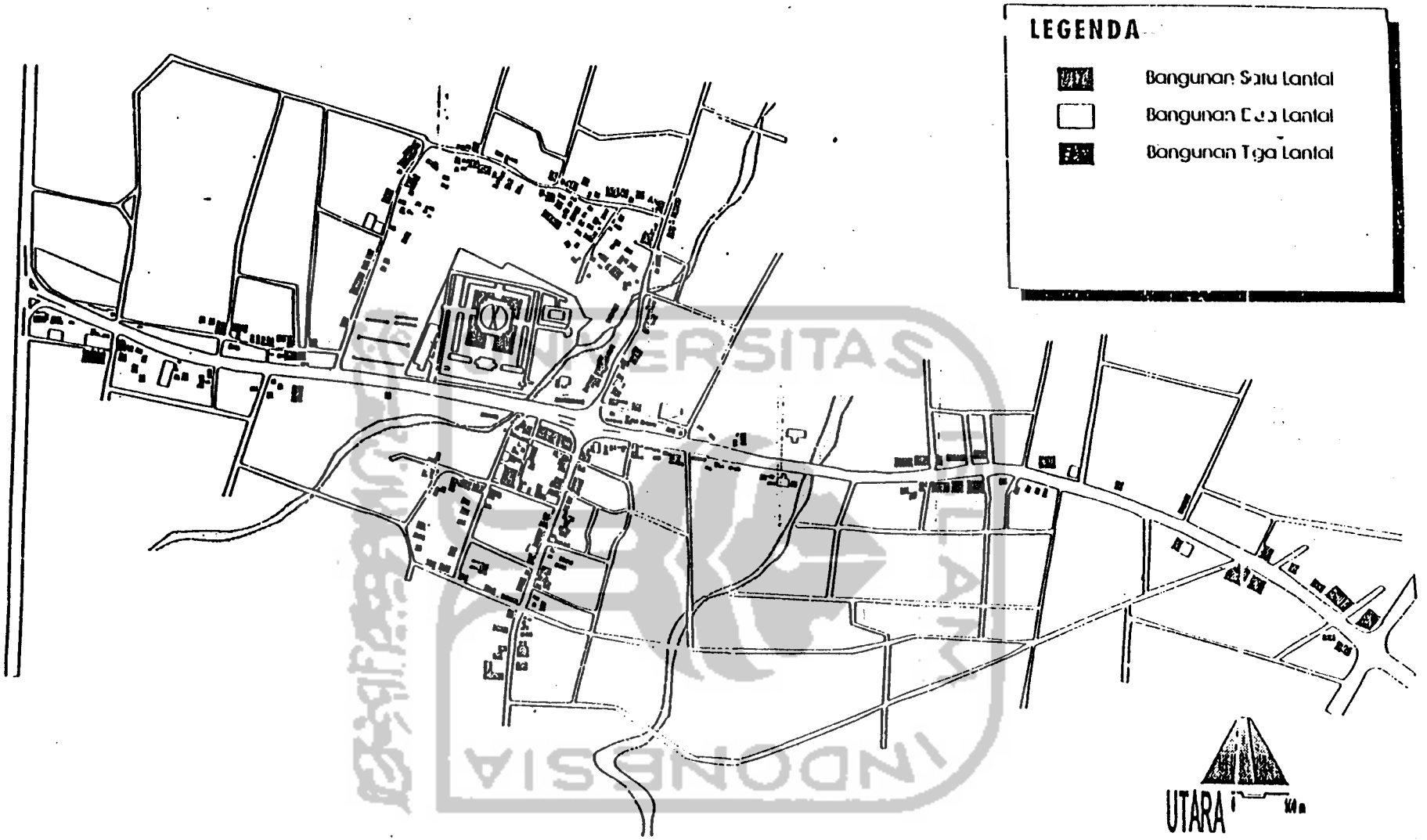


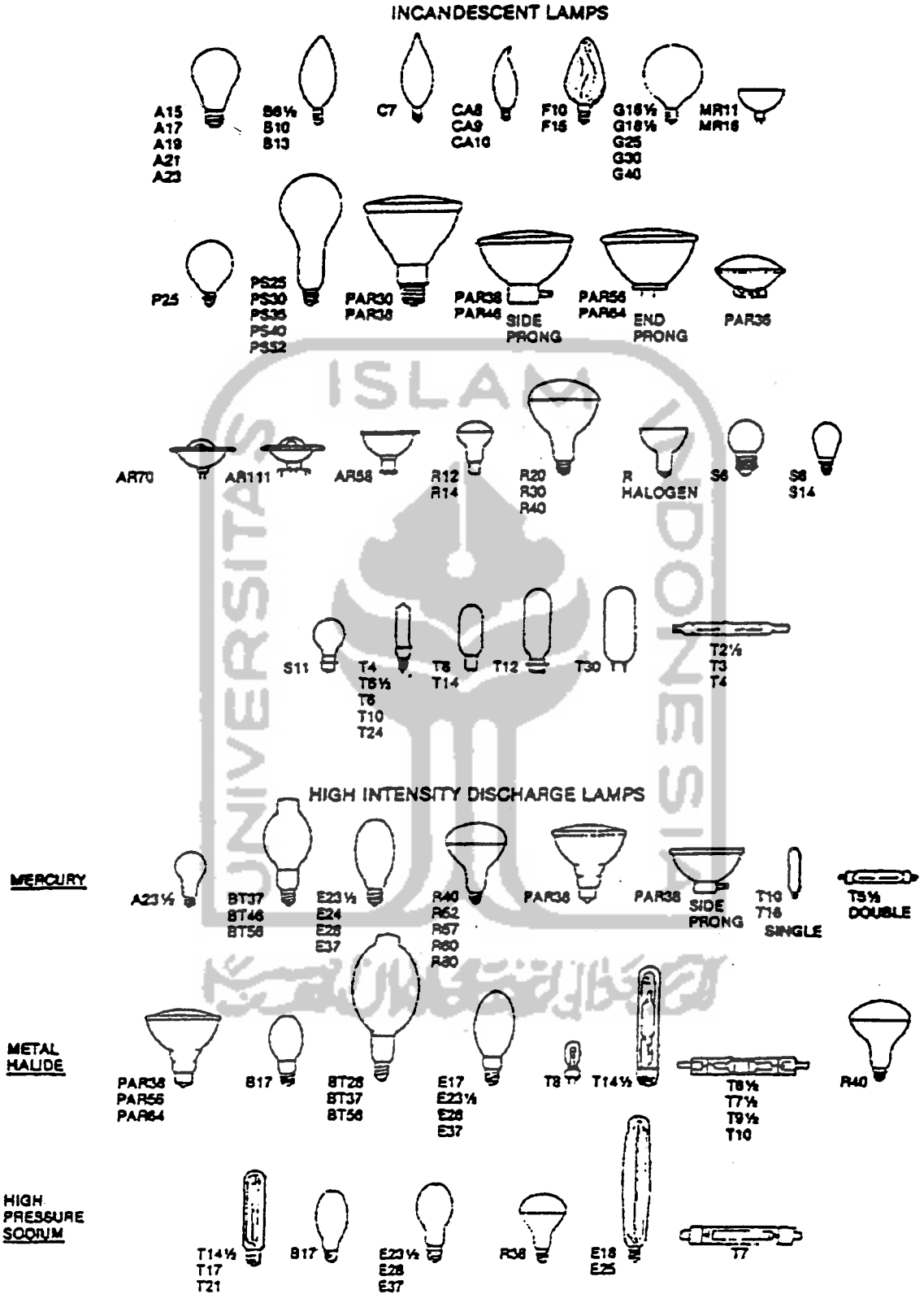
DEPARTEMEN PEKERJAAN UMUM
KANTOR WILAYAH PROPINSI DIY
BAGIAN PROYEK PENATAAN BANGUNAN

PENYUSUNAN PEDOMAN PENATAAN BANGUNAN
KAWASAN MONUMEN YOGYA KEMBALI
YOGYAKARTA
TAHUN 1994

PETA : Ketinggian / Jumlah Lantai Bangunan

SUMBER : Peta Dasar, Peta Topografi Dir. Geologi 1978
Peta Tematik, Survey Lapangan 1993

Lampiran 5 :
Lampu, Bentuk dan Ukurannya. *Sumber : Janet L. Moyer, hlm. 58.*



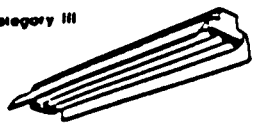
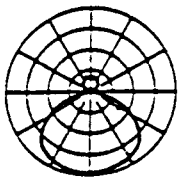
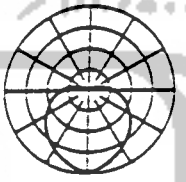
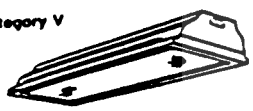
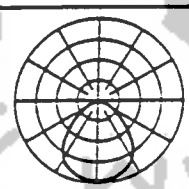
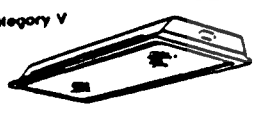
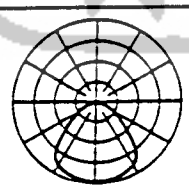
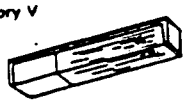
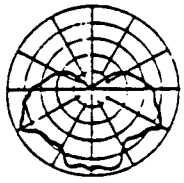
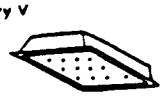
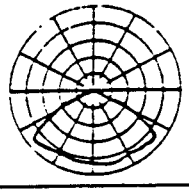
. *Examples of incandescent and HID lamp shapes. Drawing: Lezlie Johannessen.*

COEFFICIENTS OF UTILIZATION

LUMINAIRE	DISTRIBUTION	Spacing Not to Exceed	Reflectances: Ceiling Cavity	80%			50%			10%			0%
			Walls	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
			RCR	Coefficients of Utilization									
Category III Ventilated Dome Reflector	0 / 79	1.3 × Mounting Height	1	.85	.82	.79	.79	.77	.75	.73	.72	.71	.69
			2	.74	.69	.65	.70	.66	.62	.65	.62	.59	.58
			3	.65	.60	.54	.62	.57	.53	.57	.54	.51	.49
			4	.58	.51	.46	.55	.49	.45	.51	.47	.44	.42
			5	.50	.44	.38	.47	.42	.37	.45	.40	.36	.35
			6	.44	.38	.33	.43	.36	.32	.40	.35	.32	.30
			7	.40	.33	.28	.38	.33	.28	.36	.32	.27	.26
			8	.36	.29	.24	.34	.28	.24	.32	.27	.23	.22
			9	.33	.25	.20	.31	.25	.20	.29	.24	.20	.18
			10	.29	.22	.18	.28	.22	.18	.26	.21	.18	.17
Category I R-52 Filament Reflector Lamp Wide Dist.–500- and 750-Watt	0 / 100	1.5 × Mounting Height	1	1.08	1.05	1.02	1.10	.99	.97	.94	.93	.91	.89
			2	.98	.93	.89	.93	.89	.86	.88	.85	.82	.80
			3	.89	.83	.78	.85	.80	.76	.80	.76	.73	.71
			4	.81	.74	.68	.77	.72	.67	.73	.69	.65	.64
			5	.73	.66	.60	.70	.64	.59	.66	.62	.58	.56
			6	.67	.59	.53	.64	.58	.52	.61	.56	.52	.50
			7	.60	.52	.47	.58	.51	.46	.55	.50	.46	.45
			8	.54	.46	.40	.52	.45	.40	.49	.44	.40	.38
			9	.48	.40	.35	.46	.39	.35	.44	.38	.34	.33
			10	.43	.36	.30	.42	.35	.30	.40	.34	.30	.28
Category I R-57 Filament Reflector Lamp Narrow Dist.–500- and 750-Watt	0 / 100	.6 × Mounting Height	1	1.10	1.08	1.05	1.04	1.02	1.00	.97	.96	.95	.93
			2	1.02	.98	.94	.97	.94	.91	.91	.89	.88	.86
			3	.95	.90	.85	.91	.87	.83	.86	.83	.81	.79
			4	.88	.82	.78	.85	.80	.76	.81	.77	.75	.73
			5	.82	.76	.71	.79	.74	.70	.76	.72	.69	.67
			6	.77	.70	.66	.74	.69	.65	.72	.68	.64	.63
			7	.71	.65	.61	.69	.64	.60	.67	.63	.60	.58
			8	.66	.60	.56	.65	.59	.55	.63	.58	.55	.54
			9	.62	.55	.51	.60	.55	.51	.59	.54	.50	.49
			10	.58	.51	.47	.56	.51	.47	.55	.50	.46	.45

Category III Ventilated Porcelain Enamel Low Bay 400-W Phos. Coated Vapor Lamp	0 / 76	1.2 × Mounting Height	1	.81	.78	.76	.76	.74	.72	.71	.69	.68	.67
			2	.73	.69	.65	.69	.66	.63	.64	.62	.60	.59
			3	.65	.60	.56	.62	.58	.55	.58	.55	.53	.51
			4	.59	.53	.49	.56	.52	.48	.53	.50	.47	.45
			5	.53	.47	.43	.51	.46	.42	.48	.44	.41	.40
			6	.48	.42	.38	.46	.41	.37	.44	.40	.37	.35
			7	.43	.37	.33	.41	.36	.32	.39	.36	.32	.31
			8	.39	.33	.29	.38	.32	.28	.36	.32	.28	.27
			9	.36	.30	.26	.34	.29	.25	.33	.28	.25	.24
			10	.32	.27	.23	.31	.26	.23	.30	.25	.22	.21
Category III 18" Ventilated Alum. High Bay Conc. Dist. 400-W Clear Vapor Lamp	9 / 77	.7 × Mounting Height	1	.93	.90	.88	.85	.83	.82	.78	.75	.74	.72
			2	.86	.82	.79	.79	.77	.74	.72	.70	.69	.67
			3	.79	.75	.71	.74	.70	.68	.68	.65	.64	.62
			4	.74	.69	.65	.69	.65	.62	.64	.61	.59	.57
			5	.68	.63	.59	.64	.60	.57	.60	.57	.54	.53
			6	.63	.58	.54	.60	.56	.52	.56	.53	.50	.49
			7	.59	.53	.49	.56	.51	.48	.52	.49	.46	.45
			8	.55	.49	.45	.52	.47	.44	.49	.45	.43	.41
			9	.50	.45	.41	.48	.43	.40	.45	.42	.39	.38
			10	.47	.41	.38	.45	.40	.37	.42	.38	.36	.35
Category III 18" Ventilated Alum. High Bay Spread Dist. 400-W Coated Vapor Lamp	18 / 74	1.2 × Mounting Height	1	.88	.86	.84	.80	.79	.77	.71	.70	.69	.67
			2	.81	.77	.74	.75	.72	.70	.67	.65	.64	.62
			3	.74	.70	.66	.69	.65	.62	.62	.60	.58	.56
			4	.68	.63	.59	.64	.60	.57	.58	.55	.53	.51
			5	.63	.57	.53	.59	.55	.51	.54	.51	.49	.47
			6	.58	.52	.48	.54	.50	.46	.50	.47	.44	.43
			7	.53	.47	.43	.50	.45	.42	.46	.43	.40	.39
			8	.48	.43	.39	.46	.41	.38	.42	.39	.36	.35
			9	.44	.39	.35	.42	.37	.34	.39	.35	.33	.31
			10	.41	.35	.31	.39	.34	.30	.36	.32	.28	.28
Category III 24" Ventilated Porcelain Enamel 1000-W Phosphor Coated Vapor Lamp	11 / 73	1.3 × Mounting Height	1	.86	.83	.80	.78	.76	.73	.68	.67	.65	.63
			2	.77	.72	.68	.70	.66	.63	.61	.59	.57	.55
			3	.68	.62	.57	.62	.58	.54	.55	.52	.49	.47
			4	.61	.55	.49	.56	.51	.47	.50	.46	.43	.41
			5	.55	.48	.42	.50	.45	.41	.45	.41	.38	.36
			6	.49	.42	.37	.45	.39	.35	.40	.36	.33	.31
			7	.43	.36	.31	.40	.34	.30	.36	.31	.28	.26
			8	.39	.32	.28	.36	.30	.26	.32	.28	.25	.23
			9	.35	.28	.24	.33	.27	.23	.29	.25	.22	.20
			10	.32	.25	.21	.29	.24	.20	.26	.22	.19	.17

COEFFICIENTS OF UTILIZATION

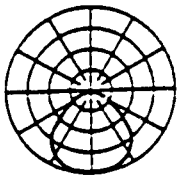
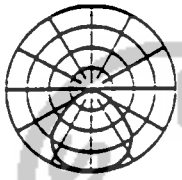
LUMINAIRE	DISTRIBUTION	Spacing Not to Exceed	Reflectances: Ceiling Cavity	80%			50%			10%			0%
			Walls	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
			RCR	Coefficients of Utilization									
Category III  3 T-12 Lamps — 430 or 800 MA For T-10 Lamps — C.U. × 1.02		1.3 × Mounting Height	1	.86	.83	.80	.78	.76	.73	.69	.67	.66	.64
			2	.75	.70	.66	.69	.65	.61	.61	.58	.56	.54
			3	.67	.60	.55	.61	.56	.52	.54	.51	.48	.46
			4	.59	.52	.47	.54	.49	.44	.48	.45	.41	.39
			5	.52	.45	.39	.48	.42	.38	.43	.39	.35	.33
			6	.46	.39	.34	.43	.37	.32	.38	.34	.30	.28
			7	.41	.34	.29	.38	.32	.28	.34	.30	.26	.25
			8	.37	.30	.25	.34	.28	.24	.31	.26	.23	.21
			9	.33	.26	.22	.31	.25	.21	.28	.23	.20	.18
			10	.30	.23	.19	.28	.22	.18	.25	.21	.17	.16
Category II  3 T-12 Lamps — 430 or 800 MA For T-10 Lamps — C.U. × 1.02		1.3 × Mounting Height	1	.85	.82	.79	.76	.73	.71	.64	.63	.62	.59
			2	.75	.70	.65	.67	.63	.59	.57	.55	.52	.50
			3	.66	.60	.55	.59	.54	.50	.51	.48	.45	.42
			4	.59	.52	.46	.52	.47	.43	.45	.41	.38	.36
			5	.51	.44	.39	.46	.40	.36	.40	.36	.33	.30
			6	.46	.39	.33	.41	.35	.31	.36	.31	.28	.26
			7	.41	.34	.29	.37	.32	.27	.32	.28	.24	.23
			8	.37	.30	.25	.33	.27	.23	.29	.24	.21	.19
			9	.33	.26	.21	.30	.24	.20	.26	.21	.18	.16
			10	.30	.23	.19	.27	.21	.18	.23	.19	.16	.14
Category V  2 T-12 Lamps — 430 MA For 800 MA — C.U. × .96		1.5 × Mounting Height	1	.70	.66	.63	.62	.59	.57	.52	.51	.49	.47
			2	.60	.54	.50	.53	.49	.46	.45	.42	.40	.37
			3	.52	.46	.41	.46	.41	.38	.39	.36	.33	.31
			4	.46	.39	.34	.41	.36	.32	.35	.31	.28	.26
			5	.40	.33	.28	.36	.30	.26	.31	.27	.24	.22
			6	.36	.29	.24	.32	.26	.22	.27	.23	.20	.18
			7	.32	.25	.21	.29	.23	.19	.25	.21	.17	.16
			8	.29	.22	.18	.26	.20	.17	.22	.18	.15	.13
			9	.26	.19	.15	.23	.18	.14	.20	.16	.13	.11
			10	.23	.17	.13	.21	.16	.12	.18	.14	.11	.10
Category V  2 T-12 Lamps — 430 MA Prismatic Lens 1' Wide — For T-10 Lamps — C.U. × 1.02		1.2 × Mounting Height	1	.63	.61	.59	.59	.58	.56	.55	.54	.53	.52
			2	.57	.54	.51	.54	.51	.49	.50	.49	.47	.46
			3	.51	.48	.44	.49	.46	.43	.46	.44	.42	.41
			4	.46	.42	.39	.44	.41	.38	.42	.39	.37	.36
			5	.42	.37	.34	.40	.36	.34	.38	.35	.33	.32
			6	.38	.34	.30	.37	.33	.30	.35	.32	.29	.28
			7	.35	.30	.27	.33	.29	.27	.32	.29	.26	.25
			8	.31	.27	.24	.30	.26	.23	.29	.26	.23	.22
			9	.28	.24	.21	.27	.23	.20	.26	.23	.20	.19
			10	.26	.21	.18	.25	.21	.18	.24	.20	.18	.17
Category V  2 T-12 Lamps — 430 MA Prismatic Lens 2' Wide — For T-10 Lamps — C.U. × 1.01		1.2 × Mounting Height	1	.73	.71	.68	.69	.67	.66	.64	.62	.61	.60
			2	.66	.62	.59	.62	.59	.57	.58	.56	.55	.53
			3	.59	.55	.51	.56	.53	.50	.53	.50	.48	.47
			4	.53	.48	.45	.51	.47	.44	.48	.45	.43	.41
			5	.48	.43	.39	.46	.42	.39	.44	.40	.38	.38
			6	.44	.38	.34	.42	.37	.34	.40	.36	.33	.32
			7	.39	.34	.30	.38	.33	.30	.36	.32	.30	.28
			8	.36	.30	.26	.34	.30	.26	.33	.29	.26	.25
			9	.32	.27	.23	.31	.26	.23	.29	.25	.23	.21
			10	.29	.24	.20	.28	.23	.20	.27	.23	.20	.19
Category V  55 Watt Low Pressure Sodium Surface Mount Security Fixture		2 × Mounting Height	1	.68	.64	.60	.58	.56	.53	.48	.46	.44	.42
			2	.58	.52	.47	.50	.46	.42	.41	.38	.36	.33
			3	.50	.44	.38	.43	.38	.34	.35	.32	.29	.27
			4	.44	.38	.32	.38	.33	.29	.31	.28	.25	.23
			5	.39	.32	.27	.34	.29	.25	.28	.24	.21	.19
			6	.35	.28	.23	.30	.25	.21	.25	.21	.18	.16
			7	.31	.25	.20	.27	.22	.18	.23	.19	.16	.14
			8	.28	.22	.18	.25	.20	.16	.21	.17	.14	.12
			9	.26	.20	.15	.22	.18	.14	.19	.15	.12	.11
			10	.23	.17	.14	.21	.16	.12	.17	.14	.11	.09
Category V  55 Watt Low Pressure Sodium 2' × 2' Security Fixture		2 × Mounting Height	1	.66	.64	.62	.62	.60	.59	.57	.56	.56	.54
			2	.60	.56	.53	.56	.54	.51	.53	.51	.49	.48
			3	.53	.49	.46	.51	.48	.45	.48	.46	.44	.42
			4	.49	.44	.41	.46	.43	.40	.44	.41	.39	.38
			5	.44	.39	.36	.42	.38	.35	.40	.37	.34	.33
			6	.40	.35	.31	.38	.34	.31	.36	.33	.30	.29
			7	.36	.31	.27	.34	.30	.27	.33	.29	.26	.25
			8	.32	.27	.24	.31	.27	.24	.29	.26	.23	.22
			9	.29	.24	.21	.28	.24	.21	.27	.23	.21	.19
			10	.26	.22	.18	.25	.21	.18	.24	.21	.18	.17

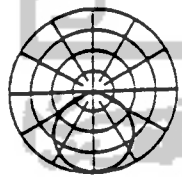
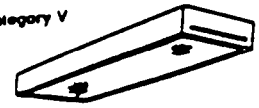
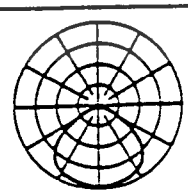
COEFFICIENTS OF UTILIZATION

LUMINAIRE	DISTRIBUTION	Spacing Not to Exceed	Reflectances: Ceiling Cavity	80%			50%			10%			0%
			Walls	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
			RCR	Coefficients of Utilization									
Category III 55, 90, 135 & 180 Watt Low Pressure Sodium Asymmetrical Reflector	8 / 77	3" x Mounting Height	1	.80	.76	.73	.75	.72	.70	.69	.67	.66	.64
			2	.69	.64	.59	.65	.60	.57	.60	.57	.54	.52
			3	.59	.53	.48	.56	.51	.46	.52	.48	.45	.43
			4	.52	.45	.40	.49	.43	.39	.46	.41	.38	.36
			5	.46	.38	.33	.43	.37	.32	.40	.35	.31	.30
			6	.40	.33	.27	.38	.31	.27	.35	.30	.26	.25
			7	.35	.28	.23	.33	.27	.22	.31	.26	.22	.20
			8	.31	.24	.20	.30	.24	.19	.28	.23	.19	.17
			9	.28	.21	.17	.27	.21	.17	.25	.20	.16	.15
			10	.26	.19	.14	.24	.18	.14	.23	.18	.14	.13
Category III 55, 90, 135 & 180 Watt Low Pressure Sodium Symmetrical Reflector	8 / 76	2" x Mounting Height	1	.80	.77	.74	.75	.73	.71	.69	.68	.66	.65
			2	.70	.66	.61	.66	.63	.59	.62	.59	.57	.55
			3	.62	.56	.51	.59	.54	.50	.55	.51	.48	.47
			4	.55	.49	.44	.52	.47	.43	.49	.45	.42	.40
			5	.49	.42	.37	.46	.41	.37	.44	.39	.36	.34
			6	.44	.37	.32	.41	.36	.32	.39	.34	.31	.29
			7	.39	.32	.28	.37	.31	.27	.35	.30	.27	.25
			8	.35	.29	.24	.33	.28	.24	.32	.27	.23	.22
			9	.32	.25	.21	.30	.25	.21	.29	.24	.20	.19
			10	.29	.22	.18	.28	.22	.18	.26	.21	.18	.17
Category III 24" Ventilated Alum. High Bay Dist. 1000-W Phos. Cld. Vapor Lamp	7 / 78	1.0 x Mounting Height	1	.91	.88	.86	.84	.82	.80	.75	.74	.73	.71
			2	.83	.78	.75	.77	.73	.71	.70	.67	.66	.64
			3	.75	.69	.65	.70	.65	.62	.64	.61	.58	.56
			4	.68	.62	.57	.63	.58	.55	.58	.55	.52	.50
			5	.61	.55	.50	.57	.52	.48	.53	.49	.46	.44
			6	.55	.49	.44	.52	.47	.43	.48	.44	.41	.39
			7	.50	.43	.38	.47	.41	.37	.43	.39	.36	.34
			8	.45	.39	.34	.43	.37	.33	.39	.35	.32	.30
			9	.41	.34	.30	.39	.33	.29	.36	.32	.28	.27
			10	.37	.31	.27	.35	.30	.26	.33	.28	.25	.24

Category III 24" Ventilated Alum. High Bay 1000-W Phos. Coated Vapor Lamp	12 / 73	1.3 x Mounting Height	1	.90	.88	.86	.81	.80	.78	.71	.70	.70	.67
			2	.83	.79	.76	.76	.73	.71	.67	.66	.64	.62
			3	.77	.72	.68	.70	.67	.64	.63	.61	.59	.57
			4	.71	.66	.62	.66	.62	.59	.59	.57	.55	.53
			5	.65	.60	.56	.61	.57	.53	.55	.52	.50	.48
			6	.60	.55	.50	.56	.52	.48	.52	.48	.46	.44
			7	.55	.50	.46	.52	.47	.44	.48	.44	.42	.40
			8	.51	.45	.41	.48	.43	.40	.44	.41	.38	.37
			9	.47	.41	.38	.44	.40	.37	.41	.38	.35	.34
			10	.44	.38	.34	.41	.37	.33	.38	.35	.32	.31
Category III 2 T-12 Lamps — Any Loading For T-10 Lamps — C.U. x 1.02	10 / 75	1.3 x Mounting Height	1	.88	.84	.81	.79	.77	.74	.69	.68	.66	.64
			2	.77	.71	.66	.70	.65	.62	.61	.59	.56	.54
			3	.68	.61	.56	.61	.56	.52	.54	.51	.48	.46
			4	.60	.52	.47	.54	.49	.44	.48	.44	.41	.39
			5	.52	.45	.39	.48	.42	.37	.43	.38	.35	.33
			6	.47	.39	.34	.43	.37	.32	.38	.34	.30	.28
			7	.42	.34	.29	.38	.32	.28	.34	.30	.26	.24
			8	.37	.30	.25	.34	.28	.24	.31	.26	.22	.21
			9	.33	.26	.21	.31	.25	.21	.28	.23	.19	.18
			10	.30	.23	.19	.28	.22	.18	.25	.20	.17	.15
Category II 2 T-12 Lamps — Any Loading For T-10 Lamps — C.U. x 1.02	17 / 71	1.3 x Mounting Height	1	.88	.85	.81	.77	.75	.73	.85	.84	.62	.59
			2	.77	.71	.67	.68	.64	.60	.57	.55	.53	.50
			3	.68	.61	.56	.60	.55	.51	.51	.48	.45	.42
			4	.60	.53	.47	.53	.48	.43	.45	.42	.38	.36
			5	.53	.45	.40	.47	.41	.36	.40	.36	.33	.30
			6	.47	.39	.34	.42	.36	.31	.36	.31	.28	.26
			7	.42	.34	.29	.38	.31	.27	.32	.28	.24	.22
			8	.38	.30	.25	.34	.28	.23	.29	.24	.21	.19
			9	.34	.26	.22	.30	.24	.20	.26	.21	.18	.16
			10	.31	.24	.19	.26	.22	.18	.24	.19	.16	.14
Category II 2 T-12 Lamps — Any Loading Center Shield For T-10 Lamps — C.U. x 1.02	18 / 66	1.3 x Mounting Height	1	.84	.81	.78	.74	.72	.70	.61	.60	.59	.56
			2	.75	.70	.65	.66	.62	.59	.55	.53	.51	.48
			3	.66	.60	.56	.59	.54	.51	.49	.47	.44	.42
			4	.59	.52	.47	.52	.47	.43	.44	.41	.38	.36
			5	.52	.45	.40	.46	.41	.37	.39	.36	.33	.31
			6	.47	.40	.35	.42	.36	.32	.36	.32	.29	.27
			7	.42	.35	.30	.37	.32	.28	.32	.28	.25	.23
			8	.38	.31	.26	.34	.28	.24	.29	.25	.22	.20
			9	.34	.27	.22	.30	.25	.21	.26	.22	.19	.17
			10	.31	.24	.20	.27	.22	.18	.23	.19	.17	.15

COEFFICIENTS OF UTILIZATION

LUMINAIRE	DISTRIBUTION	Spacing Not to Exceed	Ceiling Cavity	Reflectances 80%			50%			10%			0%
			Walls	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
			RCR	Coefficients of Utilization									
Category V  4 T-12 Lamps — 430 MA Prismatic Lens 2' Wide — For T-10 Lamps — C.U. × 1.02		1.2 × Mounting Height	1	.66	.64	.62	.62	.61	.59	.58	.57	.56	.55
			2	.60	.56	.53	.56	.54	.52	.53	.51	.49	.48
			3	.54	.50	.46	.51	.48	.45	.48	.46	.44	.43
			4	.49	.44	.41	.46	.43	.40	.44	.41	.39	.38
			5	.44	.39	.35	.42	.38	.35	.40	.37	.34	.33
			6	.40	.35	.31	.38	.34	.31	.36	.33	.31	.29
			7	.36	.31	.28	.35	.30	.27	.33	.30	.27	.26
			8	.32	.28	.24	.31	.27	.24	.30	.26	.24	.23
			9	.29	.24	.21	.28	.24	.21	.27	.23	.21	.20
			10	.27	.22	.19	.26	.23	.19	.25	.21	.18	.17
Category V  6 T-12 Lamps — 430 MA Prismatic Lens 2' Wide — For T-10 Lamps — C.U. × 1.03		1.2 × Mounting Height	1	.60	.58	.56	.56	.55	.54	.52	.51	.50	.49
			2	.54	.51	.48	.51	.49	.47	.48	.46	.45	.44
			3	.49	.45	.42	.46	.43	.41	.44	.41	.40	.39
			4	.44	.40	.37	.42	.39	.36	.40	.37	.35	.34
			5	.40	.35	.32	.38	.35	.32	.36	.33	.31	.30
			6	.36	.32	.29	.35	.31	.28	.33	.30	.28	.27
			7	.33	.28	.25	.32	.28	.25	.30	.27	.25	.24
			8	.30	.25	.22	.29	.25	.22	.27	.24	.22	.21
			9	.27	.22	.19	.26	.22	.19	.25	.21	.19	.18
			10	.24	.20	.17	.23	.20	.17	.22	.19	.17	.16

Category V  8 T-12 Lamps — 430 MA Prismatic Lens 4' × 4' — For T-10 Lamps — C.U. × 1.02		1.3 × Mounting Height	1	.59	.57	.55	.55	.54	.52	.51	.50	.49	.48
			2	.53	.50	.47	.50	.48	.46	.47	.45	.44	.43
			3	.48	.44	.41	.45	.42	.40	.43	.40	.39	.38
			4	.43	.39	.36	.41	.38	.35	.39	.36	.34	.33
			5	.39	.35	.31	.37	.34	.31	.35	.32	.30	.29
			6	.35	.31	.28	.34	.30	.28	.32	.29	.27	.26
			7	.32	.28	.25	.31	.27	.25	.29	.26	.24	.23
			8	.29	.25	.22	.28	.24	.22	.27	.24	.21	.20
			9	.26	.22	.19	.25	.21	.19	.24	.21	.19	.19
			10	.24	.20	.17	.23	.19	.17	.22	.19	.17	.16
Category V  4 T-12 Lamps — 430 MA Prismatic Lens 2' Wide — For T-10 Lamps — C.U. × 1.02		1.2 × Mounting Height	1	.56	.54	.52	.52	.50	.49	.47	.46	.45	.44
			2	.50	.47	.45	.47	.44	.42	.43	.41	.40	.39
			3	.45	.41	.38	.42	.39	.37	.39	.37	.35	.34
			4	.41	.37	.34	.38	.35	.32	.35	.33	.31	.30
			5	.37	.32	.29	.34	.31	.28	.32	.29	.27	.26
			6	.33	.29	.26	.31	.28	.25	.29	.27	.24	.23
			7	.30	.26	.23	.29	.25	.22	.27	.24	.22	.20
			8	.27	.23	.20	.26	.22	.20	.24	.21	.19	.18
			9	.25	.20	.18	.23	.20	.17	.22	.19	.17	.16
			10	.22	.18	.16	.21	.18	.15	.20	.17	.15	.14

COEFFICIENTS OF UTILIZATION

LUMINAIRE	DISTRIBUTION	Spacing Not to Exceed	Reflectances: Ceiling Cavity	80%			70%			50%			0%
			Walls	50%	30%	10%	50%	30%	10%	50%	30%	10%	0%
			RCR	Coefficients of Utilization									
Category V 2 T-12 Lamps — 430 MA 1' Wide Prismatic Wrap-Around	7 / SM	1.2 x Mounting Height	1	.68	.65	.63	.65	.63	.61	.61	.60	.58	
			2	.60	.56	.53	.58	.55	.52	.55	.52	.49	
			3	.54	.49	.45	.52	.48	.45	.50	.46	.43	
			4	.49	.43	.40	.47	.43	.39	.45	.41	.38	
			5	.44	.38	.34	.43	.38	.34	.40	.36	.33	
			6	.40	.34	.30	.39	.34	.30	.37	.32	.29	
			7	.36	.31	.27	.35	.30	.26	.33	.29	.26	
			8	.32	.27	.24	.32	.27	.23	.30	.26	.23	
			9	.29	.24	.21	.29	.24	.20	.27	.23	.20	
			10	.27	.22	.18	.26	.21	.18	.25	.21	.18	
Category V 4 T-12 Lamps — 430 MA 2' Wide Prismatic Wrap-Around	4 / SM	1.3 x Mounting Height	1	.66	.64	.61	.64	.62	.60	.61	.59	.57	
			2	.59	.55	.52	.57	.54	.51	.55	.52	.49	
			3	.53	.48	.45	.52	.48	.44	.49	.46	.43	
			4	.48	.43	.39	.47	.42	.39	.45	.41	.38	
			5	.43	.38	.34	.42	.37	.34	.40	.36	.33	
			6	.39	.34	.30	.38	.34	.30	.36	.32	.29	
			7	.35	.30	.26	.34	.30	.26	.33	.29	.26	
			8	.32	.27	.23	.31	.26	.23	.30	.26	.23	
			9	.28	.24	.20	.28	.23	.20	.27	.23	.20	
			10	.26	.21	.18	.25	.21	.18	.25	.20	.17	
Category I 2 Lamp Strip — Any Loading	17 / SM	1.6 x Mounting Height	1	.83	.79	.75	.79	.76	.72	.73	.70	.67	
			2	.71	.65	.60	.68	.62	.57	.62	.58	.54	
			3	.62	.55	.49	.59	.53	.47	.55	.49	.44	
			4	.55	.47	.41	.52	.45	.39	.48	.42	.37	
			5	.48	.40	.34	.46	.38	.33	.42	.36	.31	
			6	.43	.35	.29	.41	.33	.28	.38	.31	.26	
			7	.38	.30	.25	.36	.29	.24	.34	.27	.23	
			8	.34	.26	.21	.33	.25	.21	.30	.24	.19	
			9	.30	.23	.18	.30	.23	.18	.27	.21	.17	
			10	.28	.21	.16	.27	.20	.15	.25	.19	.15	

Category V 1 Lamp — Any Loading 2' Wide, 1' Deep Prismatic Lens	8 / SM	1.2 x Mounting Height	1	.64	.62	.60	.63	.61	.59	.60	.59	.57	
			2	.58	.55	.52	.57	.54	.51	.55	.52	.50	
			3	.52	.48	.45	.51	.47	.44	.49	.46	.44	
			4	.47	.42	.39	.46	.42	.39	.45	.41	.38	
			5	.42	.37	.34	.42	.37	.34	.40	.36	.34	
			6	.38	.33	.30	.38	.33	.30	.37	.32	.30	
			7	.35	.30	.26	.34	.30	.26	.33	.29	.26	
			8	.31	.26	.23	.31	.26	.23	.30	.26	.23	
			9	.28	.23	.20	.28	.23	.20	.27	.23	.20	
			10	.26	.21	.18	.25	.21	.18	.25	.21	.18	
Category VI 2 Lamp — Any Loading Opaque Sides	7.5 / S	1.5 x Mounting Height	1	.68	.65	.62	.59	.56	.54	.42	.41	.39	
			2	.59	.54	.51	.51	.48	.44	.37	.35	.32	
			3	.52	.46	.42	.45	.40	.37	.32	.29	.27	
			4	.46	.40	.35	.40	.35	.31	.28	.25	.23	
			5	.40	.34	.30	.35	.30	.26	.25	.22	.20	
			6	.36	.30	.26	.31	.27	.23	.22	.20	.17	
			7	.32	.26	.22	.28	.23	.19	.20	.17	.14	
			8	.29	.23	.19	.25	.20	.17	.18	.15	.13	
			9	.26	.20	.17	.23	.18	.15	.17	.13	.11	
			10	.24	.18	.15	.21	.16	.13	.15	.12	.10	
Category VI Luminous Ceiling — 50% Transmission 80% Cavity Reflectance	0 / 6'-0"	1.5 to 2.0 x Mounting Height above Diffuser	1	① For cavities that are painted white use 70% effective ceiling cavity reflectance. ② For cavities that are obstructed or have lower reflectances use 50% effective ceiling cavity reflectance.			.60	.58	.56	.58	.56	.54	
			2				.53	.49	.45	.51	.47	.43	
			3				.47	.42	.37	.45	.41	.36	
			4				.41	.36	.32	.39	.35	.31	
			5				.37	.31	.27	.35	.30	.26	
			6				.33	.27	.23	.31	.26	.23	
			7				.29	.24	.20	.28	.23	.20	
			8				.26	.21	.18	.25	.20	.17	
			9				.23	.19	.15	.23	.18	.15	
			10				.21	.17	.13	.21	.16	.13	
Category VI Cove Without Reflector	Cove 12 to 18 inches below ceiling. Reflectors with fluorescent lamps increase coefficients of utilization 5 to 10%		1	.42	.40	.39	.36	.35	.33	.25	.24	.23	
			2	.37	.34	.32	.32	.29	.27	.22	.20	.19	
			3	.32	.29	.26	.28	.25	.23	.19	.17	.16	
			4	.29	.25	.22	.25	.22	.19	.17	.15	.13	
			5	.25	.21	.18	.22	.19	.16	.15	.13	.11	
			6	.23	.19	.16	.20	.16	.14	.14	.12	.10	
			7	.20	.17	.14	.17	.14	.12	.12	.10	.09	
			8	.18	.15	.12	.16	.13	.10	.11	.09	.08	
			9	.17	.13	.10	.15	.11	.09	.10	.08	.07	
			10	.15	.12	.09	.13	.10	.08	.09	.07	.06	

Lampiran 6 :
Pendekatan Teknik Pencahayaan. *Sumber : Janet L. Moyer, hlm. 208.*

LIGHTING APPROACH					
	UP LIGHT			DOWN LIGHT	
EFFECT	PURPOSE	FIXTURE LOCATION	PURPOSE	FIXTURE LOCATION	
WASH	FILL	FRONT	FILL	FRONT	
GRAZE	FILL or ACCENT*	FRONT*	FILL or ACCENT*	FRONT*	
SHOW TEXTURE (Trunk)	ACCENT	"SIDE, FRONT" or BACK*	ACCENT	"SIDE, FRONT" or BACK*	
HALO (Trunk)	ACCENT	BACK	ACCENT	BACK	
SILHOUETTE	ACCENT	BACK	ACCENT	BACK	
SHADOWS: (On Vertical Surface)	FILL	SIDE	NO		
MOONLIGHTING: (Shadows on Horizontal Surface)	NO		FILL	OVER or IN TREE"	
GLOW	ACCENT	UNDER CANOPY	NO		
DETAIL AND COLOR	NO		FILL or ACCENT	OVER CANOPY	

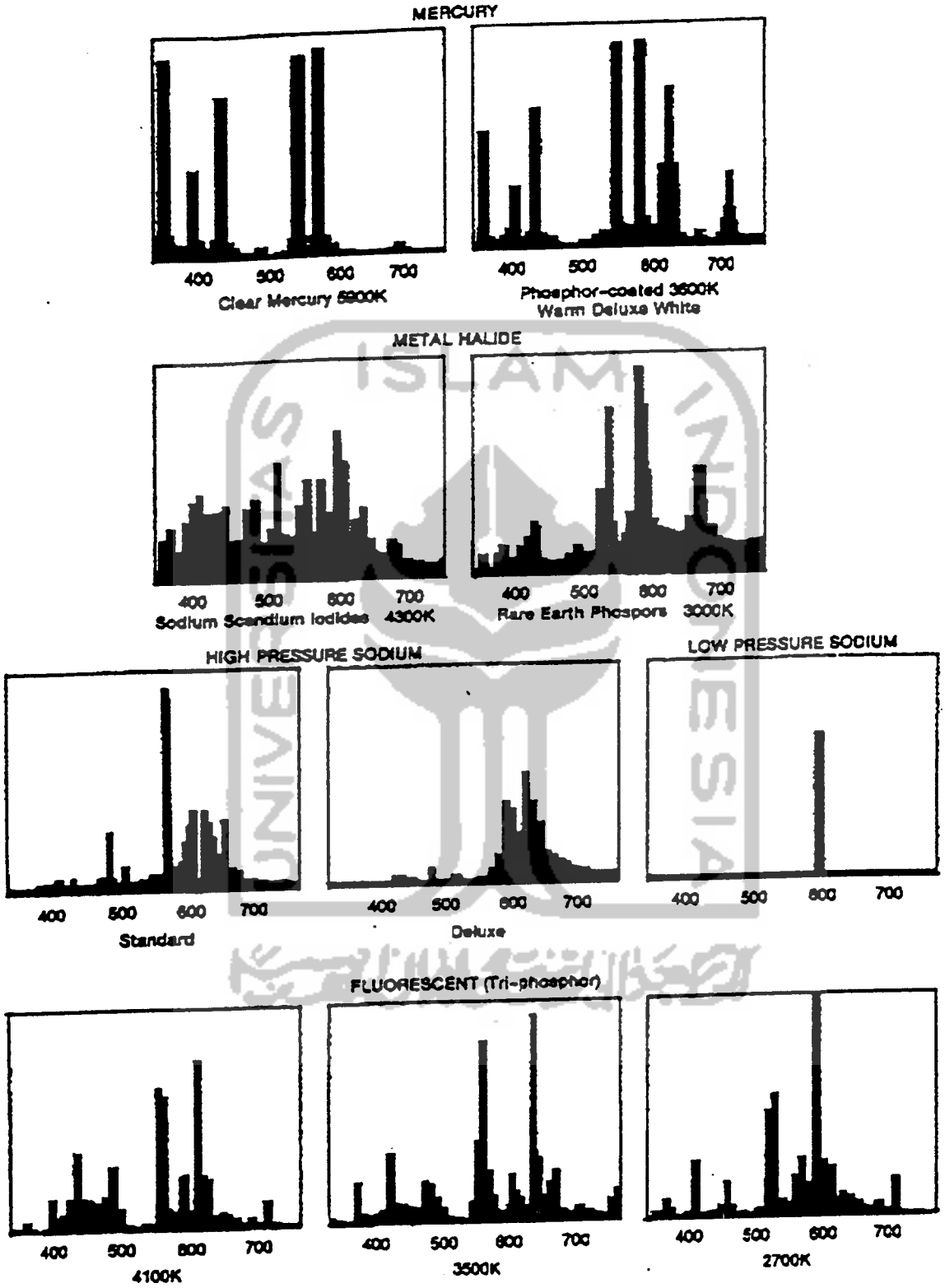
* Requires fixture location close to object.
** Requires shining through leaves and branches

Lighting techniques chart—*Four issues direct the selection of the appropriate lighting technique for a specimen tree: the desired effect; the purpose the lighting effect serves in the composition; the direction of light; and fixture location.*
Drawing: Lezlie Johannessen.

Lampiran 7 :
Perbandingan Jenis Lampu. *Sumber : Janet L. Moyer, hlm. 65.*

LAMP COMPARISON CHART						
LAMP CATEGORY CATEGORY	WATTAGE RANGE	EFFICACY (lumens per watt)	LIFE In hours	TRANSFORMER BALLAST	START/POWER INTERRUP.	INTERCHANG-ABILITY
INCANDESCENT	Less than 1— 1,500+	7 — 24 17 Avg.	750 — 2,000 Special Lamps: as low as 10 hours	120 — 135 volts None required All voltages below 120 require transformer. Quantity of lamps per transformer based on lamp wattage.	Immediate start No restrike delay	Within same base type up to fixture max. wattage
FLUORESCENT	4 — 220	20 — 95 Standard F40 Magnetic ballast: 60 — 75 Electronic ballast: 40 — 95 Compact type: Manu. don't list	7500 — 20,000	Ballast required Up to 3 lamps per ballast	Immediate Start Pre-heat: Few seconds delay No restrike delay	Within same base type; voltage and wattage ONLY.
MERCURY VAPOR	40 — 1,000	50 — 60 Good color and/or low wattage as low as 20	16,000 — 24,000 Self ballasted: 12 — 16,000	Ballast required 1 lamp per ballast	Start and restrike: 3+ minutes	Within same base, voltage, and wattage
METAL HALIDE	70 — 1,500	75 — 125	6,000 — 20,000	Ballast required 1 lamp per ballast	Start: 2 — 5 minutes Restrike: 10 — 20 minutes	Within same base, voltage, and wattage
HIGH PRESSURE SODIUM	35 — 1,000	80 — 100 Low wattage: as low as 50	24,000 Good color 10000	Ballast required 1 lamp per ballast	Start: 3 — 4 minutes Restrike: 1/2 — 1 minute	Within same base, voltage, and wattage
LOW PRESSURE SODIUM	18 — 180	Up to 180	10,000 — 18,000	Ballast required 1 lamp per ballast	Start: 7 — 15 minutes Restrike: 1 minute	Within same base, voltage, and wattage

Lampiran 8 :
Komposisi Cahaya Lampu. *Sumber : Janet L. Moyer, hlm. 67.*



Examples of HID and fluorescent spectral distribution. Portions are based on material from the IES Lighting Handbook, Reference Volume, *Illuminating Engineering Society of North America, New York, 1984, and portions are courtesy of Osram Corporation. Drawing: Lezlie Johannessen.*