

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: METALUX

Report Number: P894167

Luminaire Tested: 4MB-SC3-ASML-UNV-CC93-LOW-5000K

Issue Date: 11/11/2024

**Test Information**

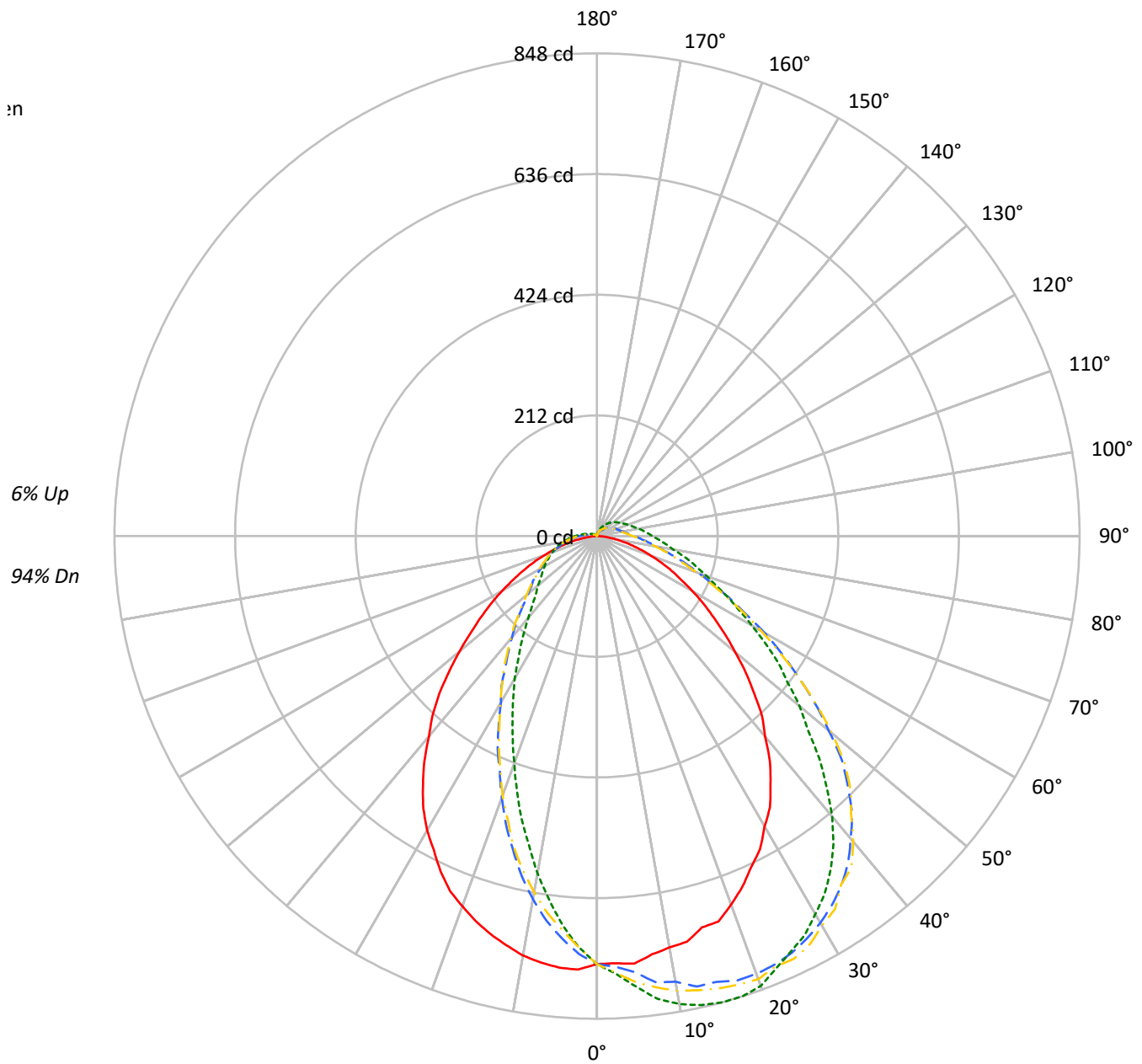
Test Method: LM-79-2019  
Report Number: P894167  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-33)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASML-UNV-CC93-LOW-5000K  
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 5000K CCT, LOW lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1874.0 lumens  
Efficiency: N/A  
Efficacy: 112.2 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.07 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')  
CIE Type: Direct  
  
Input Watts (W): 16.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.9915  
Total Harmonic Distortion (THDi): 6.67573310469889  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    ··· 90°-270°    - · 135°-315°



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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	97	97	97	94
1	107	103	98	94	104	100	96	92	95	91	88	90	87	85	85	83	81	85	83	81	79
2	98	90	83	78	95	88	82	76	83	78	74	79	75	71	75	72	69	75	72	69	66
3	90	80	72	65	87	78	70	64	74	68	63	70	65	61	67	63	59	67	63	59	57
4	83	71	63	56	80	69	61	55	66	59	54	63	57	53	60	55	51	60	55	51	49
5	76	64	55	49	74	62	54	48	60	53	47	57	51	46	55	49	45	55	49	45	43
6	71	58	49	43	68	56	48	42	54	47	42	52	46	41	50	44	40	50	44	40	38
7	66	53	44	38	64	51	43	38	49	42	37	48	41	36	46	40	36	46	40	36	34
8	61	48	40	34	59	47	39	34	45	38	33	44	37	33	42	37	32	42	37	32	30
9	57	44	36	31	56	43	36	31	42	35	30	40	34	30	39	33	29	39	33	29	28
10	54	41	33	28	52	40	33	28	39	32	28	38	31	27	36	31	27	36	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°	270°
0°	7658	7658	7658	7658
5°	7686	7803	7758	6745
10°	7548	7970	7695	5748
15°	7442	7941	7568	4806
20°	7384	7784	7416	3932
25°	7102	7424	7201	3235
30°	6804	7094	6893	2672
35°	6469	6695	6488	2178
40°	5953	6125	5951	1786
45°	5446	5406	5472	1521
50°	4843	4718	4820	1374
55°	4267	4133	4238	1263
60°	3744	3525	3709	1194
65°	3280	3036	3201	1133
70°	2788	2660	2692	1084
75°	2272	2418	2212	1044
80°	1752	2176	1593	972
85°	1204	2101	972	910

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 7575 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.6	3.8
10°-20°	196.4	10.5
20°-30°	282.4	15.1
30°-40°	320.5	17.1
40°-50°	306.3	16.3
50°-60°	248.9	13.3
60°-70°	173.7	9.3
70°-80°	107.6	5.7
80°-90°	61.7	3.3
90°-100°	36.9	2.0
100°-110°	24.2	1.3
110°-120°	17.0	0.9
120°-130°	12.3	0.7
130°-140°	8.2	0.4
140°-150°	4.6	0.2
150°-160°	2.1	0.1
160°-170°	0.6	0.0
170°-180°	0.1	0.0
0°-30°	549.4	29.3
0°-40°	870.0	46.4
0°-60°	1425.2	76.1
0°-90°	1768.1	94.4
90°-120°	78.1	4.2
90°-150°	103.2	5.5
90°-180°	106.0	5.7
0°-180°	1874.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	752	752	752	752	752	
5°	754	795	761	687	754	71
15°	712	848	724	513	712	202
25°	641	806	650	351	641	296
35°	532	716	533	233	532	331
45°	390	552	392	155	390	301
55°	251	389	249	119	251	226
65°	145	253	142	94	145	144
75°	64	169	63	73	64	70
85°	14	115	11	50	14	16
90°	0	97	0	38	0	1
95°	1	84	0	29	1	1
105°	0	65	0	16	0	1
115°	0	52	0	9	0	0
125°	0	42	0	6	0	0
135°	0	34	0	4	0	0
145°	0	24	0	3	0	0
155°	1	15	0	2	1	0
165°	1	7	0	1	1	0
175°	1	0	0	0	1	0
180°	0	0	0	0	0	



TEST NUMBER: P894167  
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-LOW-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9	751.9
2.5°	751.1	756.8	757.3	775.0	769.9	776.5	768.1	769.6	762.2	760.3	734.6
5°	753.9	765.9	769.1	799.6	794.7	798.2	786.6	778.2	761.0	750.6	709.3
7.5°	741.0	772.8	790.5	812.2	820.3	823.0	799.6	784.1	755.6	730.2	681.7
10°	733.9	777.7	795.0	827.5	834.6	829.4	811.2	785.6	748.2	707.3	647.7
12.5°	730.0	780.4	810.5	843.7	844.0	838.5	817.1	789.5	736.1	682.7	611.8
15°	711.8	779.9	810.7	844.4	848.1	844.7	822.8	786.8	723.8	652.2	570.4
17.5°	709.8	778.7	818.6	854.1	847.9	845.4	826.2	785.6	709.0	621.2	531.5
20°	689.1	776.0	818.6	843.2	841.2	842.2	828.4	783.9	692.1	587.7	488.9
22.5°	667.2	772.8	815.2	833.9	822.0	840.0	818.6	779.2	674.8	552.7	446.6
25°	641.3	767.6	808.5	820.6	805.6	819.6	819.3	772.1	650.2	515.0	413.1
27.5°	620.4	759.5	797.7	815.9	790.3	802.4	809.2	763.5	621.2	477.9	373.7
30°	589.1	749.2	784.6	787.3	767.1	782.4	790.3	752.6	596.8	435.8	337.8
32.5°	565.3	737.4	768.6	764.9	744.7	764.9	777.7	741.8	567.7	398.8	312.4
35°	531.8	723.1	748.7	729.2	715.9	732.7	747.7	730.2	533.3	359.4	279.9
37.5°	499.3	710.5	724.8	700.7	682.5	701.2	734.2	708.6	498.5	328.2	255.8
40°	459.6	681.7	693.5	660.8	642.6	670.1	700.4	689.8	459.4	295.7	232.4
42.5°	429.6	660.3	663.7	618.9	597.3	626.6	661.0	663.3	427.6	266.4	211.7
45°	390.0	630.3	623.9	574.6	552.0	578.3	630.0	635.9	391.9	241.0	191.5
47.5°	354.3	596.8	584.2	526.6	501.3	532.5	589.9	605.4	352.1	217.6	172.6
50°	317.1	559.4	531.5	481.8	464.8	480.3	538.9	564.5	315.6	194.5	158.1
52.5°	283.1	518.0	483.5	439.0	422.0	434.8	485.5	523.9	279.4	175.0	145.3
55°	251.1	476.6	432.1	392.7	389.2	393.2	431.3	475.4	249.4	157.8	137.1
57.5°	222.6	426.4	385.8	356.7	350.6	353.8	380.1	425.4	220.3	140.6	125.3
60°	193.8	375.0	340.0	317.6	314.1	316.6	333.6	376.7	192.0	126.1	114.2
62.5°	167.7	323.3	292.2	283.9	281.4	281.4	288.5	327.9	165.4	111.3	105.9
65°	145.3	278.9	255.6	252.4	253.1	252.8	248.4	273.8	141.8	98.2	98.5
67.5°	122.6	231.9	218.9	222.8	225.8	224.5	215.2	227.7	119.7	86.4	91.8
70°	101.7	191.5	189.1	197.9	204.8	198.4	184.9	186.1	98.2	74.8	83.2
72.5°	82.0	154.9	166.2	178.5	185.1	178.0	159.3	153.9	79.0	64.3	75.3
75°	64.5	124.6	142.5	160.8	169.4	160.3	138.6	120.1	62.8	54.2	68.9
77.5°	49.2	98.7	121.9	143.0	151.4	143.5	120.6	93.8	46.0	45.5	62.0
80°	35.2	78.0	108.1	128.5	136.1	128.5	104.6	74.1	32.0	36.4	54.7
82.5°	23.1	60.3	94.0	116.9	125.3	116.0	90.8	57.1	20.4	29.5	49.2
85°	14.0	47.8	82.0	105.1	114.7	105.6	79.5	43.3	11.3	22.6	42.8
87.5°	6.2	36.9	73.1	97.0	105.6	97.2	70.9	34.0	4.7	17.7	36.7
90°	0.5	29.3	64.5	89.4	97.0	89.1	62.8	27.6	0.0	12.8	31.5
92.5°	0.5	25.1	59.1	82.7	91.3	82.5	56.6	22.6	0.0	9.4	26.6
95°	0.7	21.2	53.7	77.6	84.4	76.8	51.7	19.4	0.0	6.4	22.4
97.5°	0.7	19.2	49.2	72.4	80.0	71.9	47.3	17.5	0.0	4.7	18.2
100°	0.5	17.7	45.8	67.5	74.6	67.0	43.8	15.8	0.0	3.0	14.8
102.5°	0.5	16.5	42.8	63.3	68.9	62.5	40.9	14.8	0.0	2.5	12.1
105°	0.5	15.8	40.1	58.3	65.0	58.3	38.4	13.8	0.0	2.0	9.4
107.5°	0.5	14.8	38.2	55.6	61.1	55.1	36.4	13.0	0.0	2.0	7.6
110°	0.5	14.0	36.4	51.7	57.9	52.2	34.7	11.8	0.0	1.2	6.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.5	12.8	34.7	49.0	54.9	49.2	33.2	10.8	0.0	1.2	5.4
115°	0.5	11.6	33.2	47.3	51.7	46.8	31.8	9.6	0.0	1.0	4.9
117.5°	0.5	10.8	32.3	45.1	49.5	44.6	30.5	9.1	0.0	1.0	4.7
120°	0.5	10.3	30.8	42.8	46.3	42.3	29.1	8.6	0.0	1.0	4.4
122.5°	0.5	9.8	29.5	40.9	44.6	40.6	27.8	8.4	0.0	0.7	3.9
125°	0.5	9.4	27.8	38.7	42.1	38.2	25.6	8.1	0.0	0.5	3.4
127.5°	0.5	8.9	26.1	36.9	40.1	36.4	24.1	7.9	0.0	0.5	3.2
130°	0.5	8.6	23.9	34.7	37.9	34.2	22.4	7.9	0.0	0.5	3.0
132.5°	0.5	8.4	21.4	32.5	35.9	32.0	20.7	7.6	0.0	0.5	2.5
135°	0.5	8.1	19.0	30.3	33.5	29.8	19.2	7.4	0.0	0.5	2.2
137.5°	0.5	7.6	16.7	27.8	31.0	27.3	18.2	6.9	0.0	0.5	2.0
140°	0.5	7.1	15.0	25.9	28.6	25.1	16.7	6.4	0.0	0.2	1.5
142.5°	0.5	6.4	13.5	23.4	26.1	22.9	15.0	5.4	0.0	0.2	1.5
145°	0.5	5.7	12.3	20.4	23.6	20.4	14.0	4.9	0.0	0.2	1.2
147.5°	0.5	5.2	11.1	17.2	21.4	18.7	12.6	4.2	0.0	0.2	1.0
150°	0.5	4.7	9.6	14.5	19.0	16.5	11.6	3.7	0.0	0.0	0.7
152.5°	0.5	4.2	8.4	12.1	17.0	15.0	10.3	3.2	0.0	0.0	0.5
155°	0.7	3.9	7.1	10.6	14.8	13.0	8.6	2.7	0.0	0.0	0.5
157.5°	0.7	3.4	5.9	8.6	13.0	11.3	6.9	2.2	0.0	0.0	0.2
160°	0.7	3.2	4.9	6.6	10.8	9.4	5.7	1.7	0.0	0.0	0.2
162.5°	0.7	3.0	4.2	4.9	8.9	7.4	4.4	1.2	0.0	0.0	0.2
165°	0.7	2.5	3.7	3.4	6.9	5.7	3.4	0.7	0.0	0.0	0.0
167.5°	0.7	2.2	3.0	2.5	5.2	4.2	2.5	0.5	0.0	0.0	0.0
170°	0.7	1.7	2.5	1.7	1.5	2.7	1.5	0.2	0.0	0.0	0.0
172.5°	0.7	1.5	2.0	1.2	0.5	1.5	0.7	0.0	0.0	0.0	0.0
175°	0.7	1.2	1.2	0.7	0.2	0.5	0.0	0.0	0.0	0.0	0.0
177.5°	0.7	1.0	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2



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CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-LOW-5000K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	751.9	751.9	751.9	751.9	751.9	751.9
2.5°	731.2	723.1	715.7	723.6	729.2	751.1
5°	695.5	686.9	687.9	695.0	714.0	753.9
7.5°	658.6	644.3	647.7	667.7	695.7	741.0
10°	615.0	601.9	605.1	635.2	674.6	733.9
12.5°	576.1	554.2	572.9	601.2	650.0	730.0
15°	530.6	513.3	523.4	565.3	626.3	711.8
17.5°	481.3	468.0	480.1	521.7	597.3	709.8
20°	443.4	424.9	439.2	485.0	561.3	689.1
22.5°	400.8	386.8	401.8	443.9	524.6	667.2
25°	365.8	351.1	366.1	407.9	492.1	641.3
27.5°	331.9	318.3	331.9	370.3	459.9	620.4
30°	302.1	289.0	302.8	339.7	422.2	589.1
32.5°	274.3	257.5	275.2	310.9	389.0	565.3
35°	245.5	232.9	246.2	285.8	352.1	531.8
37.5°	221.6	208.5	224.3	258.3	320.8	499.3
40°	198.9	187.4	199.9	236.1	294.2	459.6
42.5°	181.2	169.6	182.4	215.9	267.4	429.6
45°	164.0	155.3	165.7	193.8	240.3	390.0
47.5°	151.4	144.0	152.6	177.5	217.6	354.3
50°	140.6	135.4	141.6	161.3	194.2	317.1
52.5°	131.0	125.8	132.9	148.7	175.8	283.1
55°	123.6	118.9	124.3	136.9	157.3	251.1
57.5°	115.5	112.5	116.7	124.3	142.8	222.6
60°	109.6	106.4	110.8	116.9	126.3	193.8
62.5°	102.9	101.2	103.9	108.8	113.7	167.7
65°	97.0	94.5	98.0	99.7	99.2	145.3
67.5°	90.6	89.9	91.8	92.1	88.4	122.6
70°	84.0	83.5	85.9	84.4	76.8	101.7
72.5°	78.5	78.5	80.0	77.1	67.0	82.0
75°	72.6	73.1	74.4	70.9	56.4	64.5
77.5°	67.2	67.7	67.9	63.3	47.3	49.2
80°	61.1	60.8	63.3	57.4	38.4	35.2
82.5°	55.6	54.7	56.1	50.2	31.0	23.1
85°	49.5	49.7	50.7	43.8	24.9	14.0
87.5°	44.6	44.6	45.5	38.7	18.7	6.2
90°	38.7	38.2	39.6	32.7	14.0	0.5
92.5°	33.7	33.7	34.7	28.1	10.3	0.5
95°	28.8	29.1	29.8	23.1	7.9	0.7
97.5°	24.6	24.9	25.9	19.7	5.7	0.7
100°	20.9	21.2	21.7	15.8	4.4	0.5
102.5°	17.5	18.2	18.2	13.0	3.4	0.5
105°	14.8	15.8	15.3	10.6	3.2	0.5
107.5°	12.3	13.3	13.3	8.6	3.2	0.5
110°	10.1	11.6	11.3	7.4	2.5	0.5





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	8.6	9.8	9.1	6.4	2.5	0.5
115°	7.4	8.6	8.1	5.9	2.2	0.5
117.5°	6.6	7.4	7.4	5.7	2.2	0.5
120°	6.2	6.9	6.6	5.4	2.2	0.5
122.5°	5.7	6.2	6.2	4.9	2.0	0.5
125°	5.4	5.7	5.9	4.4	2.0	0.5
127.5°	5.2	5.7	5.7	4.2	1.7	0.5
130°	4.7	5.2	5.2	3.9	1.7	0.5
132.5°	4.2	4.7	4.7	3.7	1.7	0.5
135°	3.9	4.4	4.4	3.4	1.7	0.5
137.5°	3.7	3.9	3.9	3.2	1.7	0.5
140°	3.2	3.7	3.7	3.0	1.7	0.5
142.5°	3.0	3.4	3.4	2.7	1.5	0.5
145°	2.7	3.0	3.2	2.5	1.5	0.5
147.5°	2.2	2.7	3.0	2.2	1.5	0.5
150°	1.7	2.5	2.5	2.2	1.5	0.5
152.5°	1.2	2.2	2.2	2.0	1.2	0.5
155°	1.0	1.7	2.0	1.7	1.2	0.7
157.5°	0.7	1.5	1.7	1.7	1.2	0.7
160°	0.5	1.2	1.5	1.5	1.0	0.7
162.5°	0.2	1.0	1.2	1.5	1.0	0.7
165°	0.0	0.7	1.0	1.2	1.0	0.7
167.5°	0.0	0.5	0.7	1.0	0.7	0.7
170°	0.0	0.2	0.5	0.7	0.7	0.7
172.5°	0.0	0.0	0.2	0.5	0.5	0.7
175°	0.0	0.0	0.0	0.2	0.5	0.7
177.5°	0.0	0.0	0.0	0.2	0.5	0.7
180°	0.2	0.2	0.2	0.2	0.2	0.2



TEST NUMBER: P894167  
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-LOW-5000K

**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	15.99	17.45	16.44	17.88	18.34	18.25	19.71	18.70	20.14	20.59
	3H	16.81	18.13	17.28	18.57	19.07	19.95	21.27	20.42	21.71	22.21
	4H	17.02	18.26	17.50	18.72	19.23	20.79	22.03	21.28	22.49	23.00
	6H	17.11	18.26	17.61	18.73	19.26	21.66	22.82	22.16	23.29	23.82
	8H	17.11	18.21	17.62	18.71	19.24	22.14	23.24	22.65	23.73	24.27
	12H	17.10	18.15	17.62	18.64	19.20	22.68	23.73	23.20	24.22	24.79
4H	2H	16.43	17.67	16.92	18.13	18.64	18.61	19.86	19.10	20.32	20.83
	3H	17.52	18.57	18.02	19.07	19.61	20.50	21.54	21.00	22.05	22.58
	4H	17.86	18.81	18.38	19.33	19.90	21.47	22.42	21.99	22.94	23.50
	6H	18.05	18.88	18.60	19.43	20.01	22.51	23.34	23.05	23.88	24.47
	8H	18.08	18.86	18.63	19.40	20.00	23.07	23.85	23.62	24.40	24.99
	12H	18.09	18.79	18.66	19.36	19.96	23.73	24.43	24.30	25.01	25.61
8H	4H	18.19	18.97	18.74	19.51	20.11	21.61	22.39	22.16	22.93	23.53
	6H	18.51	19.17	19.09	19.75	20.36	22.78	23.44	23.36	24.02	24.63
	8H	18.60	19.19	19.20	19.79	20.40	23.46	24.05	24.06	24.65	25.27
	12H	18.66	19.18	19.25	19.77	20.45	24.28	24.80	24.87	25.39	26.07
12H	4H	18.27	18.97	18.84	19.55	20.14	21.60	22.31	22.17	22.88	23.48
	6H	18.65	19.24	19.25	19.84	20.45	22.80	23.39	23.39	23.99	24.60
	8H	18.81	19.33	19.40	19.92	20.60	23.53	24.06	24.13	24.64	25.33