

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: P894165

Luminaire Tested: 4MB-SC3-ASML-UNV-CC93-LOW-3500K

Issue Date: 11/11/2024

**Test Information**

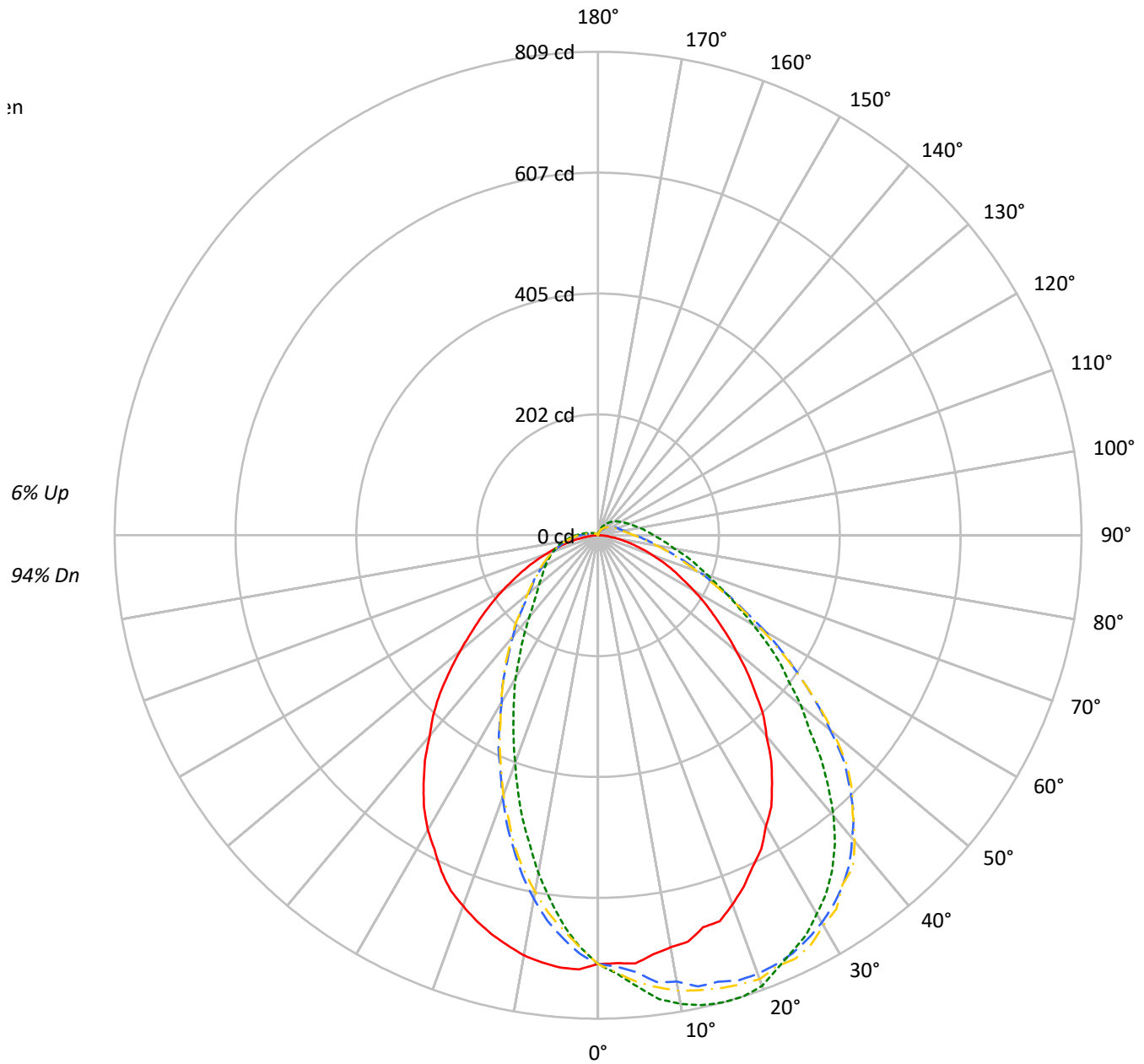
Test Method: LM-79-2019  
Report Number: P894165  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-33)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-SC3-ASML-UNV-CC93-LOW-3500K  
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 3500K CCT, LOW lumen setting  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1788.0 lumens  
Efficiency: N/A  
Efficacy: 107.1 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

TEST NUMBER: P894165  
CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-LOW-3500K

### 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°	7306	7306	7306	7306
5°	7333	7445	7403	6435
10°	7201	7604	7342	5484
15°	7100	7576	7221	4586
20°	7045	7426	7075	3751
25°	6777	7083	6871	3087
30°	6492	6768	6577	2550
35°	6173	6388	6190	2078
40°	5681	5843	5677	1704
45°	5196	5157	5223	1451
50°	4620	4502	4598	1311
55°	4072	3944	4044	1205
60°	3572	3363	3539	1139
65°	3129	2897	3055	1082
70°	2659	2538	2568	1034
75°	2166	2307	2110	996
80°	1673	2077	1518	927
85°	1152	2006	929	868

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 7227 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.4	3.8
10°-20°	187.3	10.5
20°-30°	269.5	15.1
30°-40°	305.8	17.1
40°-50°	292.3	16.3
50°-60°	237.5	13.3
60°-70°	165.7	9.3
70°-80°	102.6	5.7
80°-90°	58.9	3.3
90°-100°	35.2	2.0
100°-110°	23.1	1.3
110°-120°	16.2	0.9
120°-130°	11.7	0.7
130°-140°	7.8	0.4
140°-150°	4.4	0.2
150°-160°	2.0	0.1
160°-170°	0.6	0.0
170°-180°	0.0	0.0
0°-30°	524.2	29.3
0°-40°	830.0	46.4
0°-60°	1359.8	76.1
0°-90°	1687.0	94.4
90°-120°	74.5	4.2
90°-150°	98.4	5.5
90°-180°	101.0	5.6
0°-180°	1788.0	100.0

**CANDELA DISTRIBUTION:**

	0°	90°	180°	270°	360°	Flux
0°	717	717	717	717	717	
5°	719	758	726	655	719	68
15°	679	809	691	490	679	193
25°	612	769	620	335	612	282
35°	507	683	509	222	507	316
45°	372	527	374	148	372	287
55°	240	371	238	114	240	216
65°	139	242	135	90	139	138
75°	62	162	60	70	62	66
85°	13	110	11	47	13	15
90°	0	92	0	36	0	1
95°	1	81	0	28	1	1
105°	0	62	0	15	0	1
115°	0	49	0	8	0	0
125°	0	40	0	5	0	0
135°	0	32	0	4	0	0
145°	0	23	0	3	0	0
155°	1	14	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: P894165  
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-LOW-3500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4	717.4
2.5°	716.7	722.1	722.5	739.5	734.5	740.9	732.9	734.3	727.2	725.4	700.9
5°	719.3	730.8	733.8	762.9	758.2	761.5	750.5	742.5	726.1	716.2	676.7
7.5°	707.0	737.3	754.3	774.9	782.7	785.3	762.9	748.1	720.9	696.7	650.4
10°	700.2	742.0	758.5	789.5	796.3	791.4	774.0	749.6	713.9	674.9	618.0
12.5°	696.5	744.6	773.3	805.0	805.2	800.1	779.6	753.3	702.3	651.4	583.7
15°	679.1	744.2	773.5	805.7	809.2	805.9	785.0	750.7	690.6	622.2	544.3
17.5°	677.2	743.0	781.0	814.9	809.0	806.6	788.3	749.6	676.5	592.6	507.1
20°	657.5	740.4	781.0	804.5	802.6	803.6	790.4	747.9	660.3	560.7	466.5
22.5°	636.6	737.3	777.7	795.6	784.3	801.5	781.0	743.4	643.9	527.3	426.1
25°	611.9	732.4	771.4	782.9	768.6	782.0	781.7	736.6	620.4	491.4	394.2
27.5°	591.9	724.7	761.1	778.4	754.0	765.5	772.1	728.4	592.6	455.9	356.6
30°	562.1	714.8	748.6	751.2	731.9	746.5	754.0	718.1	569.4	415.8	322.3
32.5°	539.3	703.5	733.3	729.8	710.6	729.8	742.0	707.7	541.7	380.5	298.1
35°	507.4	689.9	714.3	695.8	683.1	699.1	713.4	696.7	508.8	342.9	267.1
37.5°	476.4	677.9	691.5	668.5	651.1	669.0	700.5	676.0	475.7	313.1	244.1
40°	438.6	650.4	661.7	630.5	613.1	639.4	668.3	658.2	438.3	282.1	221.7
42.5°	409.9	630.0	633.3	590.5	569.9	597.8	630.7	632.8	408.0	254.2	202.0
45°	372.1	601.3	595.2	548.2	526.6	551.8	601.1	606.7	374.0	230.0	182.7
47.5°	338.0	569.4	557.4	502.4	478.3	508.1	562.8	577.6	335.9	207.6	164.7
50°	302.5	533.7	507.1	459.7	443.5	458.3	514.2	538.6	301.1	185.6	150.8
52.5°	270.1	494.2	461.3	418.8	402.6	414.8	463.2	499.9	266.6	167.0	138.6
55°	239.6	454.8	412.2	374.7	371.4	375.1	411.5	453.6	238.0	150.6	130.8
57.5°	212.3	406.8	368.1	340.4	334.5	337.5	362.7	405.9	210.2	134.1	119.6
60°	184.9	357.7	324.4	303.0	299.7	302.1	318.3	359.4	183.2	120.3	109.0
62.5°	160.0	308.4	278.8	270.8	268.5	268.5	275.3	312.9	157.9	106.2	101.0
65°	138.6	266.1	243.8	240.8	241.5	241.2	237.0	261.2	135.3	93.7	94.0
67.5°	117.0	221.3	208.8	212.6	215.4	214.2	205.3	217.3	114.2	82.4	87.6
70°	97.0	182.7	180.4	188.9	195.4	189.3	176.4	177.6	93.7	71.4	79.4
72.5°	78.2	147.8	158.6	170.3	176.6	169.8	152.0	146.8	75.4	61.3	71.9
75°	61.5	118.9	136.0	153.4	161.6	152.9	132.2	114.6	59.9	51.7	65.8
77.5°	47.0	94.2	116.3	136.5	144.5	136.9	115.1	89.5	43.9	43.5	59.2
80°	33.6	74.5	103.1	122.6	129.9	122.6	99.8	70.7	30.5	34.8	52.1
82.5°	22.1	57.5	89.7	111.6	119.6	110.6	86.7	54.5	19.5	28.2	47.0
85°	13.4	45.6	78.2	100.3	109.5	100.8	75.9	41.3	10.8	21.6	40.9
87.5°	5.9	35.2	69.8	92.5	100.8	92.8	67.7	32.4	4.5	16.9	35.0
90°	0.5	28.0	61.5	85.3	92.5	85.0	59.9	26.3	0.0	12.2	30.1
92.5°	0.5	24.0	56.4	78.9	87.1	78.7	54.0	21.6	0.0	8.9	25.4
95°	0.7	20.2	51.2	74.0	80.6	73.3	49.3	18.6	0.0	6.1	21.4
97.5°	0.7	18.3	47.0	69.1	76.3	68.6	45.1	16.7	0.0	4.5	17.4
100°	0.5	16.9	43.7	64.4	71.2	63.9	41.8	15.0	0.0	2.8	14.1
102.5°	0.5	15.7	40.9	60.4	65.8	59.7	39.0	14.1	0.0	2.3	11.5
105°	0.5	15.0	38.3	55.7	62.0	55.7	36.6	13.2	0.0	1.9	8.9
107.5°	0.5	14.1	36.4	53.1	58.3	52.6	34.8	12.4	0.0	1.9	7.3
110°	0.5	13.4	34.8	49.3	55.2	49.8	33.1	11.3	0.0	1.2	5.9



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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	12.2	33.1	46.7	52.4	47.0	31.7	10.3	0.0	1.2	5.2
115°	0.5	11.0	31.7	45.1	49.3	44.6	30.3	9.2	0.0	0.9	4.7
117.5°	0.5	10.3	30.8	43.0	47.2	42.5	29.1	8.7	0.0	0.9	4.5
120°	0.5	9.9	29.4	40.9	44.2	40.4	27.7	8.2	0.0	0.9	4.2
122.5°	0.5	9.4	28.2	39.0	42.5	38.8	26.5	8.0	0.0	0.7	3.8
125°	0.5	8.9	26.5	36.9	40.2	36.4	24.4	7.8	0.0	0.5	3.3
127.5°	0.5	8.5	24.9	35.2	38.3	34.8	23.0	7.5	0.0	0.5	3.1
130°	0.5	8.2	22.8	33.1	36.2	32.7	21.4	7.5	0.0	0.5	2.8
132.5°	0.5	8.0	20.4	31.0	34.3	30.5	19.7	7.3	0.0	0.5	2.3
135°	0.5	7.8	18.1	28.9	31.9	28.4	18.3	7.0	0.0	0.5	2.1
137.5°	0.5	7.3	16.0	26.5	29.6	26.1	17.4	6.6	0.0	0.5	1.9
140°	0.5	6.8	14.3	24.7	27.2	24.0	16.0	6.1	0.0	0.2	1.4
142.5°	0.5	6.1	12.9	22.3	24.9	21.8	14.3	5.2	0.0	0.2	1.4
145°	0.5	5.4	11.7	19.5	22.6	19.5	13.4	4.7	0.0	0.2	1.2
147.5°	0.5	4.9	10.6	16.4	20.4	17.9	12.0	4.0	0.0	0.2	0.9
150°	0.5	4.5	9.2	13.9	18.1	15.7	11.0	3.5	0.0	0.0	0.7
152.5°	0.5	4.0	8.0	11.5	16.2	14.3	9.9	3.1	0.0	0.0	0.5
155°	0.7	3.8	6.8	10.1	14.1	12.4	8.2	2.6	0.0	0.0	0.5
157.5°	0.7	3.3	5.6	8.2	12.4	10.8	6.6	2.1	0.0	0.0	0.2
160°	0.7	3.1	4.7	6.3	10.3	8.9	5.4	1.6	0.0	0.0	0.2
162.5°	0.7	2.8	4.0	4.7	8.5	7.0	4.2	1.2	0.0	0.0	0.2
165°	0.7	2.3	3.5	3.3	6.6	5.4	3.3	0.7	0.0	0.0	0.0
167.5°	0.7	2.1	2.8	2.3	4.9	4.0	2.3	0.5	0.0	0.0	0.0
170°	0.7	1.6	2.3	1.6	1.4	2.6	1.4	0.2	0.0	0.0	0.0
172.5°	0.7	1.4	1.9	1.2	0.5	1.4	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	0.9	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



TEST NUMBER: P894165

CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-LOW-3500K

**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
0°	717.4	717.4	717.4	717.4	717.4	717.4
2.5°	697.6	689.9	682.8	690.4	695.8	716.7
5°	663.6	655.4	656.3	663.1	681.2	719.3
7.5°	628.3	614.7	618.0	637.0	663.8	707.0
10°	586.8	574.3	577.4	606.0	643.6	700.2
12.5°	549.7	528.8	546.6	573.6	620.1	696.5
15°	506.2	489.8	499.4	539.3	597.6	679.1
17.5°	459.2	446.5	458.0	497.7	569.9	677.2
20°	423.0	405.4	419.1	462.7	535.6	657.5
22.5°	382.4	369.0	383.4	423.5	500.6	636.6
25°	349.1	335.0	349.3	389.2	469.6	611.9
27.5°	316.6	303.7	316.6	353.3	438.8	591.9
30°	288.2	275.8	288.9	324.2	402.8	562.1
32.5°	261.7	245.7	262.6	296.7	371.1	539.3
35°	234.2	222.2	234.9	272.7	335.9	507.4
37.5°	211.4	199.0	214.0	246.4	306.1	476.4
40°	189.8	178.8	190.7	225.3	280.7	438.6
42.5°	172.9	161.8	174.1	206.0	255.1	409.9
45°	156.4	148.2	158.1	184.9	229.3	372.1
47.5°	144.5	137.4	145.6	169.4	207.6	338.0
50°	134.1	129.2	135.1	153.9	185.3	302.5
52.5°	125.0	120.0	126.8	141.9	167.7	270.1
55°	117.9	113.5	118.6	130.6	150.1	239.6
57.5°	110.2	107.3	111.3	118.6	136.2	212.3
60°	104.5	101.5	105.7	111.6	120.5	184.9
62.5°	98.2	96.5	99.1	103.8	108.5	160.0
65°	92.5	90.2	93.5	95.1	94.7	138.6
67.5°	86.4	85.7	87.6	87.9	84.3	117.0
70°	80.1	79.6	82.0	80.6	73.3	97.0
72.5°	74.9	74.9	76.3	73.5	63.9	78.2
75°	69.3	69.8	70.9	67.7	53.8	61.5
77.5°	64.1	64.6	64.8	60.4	45.1	47.0
80°	58.3	58.0	60.4	54.7	36.6	33.6
82.5°	53.1	52.1	53.6	47.9	29.6	22.1
85°	47.2	47.4	48.4	41.8	23.7	13.4
87.5°	42.5	42.5	43.5	36.9	17.9	5.9
90°	36.9	36.4	37.8	31.2	13.4	0.5
92.5°	32.2	32.2	33.1	26.8	9.9	0.5
95°	27.5	27.7	28.4	22.1	7.5	0.7
97.5°	23.5	23.7	24.7	18.8	5.4	0.7
100°	20.0	20.2	20.7	15.0	4.2	0.5
102.5°	16.7	17.4	17.4	12.4	3.3	0.5
105°	14.1	15.0	14.6	10.1	3.1	0.5
107.5°	11.7	12.7	12.7	8.2	3.1	0.5
110°	9.6	11.0	10.8	7.0	2.3	0.5





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**CANDELA DISTRIBUTION (continued):**

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	8.2	9.4	8.7	6.1	2.3	0.5
115°	7.0	8.2	7.8	5.6	2.1	0.5
117.5°	6.3	7.0	7.0	5.4	2.1	0.5
120°	5.9	6.6	6.3	5.2	2.1	0.5
122.5°	5.4	5.9	5.9	4.7	1.9	0.5
125°	5.2	5.4	5.6	4.2	1.9	0.5
127.5°	4.9	5.4	5.4	4.0	1.6	0.5
130°	4.5	4.9	4.9	3.8	1.6	0.5
132.5°	4.0	4.5	4.5	3.5	1.6	0.5
135°	3.8	4.2	4.2	3.3	1.6	0.5
137.5°	3.5	3.8	3.8	3.1	1.6	0.5
140°	3.1	3.5	3.5	2.8	1.6	0.5
142.5°	2.8	3.3	3.3	2.6	1.4	0.5
145°	2.6	2.8	3.1	2.3	1.4	0.5
147.5°	2.1	2.6	2.8	2.1	1.4	0.5
150°	1.6	2.3	2.3	2.1	1.4	0.5
152.5°	1.2	2.1	2.1	1.9	1.2	0.5
155°	0.9	1.6	1.9	1.6	1.2	0.7
157.5°	0.7	1.4	1.6	1.6	1.2	0.7
160°	0.5	1.2	1.4	1.4	0.9	0.7
162.5°	0.2	0.9	1.2	1.4	0.9	0.7
165°	0.0	0.7	0.9	1.2	0.9	0.7
167.5°	0.0	0.5	0.7	0.9	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: P894165  
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC93-LOW-3500K

**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	15.83	17.29	16.28	17.72	18.17	18.09	19.55	18.54	19.98	20.43
	3H	16.65	17.97	17.11	18.41	18.91	19.79	21.10	20.25	21.55	22.04
	4H	16.85	18.09	17.34	18.56	19.07	20.62	21.87	21.11	22.33	22.84
	6H	16.94	18.09	17.44	18.57	19.10	21.50	22.65	22.00	23.13	23.65
	8H	16.94	18.04	17.46	18.54	19.08	21.97	23.07	22.49	23.57	24.10
	12H	16.93	17.99	17.45	18.48	19.04	22.52	23.57	23.03	24.06	24.62
4H	2H	16.26	17.50	16.75	17.97	18.48	18.45	19.69	18.94	20.15	20.67
	3H	17.36	18.40	17.86	18.91	19.44	20.33	21.38	20.84	21.89	22.42
	4H	17.70	18.65	18.22	19.16	19.73	21.31	22.26	21.83	22.77	23.34
	6H	17.89	18.72	18.43	19.26	19.85	22.35	23.18	22.89	23.72	24.31
	8H	17.92	18.70	18.47	19.24	19.84	22.91	23.69	23.46	24.23	24.83
	12H	17.92	18.63	18.49	19.20	19.80	23.57	24.27	24.14	24.84	25.44
8H	4H	18.03	18.81	18.58	19.35	19.95	21.45	22.23	22.00	22.77	23.37
	6H	18.35	19.00	18.93	19.59	20.19	22.62	23.27	23.20	23.86	24.46
	8H	18.44	19.03	19.03	19.63	20.24	23.30	23.89	23.89	24.49	25.10
	12H	18.49	19.02	19.09	19.60	20.29	24.12	24.64	24.71	25.23	25.91
12H	4H	18.11	18.81	18.67	19.38	19.98	21.44	22.14	22.01	22.72	23.32
	6H	18.49	19.08	19.08	19.68	20.29	22.63	23.22	23.23	23.82	24.44
	8H	18.64	19.17	19.24	19.75	20.44	23.37	23.89	23.96	24.48	25.16