

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: P894157

Luminaire Tested: 4MB-SC3-ASML-UNV-CC83-LOW-4000K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894157
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-CC83-LOW-4000K
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 4000K CCT, LOW lumen setting
Light Source: -
Ballast/Driver: -

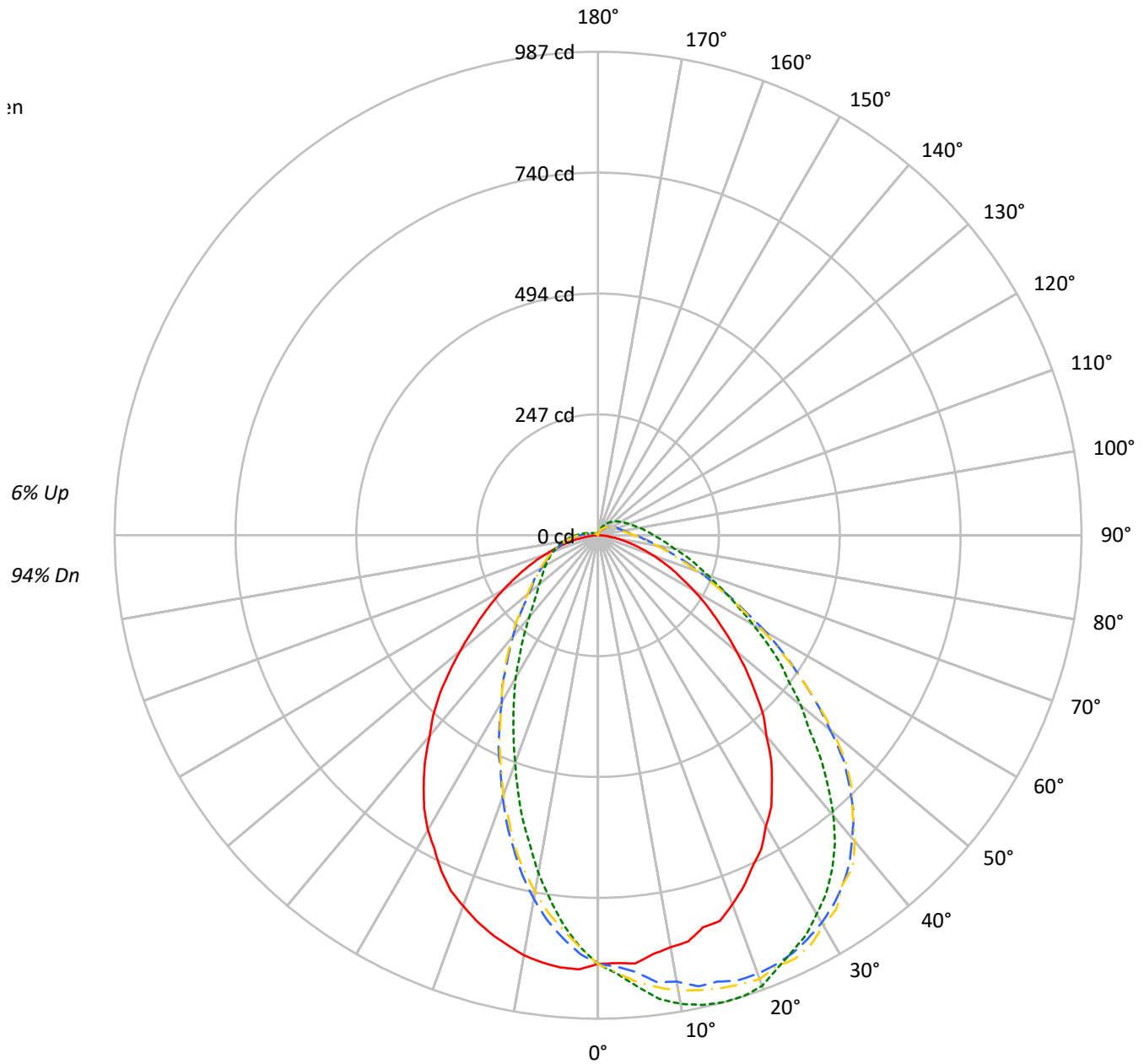
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2181.0 lumens
Efficiency: N/A
Efficacy: 130.6 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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CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-4000K

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	8912	8912	8912	8912
5°	8944	9081	9030	7849
10°	8784	9275	8956	6690
15°	8661	9242	8808	5593
20°	8594	9060	8630	4576
25°	8266	8639	8380	3765
30°	7920	8256	8022	3111
35°	7529	7791	7550	2535
40°	6929	7127	6926	2078
45°	6338	6292	6370	1771
50°	5635	5492	5609	1600
55°	4967	4810	4933	1470
60°	4356	4103	4317	1389
65°	3818	3532	3725	1319
70°	3243	3096	3133	1261
75°	2645	2814	2575	1215
80°	2041	2532	1852	1132
85°	1401	2446	1135	1061

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 8816 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.2	3.8
10°-20°	228.5	10.5
20°-30°	328.7	15.1
30°-40°	373.0	17.1
40°-50°	356.5	16.3
50°-60°	289.7	13.3
60°-70°	202.1	9.3
70°-80°	125.2	5.7
80°-90°	71.8	3.3
90°-100°	42.9	2.0
100°-110°	28.2	1.3
110°-120°	19.8	0.9
120°-130°	14.3	0.7
130°-140°	9.5	0.4
140°-150°	5.4	0.2
150°-160°	2.4	0.1
160°-170°	0.7	0.0
170°-180°	0.1	0.0
0°-30°	639.5	29.3
0°-40°	1012.5	46.4
0°-60°	1658.6	76.0
0°-90°	2057.8	94.4
90°-120°	90.9	4.2
90°-150°	120.1	5.5
90°-180°	123.0	5.6
0°-180°	2181.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	875	875	875	875	875	
5°	877	925	886	799	877	83
15°	828	987	842	597	828	235
25°	746	938	757	409	746	344
35°	619	833	621	271	619	386
45°	454	642	456	181	454	350
55°	292	453	290	138	292	263
65°	169	294	165	110	169	168
75°	75	197	73	85	75	81
85°	16	134	13	58	16	18
90°	1	113	0	44	1	1
95°	1	98	0	34	1	1
105°	1	76	0	18	1	1
115°	1	60	0	10	1	1
125°	1	49	0	7	1	1
135°	1	39	0	5	1	0
145°	1	28	0	3	1	0
155°	1	17	0	2	1	0
165°	1	8	0	1	1	0
175°	1	0	0	0	1	0
180°	0	0	0	0	0	



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CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-4000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	875.1	875.1	875.1	875.1	875.1	875.1	875.1	875.1	875.1	875.1	875.1
2.5°	874.2	880.8	881.4	902.0	896.0	903.7	894.0	895.7	887.1	884.8	855.0
5°	877.3	891.4	895.1	930.6	924.9	928.9	915.5	905.7	885.7	873.6	825.5
7.5°	862.4	899.4	920.0	945.3	954.7	957.9	930.6	912.6	879.4	849.8	793.4
10°	854.1	905.1	925.2	963.0	971.3	965.3	944.1	914.3	870.8	823.2	753.9
12.5°	849.6	908.3	943.2	981.9	982.2	975.9	951.0	918.9	856.7	794.5	712.0
15°	828.4	907.7	943.5	982.8	987.1	983.1	957.6	915.7	842.4	759.0	663.9
17.5°	826.1	906.3	952.7	994.0	986.8	983.9	961.6	914.3	825.2	722.9	618.6
20°	802.0	903.1	952.7	981.4	979.1	980.2	964.2	912.3	805.4	683.9	569.0
22.5°	776.5	899.4	948.7	970.5	956.7	977.6	952.7	906.9	785.4	643.3	519.8
25°	746.4	893.4	941.0	955.0	937.5	953.8	953.6	898.5	756.7	599.4	480.8
27.5°	722.0	883.9	928.3	949.6	919.8	933.8	941.8	888.5	722.9	556.1	434.9
30°	685.7	871.9	913.2	916.3	892.8	910.6	919.8	875.9	694.5	507.2	393.1
32.5°	657.9	858.1	894.5	890.2	866.7	890.2	905.1	863.3	660.7	464.2	363.6
35°	618.9	841.5	871.3	848.7	833.2	852.7	870.2	849.8	620.6	418.3	325.8
37.5°	581.1	826.9	843.5	815.5	794.3	816.0	854.4	824.6	580.2	381.9	297.7
40°	534.9	793.4	807.1	769.0	747.8	779.9	815.2	802.8	534.7	344.1	270.5
42.5°	500.0	768.5	772.5	720.3	695.1	729.2	769.3	771.9	497.7	310.0	246.4
45°	453.9	733.5	726.1	668.8	642.4	673.1	733.2	740.1	456.2	280.5	222.9
47.5°	412.3	694.5	679.9	612.9	583.4	619.8	686.5	704.6	409.7	253.3	200.9
50°	369.0	651.0	618.6	560.7	541.0	559.0	627.2	657.0	367.3	226.4	184.0
52.5°	329.5	602.9	562.7	510.9	491.1	506.0	565.0	609.7	325.2	203.7	169.1
55°	292.3	554.7	502.9	457.0	453.0	457.6	502.0	553.3	290.3	183.7	159.6
57.5°	259.0	496.3	449.0	415.2	408.0	411.7	442.4	495.1	256.4	163.6	145.8
60°	225.5	436.4	395.7	369.6	365.6	368.5	388.2	438.4	223.5	146.7	132.9
62.5°	195.1	376.2	340.1	330.4	327.5	327.5	335.8	381.7	192.5	129.5	123.2
65°	169.1	324.6	297.4	293.7	294.5	294.3	289.1	318.6	165.0	114.3	114.6
67.5°	142.7	269.9	254.7	259.3	262.7	261.3	250.4	265.0	139.3	100.6	106.9
70°	118.3	222.9	220.1	230.4	238.4	230.9	215.2	216.6	114.3	87.1	96.8
72.5°	95.4	180.2	193.4	207.7	215.5	207.2	185.4	179.1	92.0	74.8	87.7
75°	75.1	145.0	165.9	187.1	197.1	186.5	161.3	139.8	73.1	63.0	80.2
77.5°	57.3	114.9	141.8	166.5	176.2	167.0	140.4	109.2	53.6	53.0	72.2
80°	41.0	90.8	125.8	149.6	158.4	149.6	121.8	86.2	37.2	42.4	63.6
82.5°	26.9	70.2	109.5	136.1	145.8	135.0	105.7	66.5	23.8	34.4	57.3
85°	16.3	55.6	95.4	122.3	133.5	122.9	92.5	50.4	13.2	26.4	49.9
87.5°	7.2	43.0	85.1	112.9	122.9	113.2	82.5	39.5	5.4	20.6	42.7
90°	0.6	34.1	75.1	104.0	112.9	103.7	73.1	32.1	0.0	14.9	36.7
92.5°	0.6	29.2	68.8	96.3	106.3	96.0	65.9	26.4	0.0	10.9	30.9
95°	0.9	24.6	62.5	90.3	98.3	89.4	60.2	22.6	0.0	7.4	26.1
97.5°	0.9	22.3	57.3	84.2	93.1	83.7	55.0	20.3	0.0	5.4	21.2
100°	0.6	20.6	53.3	78.5	86.8	77.9	51.0	18.3	0.0	3.4	17.2
102.5°	0.6	19.2	49.9	73.6	80.2	72.8	47.6	17.2	0.0	2.9	14.0
105°	0.6	18.3	46.7	67.9	75.6	67.9	44.7	16.0	0.0	2.3	10.9
107.5°	0.6	17.2	44.4	64.8	71.1	64.2	42.4	15.2	0.0	2.3	8.9
110°	0.6	16.3	42.4	60.2	67.3	60.7	40.4	13.8	0.0	1.4	7.2



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CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-4000K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.6	14.9	40.4	57.0	63.9	57.3	38.7	12.6	0.0	1.4	6.3
115°	0.6	13.5	38.7	55.0	60.2	54.4	37.0	11.2	0.0	1.1	5.7
117.5°	0.6	12.6	37.5	52.4	57.6	51.9	35.5	10.6	0.0	1.1	5.4
120°	0.6	12.0	35.8	49.9	53.9	49.3	33.8	10.0	0.0	1.1	5.2
122.5°	0.6	11.5	34.4	47.6	51.9	47.3	32.4	9.7	0.0	0.9	4.6
125°	0.6	10.9	32.4	45.0	49.0	44.4	29.8	9.5	0.0	0.6	4.0
127.5°	0.6	10.3	30.4	43.0	46.7	42.4	28.1	9.2	0.0	0.6	3.7
130°	0.6	10.0	27.8	40.4	44.1	39.8	26.1	9.2	0.0	0.6	3.4
132.5°	0.6	9.7	24.9	37.8	41.8	37.2	24.1	8.9	0.0	0.6	2.9
135°	0.6	9.5	22.1	35.2	39.0	34.7	22.3	8.6	0.0	0.6	2.6
137.5°	0.6	8.9	19.5	32.4	36.1	31.8	21.2	8.0	0.0	0.6	2.3
140°	0.6	8.3	17.5	30.1	33.2	29.2	19.5	7.4	0.0	0.3	1.7
142.5°	0.6	7.4	15.8	27.2	30.4	26.6	17.5	6.3	0.0	0.3	1.7
145°	0.6	6.6	14.3	23.8	27.5	23.8	16.3	5.7	0.0	0.3	1.4
147.5°	0.6	6.0	12.9	20.1	24.9	21.8	14.6	4.9	0.0	0.3	1.1
150°	0.6	5.4	11.2	16.9	22.1	19.2	13.5	4.3	0.0	0.0	0.9
152.5°	0.6	4.9	9.7	14.0	19.8	17.5	12.0	3.7	0.0	0.0	0.6
155°	0.9	4.6	8.3	12.3	17.2	15.2	10.0	3.2	0.0	0.0	0.6
157.5°	0.9	4.0	6.9	10.0	15.2	13.2	8.0	2.6	0.0	0.0	0.3
160°	0.9	3.7	5.7	7.7	12.6	10.9	6.6	2.0	0.0	0.0	0.3
162.5°	0.9	3.4	4.9	5.7	10.3	8.6	5.2	1.4	0.0	0.0	0.3
165°	0.9	2.9	4.3	4.0	8.0	6.6	4.0	0.9	0.0	0.0	0.0
167.5°	0.9	2.6	3.4	2.9	6.0	4.9	2.9	0.6	0.0	0.0	0.0
170°	0.9	2.0	2.9	2.0	1.7	3.2	1.7	0.3	0.0	0.0	0.0
172.5°	0.9	1.7	2.3	1.4	0.6	1.7	0.9	0.0	0.0	0.0	0.0
175°	0.9	1.4	1.4	0.9	0.3	0.6	0.0	0.0	0.0	0.0	0.0
177.5°	0.9	1.1	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3



TEST NUMBER: P894157

CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	875.1	875.1	875.1	875.1	875.1	875.1
2.5°	851.0	841.5	832.9	842.1	848.7	874.2
5°	809.4	799.4	800.6	808.9	830.9	877.3
7.5°	766.5	749.8	753.9	777.1	809.7	862.4
10°	715.7	700.6	704.3	739.2	785.1	854.1
12.5°	670.5	645.0	666.7	699.7	756.4	849.6
15°	617.5	597.4	609.2	657.9	728.9	828.4
17.5°	560.2	544.7	558.7	607.2	695.1	826.1
20°	516.0	494.5	511.2	564.5	653.3	802.0
22.5°	466.5	450.1	467.6	516.6	610.6	776.5
25°	425.8	408.6	426.1	474.8	572.8	746.4
27.5°	386.2	370.5	386.2	430.9	535.2	722.0
30°	351.6	336.4	352.4	395.4	491.4	685.7
32.5°	319.2	299.7	320.3	361.9	452.7	657.9
35°	285.7	271.1	286.5	332.7	409.7	618.9
37.5°	257.9	242.7	261.0	300.6	373.3	581.1
40°	231.5	218.0	232.7	274.8	342.4	534.9
42.5°	210.9	197.4	212.3	251.3	311.2	500.0
45°	190.8	180.8	192.8	225.5	279.7	453.9
47.5°	176.2	167.6	177.6	206.6	253.3	412.3
50°	163.6	157.6	164.8	187.7	226.1	369.0
52.5°	152.4	146.4	154.7	173.1	204.6	329.5
55°	143.8	138.4	144.7	159.3	183.1	292.3
57.5°	134.4	130.9	135.8	144.7	166.2	259.0
60°	127.5	123.8	128.9	136.1	147.0	225.5
62.5°	119.8	117.8	120.9	126.6	132.4	195.1
65°	112.9	110.0	114.0	116.0	115.5	169.1
67.5°	105.4	104.6	106.9	107.2	102.9	142.7
70°	97.7	97.1	100.0	98.3	89.4	118.3
72.5°	91.4	91.4	93.1	89.7	77.9	95.4
75°	84.5	85.1	86.5	82.5	65.6	75.1
77.5°	78.2	78.8	79.1	73.6	55.0	57.3
80°	71.1	70.8	73.6	66.8	44.7	41.0
82.5°	64.8	63.6	65.3	58.5	36.1	26.9
85°	57.6	57.9	59.0	51.0	28.9	16.3
87.5°	51.9	51.9	53.0	45.0	21.8	7.2
90°	45.0	44.4	46.1	38.1	16.3	0.6
92.5°	39.3	39.3	40.4	32.7	12.0	0.6
95°	33.5	33.8	34.7	26.9	9.2	0.9
97.5°	28.7	28.9	30.1	22.9	6.6	0.9
100°	24.4	24.6	25.2	18.3	5.2	0.6
102.5°	20.3	21.2	21.2	15.2	4.0	0.6
105°	17.2	18.3	17.8	12.3	3.7	0.6
107.5°	14.3	15.5	15.5	10.0	3.7	0.6
110°	11.7	13.5	13.2	8.6	2.9	0.6



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CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-4000K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	10.0	11.5	10.6	7.4	2.9	0.6
115°	8.6	10.0	9.5	6.9	2.6	0.6
117.5°	7.7	8.6	8.6	6.6	2.6	0.6
120°	7.2	8.0	7.7	6.3	2.6	0.6
122.5°	6.6	7.2	7.2	5.7	2.3	0.6
125°	6.3	6.6	6.9	5.2	2.3	0.6
127.5°	6.0	6.6	6.6	4.9	2.0	0.6
130°	5.4	6.0	6.0	4.6	2.0	0.6
132.5°	4.9	5.4	5.4	4.3	2.0	0.6
135°	4.6	5.2	5.2	4.0	2.0	0.6
137.5°	4.3	4.6	4.6	3.7	2.0	0.6
140°	3.7	4.3	4.3	3.4	2.0	0.6
142.5°	3.4	4.0	4.0	3.2	1.7	0.6
145°	3.2	3.4	3.7	2.9	1.7	0.6
147.5°	2.6	3.2	3.4	2.6	1.7	0.6
150°	2.0	2.9	2.9	2.6	1.7	0.6
152.5°	1.4	2.6	2.6	2.3	1.4	0.6
155°	1.1	2.0	2.3	2.0	1.4	0.9
157.5°	0.9	1.7	2.0	2.0	1.4	0.9
160°	0.6	1.4	1.7	1.7	1.1	0.9
162.5°	0.3	1.1	1.4	1.7	1.1	0.9
165°	0.0	0.9	1.1	1.4	1.1	0.9
167.5°	0.0	0.6	0.9	1.1	0.9	0.9
170°	0.0	0.3	0.6	0.9	0.9	0.9
172.5°	0.0	0.0	0.3	0.6	0.6	0.9
175°	0.0	0.0	0.0	0.3	0.6	0.9
177.5°	0.0	0.0	0.0	0.3	0.6	0.9
180°	0.3	0.3	0.3	0.3	0.3	0.3



TEST NUMBER: P894157
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-4000K

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	16.52	17.98	16.97	18.41	18.86	18.78	20.24	19.23	20.67	21.12
	3H	17.34	18.66	17.81	19.10	19.60	20.48	21.79	20.94	22.24	22.73
	4H	17.54	18.79	18.03	19.25	19.76	21.31	22.56	21.80	23.02	23.53
	6H	17.63	18.79	18.13	19.26	19.79	22.19	23.34	22.69	23.82	24.34
	8H	17.64	18.74	18.15	19.23	19.77	22.66	23.76	23.18	24.26	24.79
	12H	17.62	18.68	18.14	19.17	19.73	23.20	24.26	23.72	24.75	25.31
4H	2H	16.95	18.20	17.44	18.66	19.17	19.14	20.38	19.63	20.84	21.36
	3H	18.05	19.09	18.55	19.60	20.13	21.02	22.07	21.53	22.58	23.11
	4H	18.39	19.34	18.91	19.86	20.42	22.00	22.95	22.52	23.46	24.03
	6H	18.58	19.41	19.12	19.96	20.54	23.04	23.87	23.58	24.41	25.00
	8H	18.61	19.39	19.16	19.93	20.53	23.60	24.38	24.15	24.92	25.52
	12H	18.61	19.32	19.18	19.89	20.49	24.26	24.96	24.83	25.53	26.13
8H	4H	18.72	19.50	19.27	20.04	20.64	22.14	22.92	22.69	23.46	24.06
	6H	19.04	19.69	19.62	20.28	20.88	23.31	23.96	23.89	24.55	25.15
	8H	19.13	19.72	19.72	20.32	20.93	23.99	24.58	24.58	25.18	25.79
	12H	19.18	19.71	19.78	20.29	20.98	24.81	25.33	25.40	25.92	26.60
12H	4H	18.80	19.50	19.36	20.07	20.67	22.13	22.83	22.70	23.41	24.01
	6H	19.18	19.77	19.77	20.37	20.98	23.32	23.91	23.92	24.51	25.13
	8H	19.34	19.86	19.93	20.45	21.13	24.06	24.58	24.65	25.17	25.85