

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: P894156

Luminaire Tested: 4MB-SC3-ASML-UNV-CC83-LOW-3500K

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894156
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-3500K
Description: Selectable 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 80CRI, 3500K CCT, LOW lumen setting
Light Source: -
Ballast/Driver: -

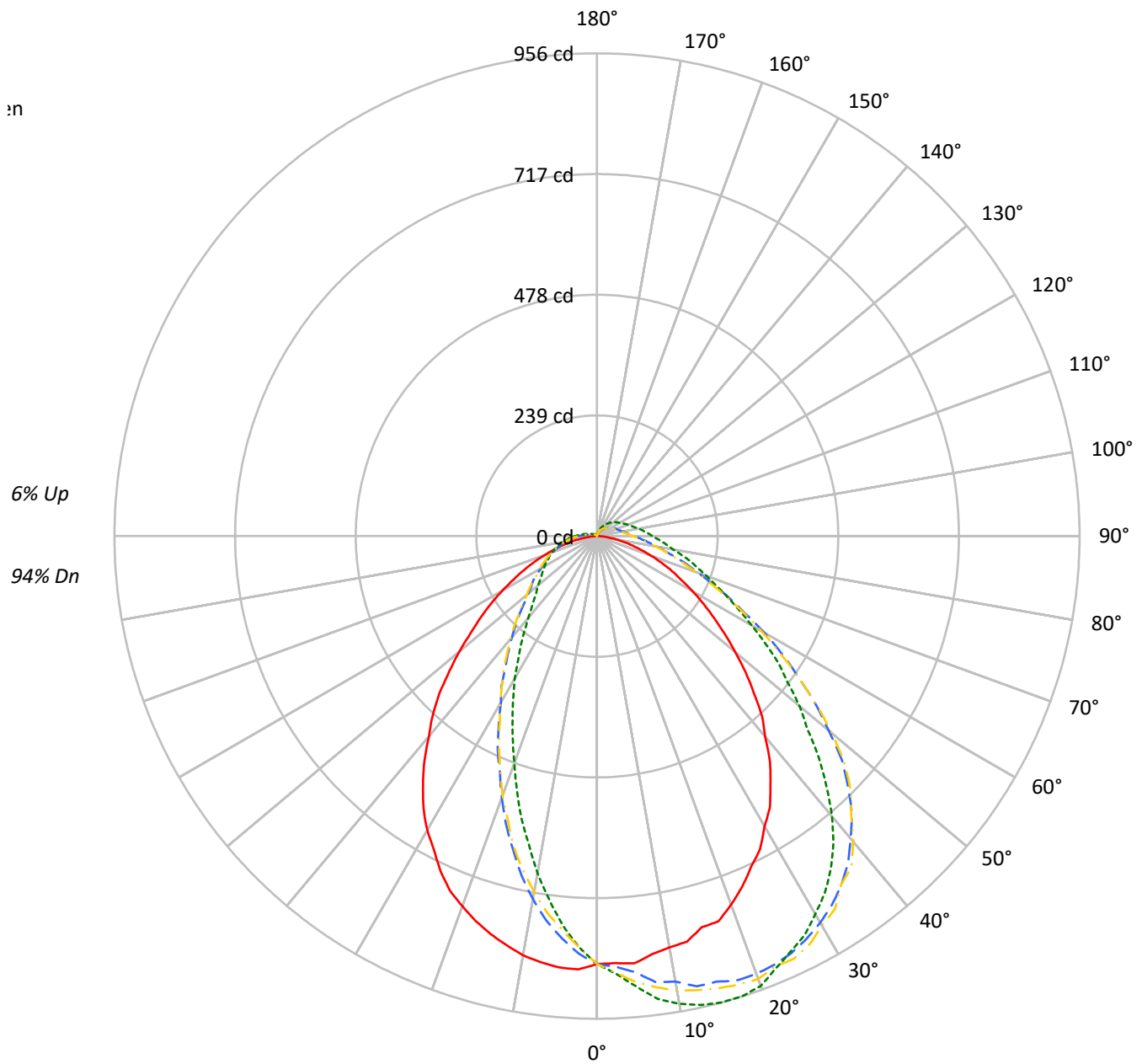
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2112.0 lumens
Efficiency: N/A
Efficacy: 126.5 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			20
RC	80				70				50			30			10			0			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	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°	8630	8630	8630	8630
5°	8662	8794	8743	7601
10°	8506	8982	8672	6478
15°	8386	8950	8529	5416
20°	8321	8773	8357	4431
25°	8005	8366	8116	3646
30°	7669	7995	7769	3012
35°	7291	7546	7311	2455
40°	6710	6902	6706	2012
45°	6137	6093	6168	1715
50°	5458	5317	5432	1549
55°	4809	4659	4777	1423
60°	4219	3973	4180	1345
65°	3696	3421	3608	1277
70°	3141	2997	3034	1222
75°	2560	2725	2494	1176
80°	1976	2452	1797	1095
85°	1358	2369	1101	1026

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 157.5°
 Vertical Angle: 45°
 Luminance: 8537 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.6	3.8
10°-20°	221.3	10.5
20°-30°	318.3	15.1
30°-40°	361.2	17.1
40°-50°	345.2	16.3
50°-60°	280.5	13.3
60°-70°	195.7	9.3
70°-80°	121.2	5.7
80°-90°	69.6	3.3
90°-100°	41.6	2.0
100°-110°	27.3	1.3
110°-120°	19.1	0.9
120°-130°	13.9	0.7
130°-140°	9.2	0.4
140°-150°	5.2	0.2
150°-160°	2.3	0.1
160°-170°	0.7	0.0
170°-180°	0.1	0.0
0°-30°	619.2	29.3
0°-40°	980.5	46.4
0°-60°	1606.2	76.0
0°-90°	1992.7	94.4
90°-120°	88.0	4.2
90°-150°	116.3	5.5
90°-180°	119.0	5.6
0°-180°	2112.0	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	847	847	847	847	847	
5°	850	896	858	774	850	80
15°	802	956	816	578	802	228
25°	723	908	733	396	723	333
35°	599	807	601	262	599	374
45°	440	622	442	175	440	339
55°	283	439	281	134	283	255
65°	164	285	160	106	164	162
75°	73	191	71	82	73	78
85°	16	129	13	56	16	18
90°	1	109	0	43	1	1
95°	1	95	0	33	1	1
105°	1	73	0	18	1	1
115°	1	58	0	10	1	1
125°	1	47	0	6	1	1
135°	1	38	0	5	1	0
145°	1	27	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
0°	847.4	847.4	847.4	847.4	847.4	847.4	847.4	847.4	847.4	847.4	847.4
2.5°	846.5	852.9	853.5	873.5	867.6	875.1	865.7	867.3	859.0	856.8	827.9
5°	849.6	863.2	866.8	901.2	895.6	899.5	886.5	877.1	857.6	846.0	799.4
7.5°	835.2	871.0	890.9	915.3	924.5	927.6	901.2	883.7	851.5	823.0	768.3
10°	827.1	876.5	895.9	932.6	940.6	934.8	914.2	885.4	843.2	797.1	730.0
12.5°	822.7	879.6	913.4	950.9	951.1	945.0	920.9	889.8	829.6	769.4	689.5
15°	802.1	879.0	913.7	951.7	955.9	952.0	927.3	886.8	815.7	735.0	642.9
17.5°	799.9	877.6	922.6	962.5	955.6	952.8	931.2	885.4	799.1	700.0	599.0
20°	776.6	874.6	922.6	950.3	948.1	949.2	933.7	883.4	779.9	662.3	551.0
22.5°	751.9	871.0	918.7	939.8	926.4	946.7	922.6	878.2	760.5	622.9	503.3
25°	722.8	865.1	911.2	924.8	907.9	923.7	923.4	870.1	732.8	580.5	465.6
27.5°	699.2	856.0	899.0	919.5	890.7	904.2	912.0	860.4	700.0	538.6	421.2
30°	664.0	844.3	884.3	887.3	864.6	881.8	890.7	848.2	672.6	491.1	380.7
32.5°	637.1	831.0	866.2	862.1	839.3	862.1	876.5	836.0	639.8	449.5	352.1
35°	599.3	814.9	843.8	821.8	806.9	825.7	842.7	823.0	601.0	405.1	315.5
37.5°	562.7	800.8	816.8	789.7	769.1	790.2	827.4	798.5	561.9	369.9	288.3
40°	518.0	768.3	781.6	744.7	724.2	755.3	789.4	777.4	517.7	333.2	261.9
42.5°	484.2	744.2	748.0	697.5	673.1	706.1	745.0	747.5	482.0	300.2	238.6
45°	439.5	710.3	703.1	647.6	622.1	651.8	710.0	716.7	441.7	271.6	215.9
47.5°	399.3	672.6	658.4	593.5	564.9	600.2	664.8	682.3	396.8	245.3	194.5
50°	357.4	630.4	599.0	543.0	523.8	541.3	607.4	636.2	355.7	219.2	178.1
52.5°	319.1	583.8	544.9	494.7	475.6	490.0	547.2	590.4	314.9	197.3	163.7
55°	283.0	537.2	486.9	442.6	438.7	443.1	486.1	535.8	281.1	177.9	154.5
57.5°	250.8	480.6	434.8	402.0	395.1	398.7	428.4	479.5	248.3	158.4	141.2
60°	218.4	422.6	383.2	357.9	354.0	356.8	376.0	424.5	216.4	142.1	128.7
62.5°	189.0	364.3	329.3	319.9	317.1	317.1	325.2	369.6	186.5	125.4	119.3
65°	163.7	314.4	288.0	284.4	285.2	285.0	280.0	308.5	159.8	110.7	111.0
67.5°	138.2	261.4	246.7	251.1	254.4	253.0	242.5	256.7	134.8	97.4	103.5
70°	114.6	215.9	213.1	223.1	230.8	223.6	208.4	209.8	110.7	84.3	93.8
72.5°	92.4	174.5	187.3	201.2	208.7	200.6	179.5	173.4	89.1	72.4	84.9
75°	72.7	140.4	160.7	181.2	190.9	180.6	156.2	135.4	70.8	61.0	77.7
77.5°	55.5	111.3	137.3	161.2	170.6	161.8	136.0	105.7	51.9	51.3	69.9
80°	39.7	88.0	121.8	144.8	153.4	144.8	117.9	83.5	36.1	41.1	61.6
82.5°	26.1	68.0	106.0	131.8	141.2	130.7	102.4	64.4	23.0	33.3	55.5
85°	15.8	53.8	92.4	118.5	129.3	119.0	89.6	48.8	12.8	25.5	48.3
87.5°	6.9	41.6	82.4	109.3	119.0	109.6	79.9	38.3	5.3	20.0	41.3
90°	0.6	33.0	72.7	100.7	109.3	100.4	70.8	31.1	0.0	14.4	35.5
92.5°	0.6	28.3	66.6	93.2	102.9	92.9	63.8	25.5	0.0	10.5	30.0
95°	0.8	23.9	60.5	87.4	95.2	86.6	58.3	21.9	0.0	7.2	25.2
97.5°	0.8	21.6	55.5	81.6	90.2	81.0	53.3	19.7	0.0	5.3	20.5
100°	0.6	20.0	51.6	76.0	84.1	75.5	49.4	17.8	0.0	3.3	16.6
102.5°	0.6	18.6	48.3	71.3	77.7	70.5	46.1	16.6	0.0	2.8	13.6
105°	0.6	17.8	45.2	65.8	73.3	65.8	43.3	15.5	0.0	2.2	10.5
107.5°	0.6	16.6	43.0	62.7	68.8	62.2	41.1	14.7	0.0	2.2	8.6
110°	0.6	15.8	41.1	58.3	65.2	58.8	39.1	13.3	0.0	1.4	6.9



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CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-3500K

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°	202.5°	225°
112.5°	0.6	14.4	39.1	55.2	61.9	55.5	37.5	12.2	0.0	1.4	6.1
115°	0.6	13.0	37.5	53.3	58.3	52.7	35.8	10.8	0.0	1.1	5.5
117.5°	0.6	12.2	36.3	50.8	55.8	50.2	34.4	10.3	0.0	1.1	5.3
120°	0.6	11.7	34.7	48.3	52.2	47.7	32.7	9.7	0.0	1.1	5.0
122.5°	0.6	11.1	33.3	46.1	50.2	45.8	31.4	9.4	0.0	0.8	4.4
125°	0.6	10.5	31.4	43.6	47.4	43.0	28.9	9.2	0.0	0.6	3.9
127.5°	0.6	10.0	29.4	41.6	45.2	41.1	27.2	8.9	0.0	0.6	3.6
130°	0.6	9.7	26.9	39.1	42.7	38.6	25.2	8.9	0.0	0.6	3.3
132.5°	0.6	9.4	24.1	36.6	40.5	36.1	23.3	8.6	0.0	0.6	2.8
135°	0.6	9.2	21.4	34.1	37.7	33.6	21.6	8.3	0.0	0.6	2.5
137.5°	0.6	8.6	18.9	31.4	35.0	30.8	20.5	7.8	0.0	0.6	2.2
140°	0.6	8.0	16.9	29.1	32.2	28.3	18.9	7.2	0.0	0.3	1.7
142.5°	0.6	7.2	15.3	26.4	29.4	25.8	16.9	6.1	0.0	0.3	1.7
145°	0.6	6.4	13.9	23.0	26.6	23.0	15.8	5.5	0.0	0.3	1.4
147.5°	0.6	5.8	12.5	19.4	24.1	21.1	14.2	4.7	0.0	0.3	1.1
150°	0.6	5.3	10.8	16.4	21.4	18.6	13.0	4.2	0.0	0.0	0.8
152.5°	0.6	4.7	9.4	13.6	19.1	16.9	11.7	3.6	0.0	0.0	0.6
155°	0.8	4.4	8.0	11.9	16.6	14.7	9.7	3.1	0.0	0.0	0.6
157.5°	0.8	3.9	6.7	9.7	14.7	12.8	7.8	2.5	0.0	0.0	0.3
160°	0.8	3.6	5.5	7.5	12.2	10.5	6.4	1.9	0.0	0.0	0.3
162.5°	0.8	3.3	4.7	5.5	10.0	8.3	5.0	1.4	0.0	0.0	0.3
165°	0.8	2.8	4.2	3.9	7.8	6.4	3.9	0.8	0.0	0.0	0.0
167.5°	0.8	2.5	3.3	2.8	5.8	4.7	2.8	0.6	0.0	0.0	0.0
170°	0.8	1.9	2.8	1.9	1.7	3.1	1.7	0.3	0.0	0.0	0.0
172.5°	0.8	1.7	2.2	1.4	0.6	1.7	0.8	0.0	0.0	0.0	0.0
175°	0.8	1.4	1.4	0.8	0.3	0.6	0.0	0.0	0.0	0.0	0.0
177.5°	0.8	1.1	0.8	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: P894156

CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
0°	847.4	847.4	847.4	847.4	847.4	847.4
2.5°	824.1	814.9	806.6	815.5	821.8	846.5
5°	783.8	774.1	775.2	783.3	804.6	849.6
7.5°	742.2	726.1	730.0	752.5	784.1	835.2
10°	693.1	678.4	682.0	715.9	760.2	827.1
12.5°	649.3	624.6	645.7	677.6	732.5	822.7
15°	597.9	578.5	589.9	637.1	705.9	802.1
17.5°	542.4	527.5	541.1	587.9	673.1	799.9
20°	499.7	478.9	495.0	546.6	632.6	776.6
22.5°	451.7	435.9	452.8	500.3	591.3	751.9
25°	412.3	395.7	412.6	459.8	554.6	722.8
27.5°	374.0	358.8	374.0	417.3	518.3	699.2
30°	340.4	325.7	341.3	382.9	475.8	664.0
32.5°	309.1	290.2	310.2	350.4	438.4	637.1
35°	276.6	262.5	277.5	322.1	396.8	599.3
37.5°	249.7	235.0	252.8	291.1	361.5	562.7
40°	224.2	211.1	225.3	266.1	331.6	518.0
42.5°	204.2	191.2	205.6	243.3	301.3	484.2
45°	184.8	175.1	186.7	218.4	270.8	439.5
47.5°	170.6	162.3	172.0	200.1	245.3	399.3
50°	158.4	152.6	159.5	181.7	218.9	357.4
52.5°	147.6	141.8	149.8	167.6	198.1	319.1
55°	139.3	134.0	140.1	154.3	177.3	283.0
57.5°	130.1	126.8	131.5	140.1	160.9	250.8
60°	123.5	119.9	124.9	131.8	142.3	218.4
62.5°	116.0	114.0	117.1	122.6	128.2	189.0
65°	109.3	106.5	110.4	112.4	111.8	163.7
67.5°	102.1	101.3	103.5	103.8	99.6	138.2
70°	94.6	94.1	96.8	95.2	86.6	114.6
72.5°	88.5	88.5	90.2	86.8	75.5	92.4
75°	81.9	82.4	83.8	79.9	63.5	72.7
77.5°	75.7	76.3	76.6	71.3	53.3	55.5
80°	68.8	68.5	71.3	64.6	43.3	39.7
82.5°	62.7	61.6	63.3	56.6	35.0	26.1
85°	55.8	56.0	57.2	49.4	28.0	15.8
87.5°	50.2	50.2	51.3	43.6	21.1	6.9
90°	43.6	43.0	44.7	36.9	15.8	0.6
92.5°	38.0	38.0	39.1	31.6	11.7	0.6
95°	32.5	32.7	33.6	26.1	8.9	0.8
97.5°	27.7	28.0	29.1	22.2	6.4	0.8
100°	23.6	23.9	24.4	17.8	5.0	0.6
102.5°	19.7	20.5	20.5	14.7	3.9	0.6
105°	16.6	17.8	17.2	11.9	3.6	0.6
107.5°	13.9	15.0	15.0	9.7	3.6	0.6
110°	11.4	13.0	12.8	8.3	2.8	0.6



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CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-LOW-3500K

CANDELA DISTRIBUTION (continued):

	247.5°	270°	292.5°	315°	337.5°	360°
112.5°	9.7	11.1	10.3	7.2	2.8	0.6
115°	8.3	9.7	9.2	6.7	2.5	0.6
117.5°	7.5	8.3	8.3	6.4	2.5	0.6
120°	6.9	7.8	7.5	6.1	2.5	0.6
122.5°	6.4	6.9	6.9	5.5	2.2	0.6
125°	6.1	6.4	6.7	5.0	2.2	0.6
127.5°	5.8	6.4	6.4	4.7	1.9	0.6
130°	5.3	5.8	5.8	4.4	1.9	0.6
132.5°	4.7	5.3	5.3	4.2	1.9	0.6
135°	4.4	5.0	5.0	3.9	1.9	0.6
137.5°	4.2	4.4	4.4	3.6	1.9	0.6
140°	3.6	4.2	4.2	3.3	1.9	0.6
142.5°	3.3	3.9	3.9	3.1	1.7	0.6
145°	3.1	3.3	3.6	2.8	1.7	0.6
147.5°	2.5	3.1	3.3	2.5	1.7	0.6
150°	1.9	2.8	2.8	2.5	1.7	0.6
152.5°	1.4	2.5	2.5	2.2	1.4	0.6
155°	1.1	1.9	2.2	1.9	1.4	0.8
157.5°	0.8	1.7	1.9	1.9	1.4	0.8
160°	0.6	1.4	1.7	1.7	1.1	0.8
162.5°	0.3	1.1	1.4	1.7	1.1	0.8
165°	0.0	0.8	1.1	1.4	1.1	0.8
167.5°	0.0	0.6	0.8	1.1	0.8	0.8
170°	0.0	0.3	0.6	0.8	0.8	0.8
172.5°	0.0	0.0	0.3	0.6	0.6	0.8
175°	0.0	0.0	0.0	0.3	0.6	0.8
177.5°	0.0	0.0	0.0	0.3	0.6	0.8
180°	0.3	0.3	0.3	0.3	0.3	0.3



TEST NUMBER: P894156
 CATALOG NUMBER: 4MB-SC3-ASML-UNV-CC83-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	16.41	17.87	16.86	18.30	18.75	18.66	20.12	19.12	20.55	21.01
	3H	17.23	18.55	17.69	18.99	19.49	20.36	21.68	20.83	22.13	22.62
	4H	17.43	18.67	17.92	19.13	19.65	21.20	22.45	21.69	22.91	23.42
	6H	17.52	18.67	18.02	19.15	19.68	22.08	23.23	22.58	23.71	24.23
	8H	17.52	18.62	18.04	19.12	19.66	22.55	23.65	23.06	24.15	24.68
	12H	17.51	18.57	18.03	19.06	19.62	23.09	24.15	23.61	24.64	25.20
4H	2H	16.84	18.08	17.33	18.54	19.06	19.03	20.27	19.52	20.73	21.25
	3H	17.94	18.98	18.44	19.49	20.02	20.91	21.96	21.41	22.46	23.00
	4H	18.28	19.23	18.80	19.74	20.31	21.89	22.83	22.41	23.35	23.92
	6H	18.47	19.30	19.01	19.84	20.43	22.93	23.76	23.47	24.30	24.88
	8H	18.50	19.28	19.05	19.82	20.41	23.49	24.27	24.04	24.81	25.41
	12H	18.50	19.21	19.07	19.78	20.38	24.15	24.85	24.72	25.42	26.02
8H	4H	18.61	19.39	19.16	19.93	20.52	22.03	22.81	22.58	23.35	23.94
	6H	18.93	19.58	19.51	20.17	20.77	23.20	23.85	23.78	24.44	25.04
	8H	19.02	19.61	19.61	20.21	20.82	23.88	24.47	24.47	25.07	25.68
	12H	19.07	19.60	19.67	20.18	20.87	24.69	25.22	25.29	25.80	26.49
12H	4H	18.68	19.39	19.25	19.96	20.56	22.02	22.72	22.59	23.30	23.89
	6H	19.07	19.66	19.66	20.26	20.87	23.21	23.80	23.81	24.40	25.01
	8H	19.22	19.75	19.82	20.33	21.02	23.95	24.47	24.54	25.06	25.74