

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: P893555

Luminaire Tested: 4MB-4SL-RND-UNV-L840

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P893555
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2403-327-1)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-4SL-RND-UNV-L840
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with ROUND FROSTED LENS, 80CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

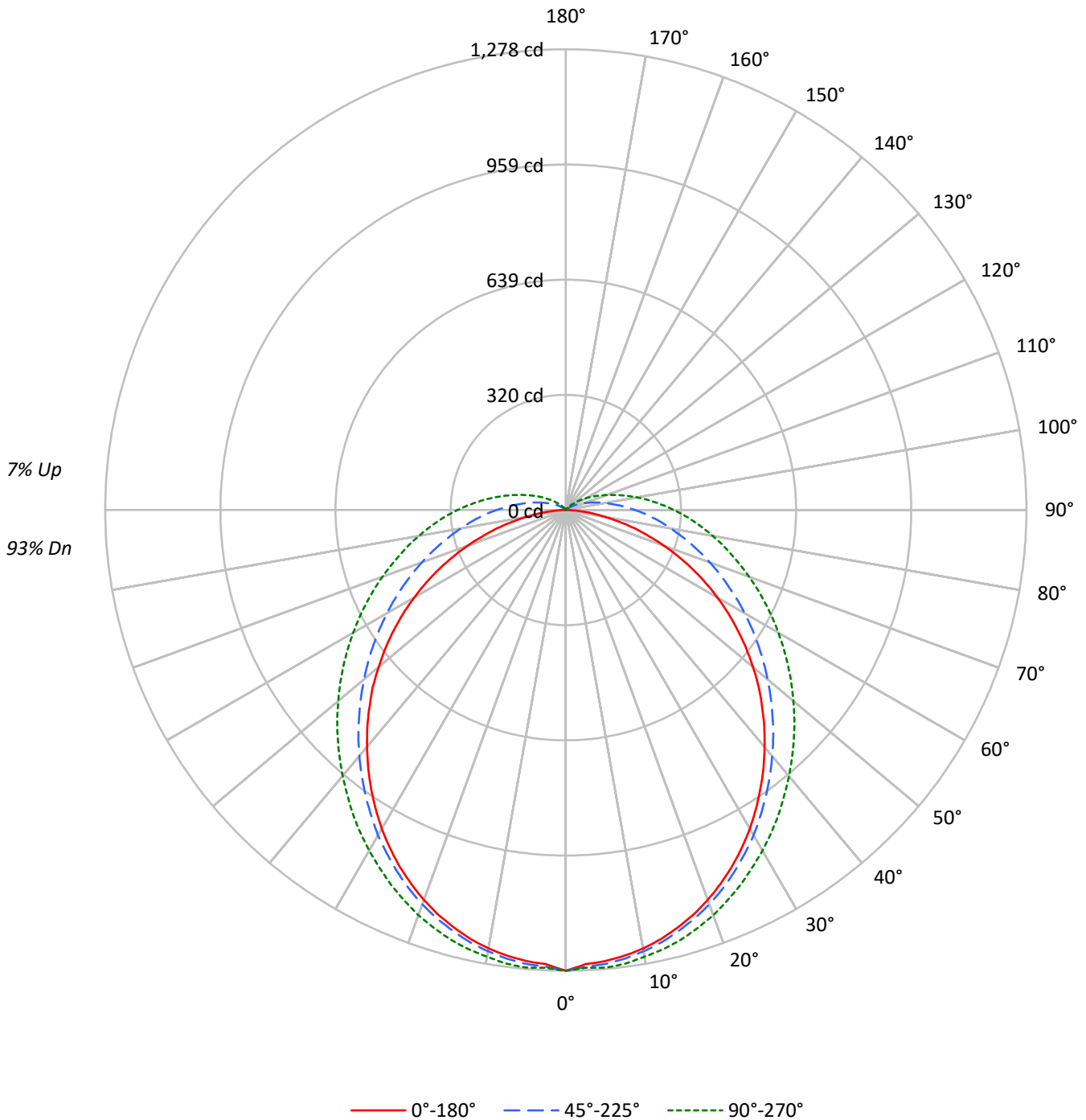
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4230.9 lumens
Efficiency: N/A
Efficacy: 142.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.35
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 29.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 5.5
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P893555
CATALOG NUMBER: 4MB-4SL-RND-UNV-L840

Luminous Intensity Polar Plot





TEST NUMBER: P893555
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	120.9	2.9
10°-20°	344.4	8.1
20°-30°	515.7	12.2
30°-40°	614.9	14.5
40°-50°	637.7	15.1
50°-60°	591.6	14.0
60°-70°	493.5	11.7
70°-80°	367.9	8.7
80°-90°	245.0	5.8
90°-100°	149.2	3.5
100°-110°	83.3	2.0
110°-120°	41.6	1.0
120°-130°	17.4	0.4
130°-140°	5.5	0.1
140°-150°	1.4	0.0
150°-160°	0.6	0.0
160°-170°	0.4	0.0
170°-180°	0.1	0.0
0°-30°	980.9	23.2
0°-40°	1595.8	37.7
0°-60°	2825.1	66.8
0°-90°	3931.5	92.9
90°-120°	274.0	6.5
90°-150°	298.3	7.0
90°-180°	299.0	7.1
0°-180°	4230.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1278	1278	1278	1278	1278	
5°	1256	1285	1264	1271	1274	119
15°	1199	1230	1209	1231	1234	338
25°	1091	1120	1107	1138	1147	502
35°	942	967	968	1016	1030	589
45°	770	790	811	875	895	594
55°	583	603	651	727	753	521
65°	388	419	497	581	610	384
75°	199	254	358	445	475	210
85°	46	126	242	325	356	52
90°	2	83	192	271	300	3
95°	0	51	148	222	248	0
105°	0	16	81	137	158	0
115°	1	4	38	77	92	1
125°	1	1	15	37	46	1
135°	1	1	4	13	17	1
145°	1	1	1	3	4	1
155°	2	2	1	1	1	1
165°	2	2	1	1	1	1
175°	2	2	2	1	0	0
180°	2	2	2	2	2	



TEST NUMBER: P893555
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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1
2.5°	1261.1	1263.1	1281.1	1280.1	1277.1	1289.1	1292.1	1282.1	1266.1	1282.1	1268.1
5°	1256.1	1258.1	1276.1	1275.1	1272.1	1285.1	1286.1	1277.1	1261.1	1277.1	1264.1
7.5°	1247.1	1249.1	1267.1	1266.1	1264.1	1277.1	1276.1	1269.1	1252.1	1269.1	1255.1
10°	1235.1	1236.1	1255.1	1253.1	1252.1	1265.1	1262.1	1256.1	1239.1	1256.1	1243.1
12.5°	1219.1	1220.1	1239.1	1237.1	1237.1	1249.1	1245.1	1240.1	1223.1	1239.1	1228.1
15°	1199.1	1200.1	1218.1	1217.1	1217.1	1230.1	1224.1	1220.1	1204.1	1221.1	1209.1
17.5°	1177.1	1176.1	1195.1	1193.1	1195.1	1207.1	1199.1	1197.1	1182.1	1198.1	1188.1
20°	1151.1	1151.1	1168.1	1167.1	1170.1	1181.1	1171.1	1172.1	1157.1	1174.1	1164.1
22.5°	1122.1	1121.1	1138.1	1138.1	1141.1	1152.1	1141.1	1144.1	1129.1	1145.1	1137.1
25°	1091.1	1089.1	1106.1	1106.1	1111.1	1120.1	1108.1	1112.1	1098.1	1114.1	1107.1
27.5°	1057.1	1054.1	1071.1	1072.1	1076.1	1085.1	1072.1	1078.1	1065.1	1080.1	1075.1
30°	1021.1	1018.1	1035.1	1036.1	1041.1	1048.1	1035.1	1043.1	1031.1	1046.1	1042.1
32.5°	982.1	980.1	996.1	998.1	1003.1	1008.1	996.1	1004.1	994.1	1009.1	1005.1
35°	942.1	940.1	955.1	958.1	963.1	967.1	954.1	965.1	956.1	970.1	968.1
37.5°	901.1	898.1	914.1	916.1	922.1	924.1	912.1	925.1	917.1	931.1	930.1
40°	858.0	855.0	871.1	873.1	879.1	879.1	869.1	883.1	877.1	890.1	891.1
42.5°	815.0	812.0	826.0	830.0	835.0	835.0	825.0	840.0	836.0	849.0	852.0
45°	770.0	767.0	780.0	784.0	790.0	790.0	780.0	797.0	794.0	807.0	811.0
47.5°	726.0	722.0	734.0	738.0	744.0	743.0	735.0	752.0	751.0	764.0	771.0
50°	678.0	675.0	687.0	691.0	698.0	696.0	690.0	708.0	708.0	721.0	731.0
52.5°	631.0	628.0	640.0	644.0	650.0	650.0	644.0	663.0	666.0	679.0	691.0
55°	583.0	579.0	591.0	595.0	602.0	603.0	598.0	617.0	623.0	638.0	651.0
57.5°	535.0	533.0	543.0	547.0	556.0	556.0	553.0	573.0	581.0	597.0	612.0
60°	486.0	484.0	493.0	498.0	508.0	510.0	508.0	529.0	540.0	556.0	573.0
62.5°	437.0	435.0	444.0	451.0	462.0	464.0	465.0	487.0	499.0	516.0	535.0
65°	388.0	386.0	395.0	403.0	416.0	419.0	422.0	445.0	459.0	477.0	497.0
67.5°	339.0	338.0	347.0	357.0	371.0	375.0	380.0	404.0	420.0	439.0	461.0
70°	291.0	290.0	299.0	311.0	328.0	333.0	339.0	363.0	383.0	403.0	425.0
72.5°	243.0	244.0	254.0	268.0	287.0	292.0	300.0	325.0	347.0	368.0	391.0
75°	199.0	199.0	210.0	226.0	247.0	254.0	263.0	289.0	312.0	334.0	358.0
77.5°	154.0	154.0	167.0	187.0	210.0	217.0	228.0	255.0	280.0	302.0	326.0
80°	113.0	115.0	130.0	150.0	174.0	183.0	196.0	223.0	250.0	272.0	296.0
82.5°	77.0	80.0	96.0	119.0	143.0	152.0	165.0	194.0	221.0	244.0	269.0
85°	46.0	51.0	68.0	91.0	116.0	126.0	140.0	167.0	194.0	217.0	242.0
87.5°	21.0	28.0	46.0	69.0	93.0	104.0	116.0	142.0	169.0	192.0	218.0
90°	2.0	12.0	30.0	50.0	73.0	83.0	95.0	120.0	146.0	167.0	192.0
92.5°	0.0	5.0	18.0	36.0	56.0	66.0	77.0	101.0	124.0	145.0	169.0
95°	0.0	2.0	10.0	25.0	42.0	51.0	61.0	83.0	106.0	126.0	148.0
97.5°	0.0	1.0	6.0	17.0	31.0	39.0	48.0	68.0	89.0	108.0	128.0
100°	0.0	1.0	3.0	11.0	23.0	29.0	38.0	55.0	74.0	91.0	111.0
102.5°	0.0	0.0	2.0	7.0	17.0	22.0	29.0	44.0	61.0	77.0	95.0
105°	0.0	0.0	1.0	5.0	12.0	16.0	22.0	35.0	50.0	64.0	81.0
107.5°	0.0	0.0	1.0	3.0	8.0	12.0	17.0	27.0	40.0	53.0	68.0
110°	1.0	1.0	1.0	2.0	6.0	9.0	12.0	21.0	33.0	44.0	57.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	1.0	1.0	1.0	1.0	4.0	6.0	9.0	16.0	26.0	35.0	47.0
115°	1.0	1.0	1.0	1.0	3.0	4.0	6.0	12.0	20.0	28.0	38.0
117.5°	1.0	1.0	1.0	1.0	2.0	3.0	4.0	9.0	15.0	22.0	31.0
120°	1.0	1.0	1.0	1.0	1.0	2.0	3.0	6.0	12.0	17.0	25.0
122.5°	1.0	1.0	1.0	1.0	1.0	2.0	2.0	5.0	9.0	13.0	19.0
125°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	6.0	10.0	15.0
127.5°	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	4.0	7.0	11.0
130°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	5.0	8.0
132.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	4.0	6.0
135°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	3.0	4.0
137.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	3.0
140°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0
142.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0
145°	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
147.5°	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
150°	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
152.5°	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0
155°	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0
157.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
160°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
162.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0
165°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0
167.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0
170°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
172.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0
175°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
177.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
180°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1	1278.1
2.5°	1272.1	1275.1	1278.1	1270.1	1275.1	1284.1	1287.1	1275.1	1279.1	1271.1
5°	1268.1	1270.1	1274.1	1264.1	1271.1	1279.1	1284.1	1274.1	1280.1	1274.1
7.5°	1260.1	1262.1	1267.1	1257.1	1266.1	1273.1	1279.1	1269.1	1275.1	1269.1
10°	1248.1	1251.1	1258.1	1246.1	1257.1	1263.1	1269.1	1258.1	1264.1	1258.1
12.5°	1233.1	1238.1	1244.1	1233.1	1244.1	1249.1	1257.1	1246.1	1253.1	1248.1
15°	1215.1	1220.1	1228.1	1217.1	1231.1	1235.1	1243.1	1232.1	1239.1	1234.1
17.5°	1194.1	1200.1	1210.1	1197.1	1213.1	1216.1	1224.1	1214.1	1221.1	1216.1
20°	1170.1	1176.1	1186.1	1174.1	1190.1	1192.1	1201.1	1192.1	1199.1	1196.1
22.5°	1142.1	1149.1	1159.1	1148.1	1165.1	1165.1	1176.1	1167.1	1175.1	1172.1
25°	1113.1	1121.1	1132.1	1120.1	1138.1	1138.1	1150.1	1141.1	1149.1	1147.1
27.5°	1082.1	1091.1	1104.1	1092.1	1110.1	1109.1	1121.1	1113.1	1122.1	1119.1
30°	1049.1	1059.1	1072.1	1062.1	1081.1	1079.1	1091.1	1084.1	1092.1	1091.1
32.5°	1013.1	1024.1	1040.1	1029.1	1048.1	1046.1	1061.1	1053.1	1063.1	1061.1
35°	977.1	989.1	1005.1	995.1	1016.1	1013.1	1028.1	1021.1	1031.1	1030.1
37.5°	940.1	953.1	969.1	961.1	981.1	978.1	994.1	988.1	999.1	996.1
40°	902.1	915.1	932.1	925.1	946.1	942.1	959.1	954.1	965.1	963.1
42.5°	864.1	878.1	895.1	891.1	911.1	907.1	924.1	920.1	931.1	929.1
45°	825.0	840.0	858.0	854.0	875.1	871.1	888.1	885.1	896.1	895.1
47.5°	786.0	802.0	820.0	818.0	838.0	834.0	852.0	849.0	860.1	860.1
50°	746.0	764.0	782.0	781.0	801.0	797.0	813.0	813.0	825.0	824.0
52.5°	706.0	725.0	744.0	744.0	764.0	760.0	778.0	777.0	789.0	789.0
55°	668.0	685.0	704.0	708.0	727.0	721.0	740.0	742.0	752.0	753.0
57.5°	630.0	648.0	667.0	672.0	690.0	686.0	704.0	706.0	716.0	717.0
60°	592.0	609.0	628.0	635.0	653.0	649.0	667.0	669.0	680.0	681.0
62.5°	554.0	571.0	592.0	599.0	616.0	613.0	632.0	634.0	644.0	646.0
65°	517.0	535.0	555.0	565.0	581.0	577.0	596.0	598.0	609.0	610.0
67.5°	481.0	499.0	519.0	530.0	545.0	543.0	561.0	565.0	574.0	576.0
70°	446.0	464.0	485.0	496.0	511.0	510.0	527.0	530.0	540.0	541.0
72.5°	412.0	430.0	451.0	464.0	477.0	476.0	493.0	497.0	507.0	508.0
75°	379.0	398.0	418.0	432.0	445.0	444.0	461.0	465.0	474.0	475.0
77.5°	348.0	367.0	388.0	402.0	413.0	414.0	429.0	433.0	442.0	445.0
80°	319.0	337.0	357.0	372.0	382.0	384.0	398.0	403.0	410.0	414.0
82.5°	291.0	309.0	329.0	343.0	353.0	355.0	368.0	374.0	381.0	384.0
85°	264.0	282.0	301.0	316.0	325.0	326.0	339.0	345.0	351.0	356.0
87.5°	238.0	256.0	274.0	290.0	298.0	300.0	312.0	318.0	323.0	328.0
90°	212.0	230.0	248.0	263.0	271.0	272.0	285.0	291.0	296.0	300.0
92.5°	188.0	206.0	224.0	239.0	246.0	248.0	259.0	266.0	270.0	274.0
95°	165.0	183.0	199.0	215.0	222.0	225.0	235.0	241.0	246.0	248.0
97.5°	145.0	161.0	176.0	192.0	198.0	201.0	211.0	218.0	222.0	224.0
100°	126.0	141.0	155.0	170.0	176.0	179.0	188.0	194.0	198.0	201.0
102.5°	109.0	123.0	136.0	150.0	156.0	158.0	166.0	172.0	176.0	179.0
105°	94.0	107.0	119.0	132.0	137.0	140.0	147.0	152.0	156.0	158.0
107.5°	80.0	93.0	103.0	115.0	120.0	122.0	129.0	135.0	138.0	139.0
110°	68.0	79.0	89.0	99.0	105.0	107.0	113.0	118.0	121.0	122.0



TEST NUMBER: P893555
 CATALOG NUMBER: 4MB-4SL-RND-UNV-L840

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	57.0	67.0	76.0	85.0	90.0	92.0	98.0	103.0	105.0	106.0
115°	47.0	57.0	64.0	73.0	77.0	79.0	84.0	89.0	90.0	92.0
117.5°	38.0	47.0	54.0	61.0	65.0	67.0	71.0	75.0	77.0	78.0
120°	31.0	38.0	44.0	51.0	54.0	56.0	60.0	64.0	65.0	66.0
122.5°	25.0	31.0	36.0	42.0	45.0	47.0	50.0	53.0	54.0	55.0
125°	19.0	25.0	29.0	34.0	37.0	38.0	41.0	44.0	45.0	46.0
127.5°	15.0	19.0	23.0	27.0	29.0	30.0	33.0	35.0	36.0	37.0
130°	11.0	14.0	17.0	21.0	23.0	24.0	26.0	28.0	29.0	29.0
132.5°	8.0	11.0	13.0	16.0	17.0	18.0	20.0	22.0	22.0	23.0
135°	5.0	7.0	9.0	11.0	13.0	13.0	15.0	16.0	17.0	17.0
137.5°	4.0	5.0	6.0	8.0	9.0	10.0	10.0	12.0	12.0	12.0
140°	3.0	4.0	4.0	5.0	6.0	7.0	7.0	8.0	8.0	8.0
142.5°	2.0	3.0	3.0	4.0	4.0	5.0	5.0	5.0	6.0	6.0
145°	2.0	2.0	2.0	3.0	3.0	3.0	3.0	4.0	4.0	4.0
147.5°	1.0	1.0	2.0	2.0	2.0	2.0	2.0	3.0	3.0	3.0
150°	1.0	1.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0
152.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
155°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
157.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
160°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
162.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
165°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
167.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
170°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
172.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
175°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
177.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
180°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0



TEST NUMBER: P893555
 CATALOG NUMBER: 4MB-4SL-RND-UNV-L840

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	17.96	19.49	18.43	19.95	20.44	19.53	21.06	20.00	21.52	22.01
	3H	19.63	21.04	20.12	21.50	22.03	22.15	23.56	22.64	24.02	24.55
	4H	20.23	21.56	20.74	22.05	22.59	23.46	24.80	23.97	25.28	25.82
	6H	20.63	21.87	21.15	22.37	22.92	24.87	26.11	25.39	26.61	27.16
	8H	20.75	21.93	21.28	22.46	23.02	25.62	26.81	26.15	27.33	27.89
	12H	20.82	21.96	21.36	22.48	23.07	26.47	27.61	27.00	28.12	28.72
4H	2H	18.88	20.21	19.39	20.70	21.24	20.08	21.41	20.58	21.89	22.44
	3H	20.86	22.00	21.38	22.53	23.09	23.00	24.13	23.51	24.66	25.22
	4H	21.64	22.68	22.18	23.22	23.81	24.52	25.56	25.06	26.10	26.69
	6H	22.22	23.14	22.78	23.70	24.31	26.16	27.08	26.72	27.65	28.26
	8H	22.40	23.27	22.96	23.83	24.45	27.04	27.91	27.61	28.48	29.10
	12H	22.53	23.31	23.11	23.91	24.53	28.05	28.84	28.63	29.43	30.06
8H	4H	22.52	23.39	23.08	23.95	24.57	24.88	25.75	25.44	26.31	26.93
	6H	23.40	24.14	23.99	24.74	25.37	26.78	27.52	27.38	28.13	28.75
	8H	23.75	24.41	24.35	25.03	25.67	27.87	28.53	28.47	29.15	29.79
	12H	24.02	24.61	24.63	25.22	25.93	29.13	29.73	29.74	30.33	31.04
12H	4H	22.80	23.58	23.38	24.18	24.80	24.92	25.71	25.51	26.30	26.93
	6H	23.85	24.52	24.45	25.13	25.77	26.89	27.56	27.50	28.18	28.82
	8H	24.37	24.96	24.98	25.57	26.27	28.09	28.68	28.70	29.29	30.00