

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



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242914

Luminaire Tested: S125RDRP-S610D835-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242914
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-32)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDRP-S610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

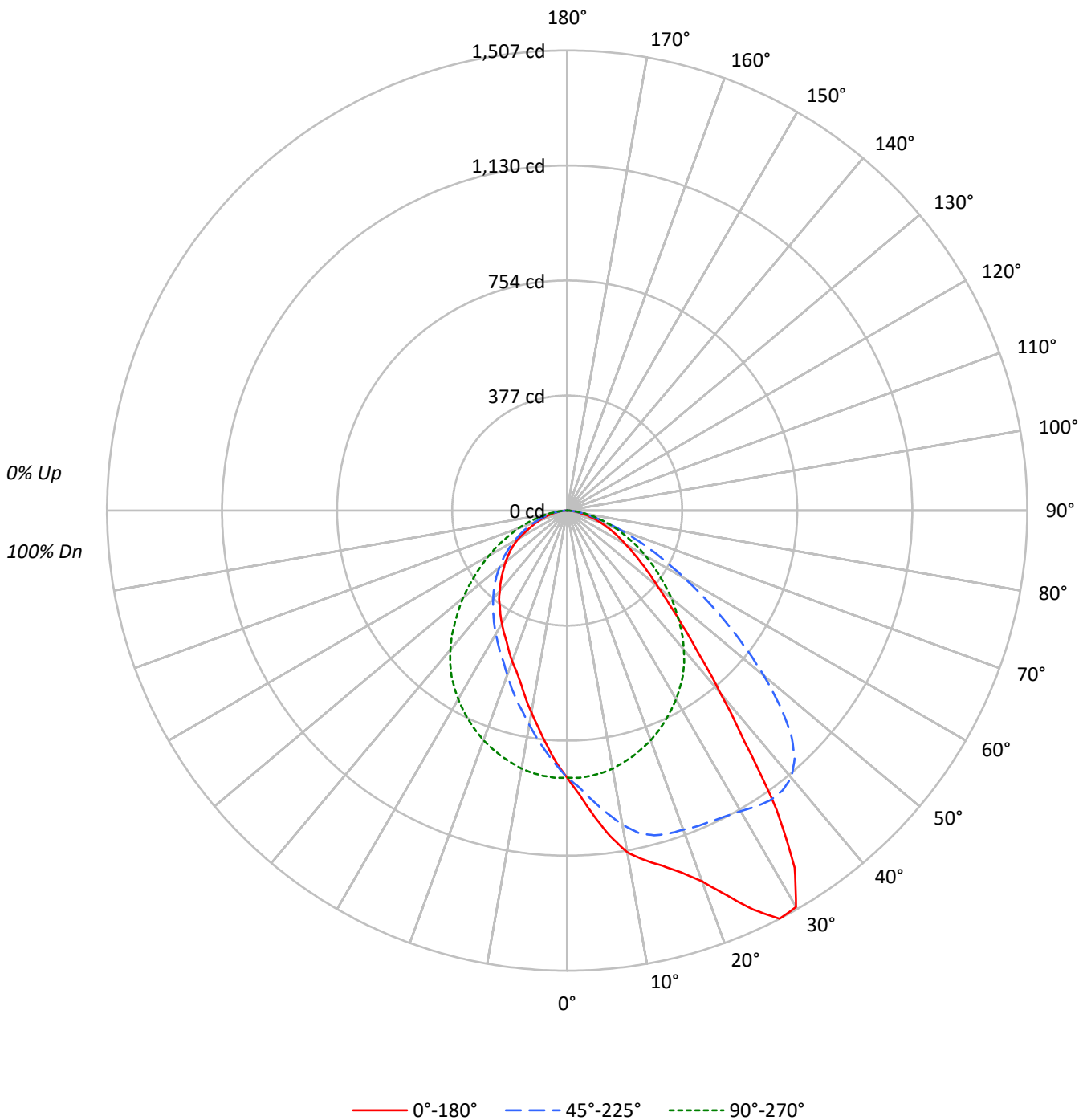
Lumens per Lamp: N/A
Luminaire Lumens: 2265.8 lumens
Efficiency: N/A
Efficacy: 120.5 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.21 / 1.48
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
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





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	69	78	72	67	76	70	66	73	69	65	63				63
4	85	74	66	59	83	73	65	59	70	63	58	68	62	57	66	61	57	55				55
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	60	54	50	48				48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	44	54	49	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	50	44	39	37				37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	42	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	6215	6215	6215	6215	6215
5°	7151	6798	6223	5656	5496
10°	8203	7540	6192	5140	4850
15°	8860	8101	6129	4720	4311
20°	9770	8412	6055	4334	3981
25°	11306	8797	5957	4051	3694
30°	12303	9328	5854	3827	3506
35°	10379	10054	5734	3650	3333
40°	7248	10598	5519	3497	3184
45°	5376	10428	5229	3352	3039
50°	4287	9292	4926	3195	2914
55°	3639	7803	4550	3033	2803
60°	3143	6323	4215	2847	2623
65°	2802	5047	3851	2639	2259
70°	2462	3871	3529	2394	2059
75°	2128	2889	3056	2128	1933
80°	1617	2071	2570	1895	1617
85°	1346	1460	2022	1606	1525

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10428 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	3.7
10°-20°	245.9	10.9
20°-30°	389.8	17.2
30°-40°	471.1	20.8
40°-50°	419.5	18.5
50°-60°	321.6	14.2
60°-70°	208.9	9.2
70°-80°	101.4	4.5
80°-90°	23.8	1.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	719.5	31.8
0°-40°	1190.6	52.5
0°-60°	1931.7	85.3
0°-90°	2265.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2265.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	874	874	874	874	874	
5°	1002	953	872	793	770	100
15°	1204	1101	833	642	586	345
25°	1442	1122	760	517	471	664
35°	1196	1159	661	421	384	725
45°	535	1038	520	334	302	424
55°	294	630	367	245	226	266
65°	167	300	229	157	134	165
75°	78	105	111	78	70	83
85°	16	18	25	20	19	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5
2.5°	931.2	930.5	931.9	928.0	928.4	922.2	922.2	917.6	911.5	906.8	904.7
5°	1002.3	1003.0	1001.6	996.2	992.6	987.2	981.1	970.4	961.4	952.8	945.9
7.5°	1074.8	1075.5	1070.9	1069.8	1060.5	1054.7	1041.1	1027.1	1014.9	998.7	987.2
10°	1136.6	1136.2	1131.2	1127.2	1119.3	1109.3	1096.0	1078.8	1062.6	1044.7	1027.4
12.5°	1172.5	1171.4	1170.7	1165.6	1158.5	1149.8	1139.1	1122.2	1101.4	1081.3	1060.5
15°	1204.1	1201.5	1196.9	1190.8	1180.4	1170.0	1157.4	1142.3	1123.3	1101.0	1082.4
17.5°	1242.1	1242.5	1235.3	1228.8	1215.2	1198.0	1179.3	1156.3	1131.9	1109.3	1090.6
20°	1291.7	1290.6	1283.4	1266.9	1250.7	1227.8	1205.5	1175.7	1144.1	1112.2	1087.4
22.5°	1362.7	1359.5	1352.0	1329.0	1301.7	1270.5	1233.5	1195.4	1155.6	1118.3	1083.8
25°	1441.7	1439.6	1424.8	1399.7	1364.5	1318.9	1274.4	1224.5	1169.6	1121.8	1082.4
27.5°	1507.0	1502.7	1489.5	1465.8	1431.3	1382.1	1320.7	1256.1	1190.8	1128.0	1073.7
30°	1499.1	1504.5	1503.1	1493.4	1469.0	1425.9	1370.3	1295.2	1213.8	1136.6	1068.7
32.5°	1386.4	1391.1	1407.2	1433.5	1441.4	1430.6	1392.5	1324.7	1239.6	1149.1	1064.8
35°	1196.2	1202.6	1227.0	1265.4	1315.7	1357.7	1366.3	1329.0	1253.2	1158.8	1060.8
37.5°	954.2	996.2	1012.7	1051.8	1130.8	1207.3	1273.7	1288.8	1247.9	1156.7	1056.2
40°	781.2	789.8	826.4	872.0	935.9	1016.3	1122.2	1198.7	1201.2	1142.3	1041.1
42.5°	640.4	651.9	674.2	708.3	760.7	841.1	951.3	1058.3	1116.1	1102.8	1021.3
45°	534.9	543.2	561.5	589.5	631.5	697.9	791.9	908.6	1001.2	1037.5	982.9
47.5°	452.3	456.6	473.5	496.1	528.4	578.7	655.2	760.7	870.9	944.5	930.1
50°	387.7	392.7	404.9	421.1	447.3	488.2	546.4	630.7	745.3	840.4	859.4
52.5°	337.5	341.4	347.9	362.9	383.4	412.5	456.6	530.9	631.1	733.8	784.0
55°	293.7	296.5	302.6	311.2	328.5	351.1	391.7	444.4	527.7	629.7	694.3
57.5°	256.3	257.8	261.3	270.0	282.5	299.4	330.3	378.4	438.7	534.5	605.6
60°	221.1	222.6	227.6	233.0	242.3	257.4	280.4	311.6	369.0	444.8	516.9
62.5°	193.1	193.9	195.3	200.7	208.6	219.3	236.2	260.3	303.0	367.2	434.4
65°	166.6	166.9	167.6	172.0	177.0	185.6	197.4	215.4	249.9	300.1	360.4
67.5°	140.0	140.7	143.2	144.7	150.8	155.1	162.6	177.0	203.5	239.4	288.3
70°	118.5	118.1	120.6	122.4	124.2	129.6	134.3	145.4	160.5	186.3	225.4
72.5°	98.4	97.3	98.0	98.4	100.9	104.1	108.8	114.5	125.3	141.1	168.7
75°	77.5	77.9	77.9	78.6	80.4	81.9	83.3	86.9	93.3	105.2	121.3
77.5°	58.2	57.4	59.2	59.2	60.7	62.5	63.5	65.0	67.5	72.9	82.6
80°	39.5	39.5	39.8	40.9	40.6	41.3	43.1	44.5	47.7	50.6	53.5
82.5°	28.0	27.6	28.0	28.0	28.0	28.7	29.1	29.1	29.8	30.9	32.7
85°	16.5	16.5	16.9	16.9	17.2	17.2	17.6	17.6	17.6	17.9	18.3
87.5°	7.9	7.5	7.2	7.2	7.5	8.3	7.9	7.5	7.5	7.5	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5
2.5°	904.7	902.1	897.5	893.2	887.8	883.1	879.9	875.9	870.9	864.8	859.8
5°	938.4	930.5	920.1	911.1	899.6	890.7	881.3	872.3	863.4	851.9	841.8
7.5°	975.7	960.3	945.9	927.3	910.4	895.7	881.3	866.6	852.6	836.8	822.1
10°	1009.5	989.7	967.8	942.7	919.7	897.8	877.7	858.0	837.2	818.9	799.1
12.5°	1041.1	1014.2	988.3	954.9	926.2	898.2	871.3	845.4	822.8	797.7	776.1
15°	1057.6	1032.5	1004.5	965.7	927.3	895.0	864.8	832.9	805.2	778.7	755.0
17.5°	1067.3	1040.7	1008.4	970.7	929.4	889.2	851.2	817.1	785.5	755.0	728.8
20°	1063.0	1037.5	1004.1	968.6	923.7	881.3	839.3	800.6	764.3	731.6	703.3
22.5°	1052.6	1026.0	994.0	956.0	914.0	868.4	822.8	780.8	742.4	708.3	676.7
25°	1042.2	1006.3	973.2	936.6	896.0	851.5	805.2	759.6	719.1	684.6	650.9
27.5°	1032.1	988.7	947.7	912.6	869.1	828.9	783.7	736.7	694.3	659.5	625.0
30°	1017.4	967.1	920.8	879.5	839.0	801.3	758.9	713.3	669.5	633.3	598.1
32.5°	999.1	944.9	892.8	843.6	804.9	767.5	730.2	687.1	644.7	607.1	571.2
35°	984.4	916.1	860.9	810.2	766.8	730.5	696.1	660.9	618.2	579.4	544.6
37.5°	963.9	888.9	826.4	771.1	725.9	690.0	662.3	629.0	589.1	551.4	519.1
40°	945.6	858.7	788.7	734.1	686.0	647.6	622.1	594.8	559.3	524.5	492.2
42.5°	921.2	831.1	750.7	693.2	644.7	608.1	582.3	559.3	530.9	498.6	463.5
45°	887.8	793.7	711.5	650.5	601.7	565.4	541.4	520.2	497.6	467.4	437.3
47.5°	847.9	758.2	671.7	604.5	557.5	523.4	499.7	482.1	465.6	439.4	408.9
50°	798.0	712.2	628.2	563.6	512.6	480.7	458.8	445.5	430.8	407.5	383.0
52.5°	739.2	664.9	583.0	516.6	469.2	439.8	418.9	405.7	394.2	376.2	353.2
55°	676.7	609.6	534.2	474.2	430.1	399.9	379.8	367.2	360.1	343.9	325.6
57.5°	606.0	554.3	486.1	427.6	387.7	357.6	342.5	331.3	323.1	311.2	297.6
60°	531.3	497.6	438.0	383.0	347.1	318.8	305.5	296.5	289.0	279.3	269.2
62.5°	455.6	433.3	383.4	338.2	305.9	283.2	271.0	263.1	254.2	248.4	238.7
65°	389.5	367.6	331.7	294.7	264.2	245.2	236.2	229.0	223.7	216.5	209.7
67.5°	316.3	306.2	279.7	252.0	229.8	211.4	203.5	197.8	191.7	187.4	182.4
70°	249.9	245.6	228.0	211.1	190.6	179.1	172.0	169.8	161.9	157.6	154.4
72.5°	191.0	189.5	181.3	170.9	158.0	148.3	141.8	139.3	135.0	131.7	130.0
75°	138.9	139.6	137.9	130.3	124.9	118.5	112.7	111.3	107.7	104.8	103.0
77.5°	94.8	98.4	97.6	97.3	94.8	90.1	87.6	86.5	82.6	81.5	81.1
80°	60.3	64.3	67.8	67.5	66.8	65.7	63.9	62.8	61.0	60.0	59.2
82.5°	35.2	38.8	41.6	44.2	44.2	43.1	42.0	41.6	41.6	40.9	40.9
85°	19.0	19.7	20.8	23.3	25.1	25.5	25.1	24.8	23.7	24.1	24.4
87.5°	8.3	8.3	8.6	8.6	8.3	10.1	11.1	11.5	10.8	10.1	9.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5	874.5
2.5°	856.2	851.2	847.6	840.4	835.4	833.2	829.3	828.2	832.1	829.3	828.9
5°	834.3	823.9	815.6	807.4	798.4	792.7	784.0	782.6	780.4	777.2	776.5
7.5°	808.8	795.9	786.2	772.5	761.4	752.4	741.7	737.4	735.2	731.3	724.8
10°	783.0	766.8	752.4	738.8	724.1	712.2	701.5	693.2	687.8	682.8	680.6
12.5°	757.5	741.0	721.6	704.3	687.5	673.8	661.6	657.0	650.9	644.7	639.0
15°	730.9	709.0	688.9	669.9	655.9	641.5	630.0	622.1	613.2	610.6	601.0
17.5°	702.5	682.1	658.4	637.9	622.1	607.1	594.5	585.2	578.3	568.6	564.0
20°	676.3	650.9	627.9	609.6	591.6	573.0	560.0	552.5	546.0	538.5	534.9
22.5°	648.3	623.6	599.9	577.6	559.3	541.0	532.7	524.8	517.3	510.5	505.5
25°	621.1	595.9	571.2	548.9	529.9	516.6	505.8	496.8	492.9	486.1	481.0
27.5°	593.8	567.2	542.1	518.7	504.0	490.7	482.1	474.9	467.4	461.3	456.6
30°	567.6	540.3	512.3	494.7	478.9	466.3	456.6	449.8	444.4	439.0	435.8
32.5°	541.4	513.0	488.9	469.6	454.8	444.4	434.4	427.9	422.2	416.1	412.1
35°	513.0	484.3	464.2	445.5	430.8	420.7	413.9	404.6	399.9	395.6	391.7
37.5°	487.5	460.2	438.0	421.8	408.2	398.5	389.5	384.8	378.7	375.1	371.9
40°	458.8	434.4	414.6	397.4	388.1	376.9	368.7	362.2	357.9	352.9	349.3
42.5°	432.9	410.7	391.7	376.6	364.4	355.4	347.5	341.0	335.3	332.1	329.2
45°	408.9	386.3	367.6	353.2	342.5	333.5	325.2	322.0	314.8	310.5	309.1
47.5°	383.8	363.3	345.0	331.7	320.6	312.3	304.4	297.2	293.7	289.3	287.2
50°	358.3	338.9	322.0	309.1	298.3	289.0	281.8	277.5	272.1	268.2	265.3
52.5°	332.8	315.2	298.3	286.1	277.1	267.8	259.6	255.2	250.2	248.1	246.3
55°	308.7	289.7	275.3	263.1	253.4	244.8	237.3	233.0	229.8	227.2	226.5
57.5°	281.1	265.7	252.0	241.2	230.8	222.6	215.8	211.8	208.9	208.6	206.1
60°	254.2	240.5	228.3	216.5	207.9	200.3	194.6	189.9	187.0	186.7	186.0
62.5°	227.2	214.3	203.2	193.1	185.6	178.4	173.0	167.6	166.2	164.1	162.3
65°	200.7	188.8	179.5	171.2	163.0	156.9	151.5	148.3	144.3	142.2	138.2
67.5°	174.5	164.8	155.8	149.0	142.2	136.1	131.4	126.7	123.9	122.1	118.8
70°	148.6	141.4	132.5	124.9	119.9	115.2	111.6	106.3	104.5	103.0	101.6
72.5°	124.2	118.1	110.9	105.2	100.2	95.9	91.5	89.7	88.0	86.5	85.8
75°	101.6	95.5	89.0	84.7	81.1	77.5	75.4	73.6	72.9	72.5	71.1
77.5°	79.0	75.4	70.0	66.1	63.5	62.1	60.0	59.2	59.6	57.8	57.4
80°	57.1	55.3	51.0	49.5	47.7	46.3	45.2	43.4	41.6	40.9	39.8
82.5°	38.8	37.0	35.9	33.4	32.0	31.2	30.2	29.8	30.5	29.4	29.1
85°	22.6	20.8	20.1	19.7	19.0	19.7	19.4	19.0	18.7	18.3	18.7
87.5°	9.0	9.0	8.6	9.3	8.3	8.6	8.6	8.3	8.3	8.3	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P242914

CATALOG NUMBER: S125RDRP-S610D835-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	874.5	874.5	874.5	874.5
2.5°	828.6	824.6	823.5	825.0
5°	772.9	769.3	771.1	770.4
7.5°	725.9	721.2	715.8	717.3
10°	676.0	672.4	670.2	672.0
12.5°	634.0	632.2	630.4	629.0
15°	596.6	592.3	590.5	585.9
17.5°	560.7	559.3	554.6	551.4
20°	529.5	528.1	523.4	526.3
22.5°	503.7	500.1	499.4	497.6
25°	479.6	474.9	473.2	471.0
27.5°	455.2	452.7	450.2	449.5
30°	431.5	429.0	427.2	427.2
32.5°	410.3	408.5	406.7	406.4
35°	389.9	387.0	386.3	384.1
37.5°	368.3	365.8	365.8	366.2
40°	347.9	346.1	345.7	343.2
42.5°	326.0	325.2	323.8	323.1
45°	306.6	304.1	304.1	302.3
47.5°	286.1	284.0	284.3	282.2
50°	265.7	264.6	264.2	263.5
52.5°	245.2	244.8	246.6	244.8
55°	227.2	226.2	228.3	226.2
57.5°	206.1	205.3	207.5	206.1
60°	185.2	183.1	184.2	184.5
62.5°	160.5	159.4	160.1	158.0
65°	137.5	136.4	135.0	134.3
67.5°	119.5	116.3	116.3	117.0
70°	99.4	99.4	99.1	99.1
72.5°	85.4	85.1	84.4	84.0
75°	71.1	71.4	70.7	70.4
77.5°	55.6	53.8	54.6	53.8
80°	39.8	39.5	40.6	39.5
82.5°	29.4	29.1	29.4	28.7
85°	19.0	18.7	18.3	18.7
87.5°	8.3	7.9	7.9	7.9
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P242914
 CATALOG NUMBER: S125RDRP-S610D835-X4F0-XX-UDD-A-W

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	15.97	17.51	16.34	17.82	18.13	16.95	18.49	17.32	18.80	19.11
	3H	17.10	18.48	17.48	18.80	19.17	18.43	19.81	18.81	20.13	20.49
	4H	17.48	18.78	17.88	19.12	19.50	18.94	20.23	19.34	20.58	20.96
	6H	17.72	18.91	18.13	19.27	19.67	19.29	20.48	19.70	20.85	21.24
	8H	17.77	18.91	18.20	19.30	19.70	19.39	20.52	19.81	20.91	21.31
	12H	17.80	18.89	18.23	19.27	19.70	19.44	20.53	19.87	20.91	21.34
4H	2H	17.56	18.85	17.96	19.20	19.58	17.80	19.09	18.20	19.44	19.82
	3H	18.63	19.70	19.04	20.10	20.50	19.46	20.53	19.87	20.93	21.33
	4H	19.01	19.97	19.44	20.39	20.83	20.05	21.01	20.48	21.42	21.86
	6H	19.27	20.10	19.72	20.55	21.01	20.47	21.31	20.93	21.75	22.21
	8H	19.33	20.11	19.79	20.55	21.02	20.60	21.38	21.06	21.82	22.29
	12H	19.37	20.07	19.86	20.55	21.02	20.68	21.38	21.16	21.85	22.33
8H	4H	19.39	20.17	19.85	20.61	21.08	20.19	20.98	20.66	21.42	21.89
	6H	19.69	20.34	20.19	20.83	21.30	20.71	21.36	21.21	21.85	22.32
	8H	19.78	20.36	20.30	20.87	21.36	20.89	21.47	21.40	21.97	22.46
	12H	19.86	20.38	20.37	20.87	21.43	21.02	21.53	21.53	22.03	22.59
12H	4H	19.41	20.11	19.89	20.59	21.06	20.18	20.88	20.67	21.36	21.83
	6H	19.72	20.30	20.24	20.81	21.30	20.70	21.28	21.22	21.79	22.28
	8H	19.86	20.37	20.36	20.86	21.42	20.92	21.43	21.43	21.92	22.49