

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: P243769

Luminaire Tested: S125RDRP-H610D830-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243769
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-71)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125RDRP-H610D830-X4F0-XX-UDD-A-W
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

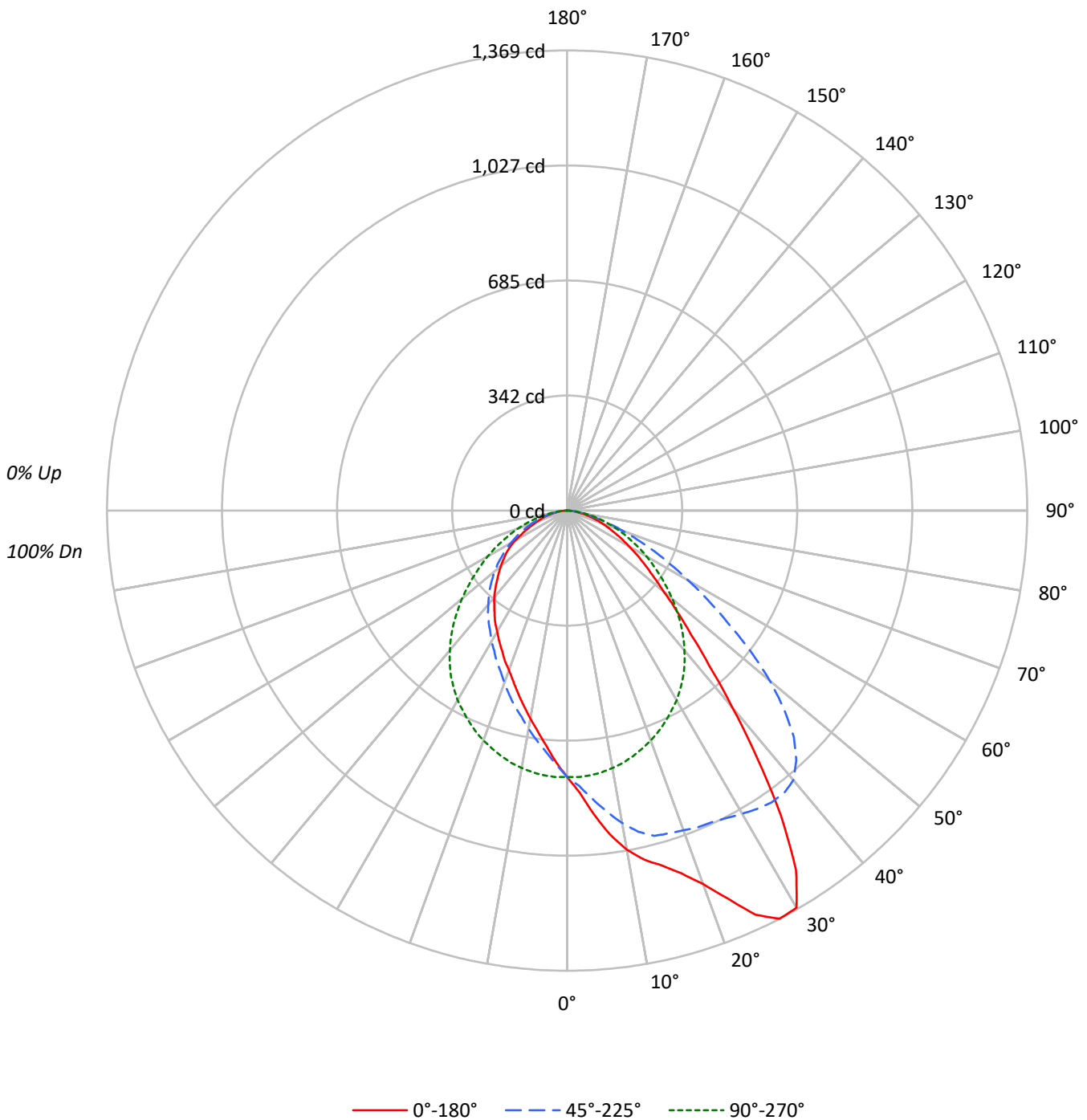
Lumens per Lamp: N/A
Luminaire Lumens: 2108.7 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Spacing Criteria (0/90/45): 1.42 / 1.22 / 1.5
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
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	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				
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75					73				
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65					63				
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56					54				
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50					48				
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44					42				
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39					37				
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35					33				
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32					30				
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29					27				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5632	5632	5632	5632	5632
5°	6465	6141	5640	5142	5016
10°	7396	6814	5612	4760	4535
15°	8045	7372	5566	4432	4147
20°	8939	7654	5503	4125	3821
25°	10403	8017	5425	3888	3597
30°	11201	8547	5345	3687	3414
35°	9622	9194	5226	3527	3266
40°	7089	9715	5037	3385	3130
45°	5236	9584	4804	3259	2968
50°	4148	8699	4516	3123	2848
55°	3504	7260	4185	2932	2741
60°	3019	5930	3876	2751	2537
65°	2620	4786	3530	2526	2208
70°	2298	3637	3231	2286	1933
75°	1950	2650	2828	2018	1829
80°	1518	1916	2366	1776	1518
85°	1329	1411	1892	1509	1386

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9584 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	3.6
10°-20°	225.6	10.7
20°-30°	359.9	17.1
30°-40°	437.0	20.7
40°-50°	393.8	18.7
50°-60°	302.8	14.4
60°-70°	196.5	9.3
70°-80°	94.5	4.5
80°-90°	22.4	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°	661.8	31.4
0°-40°	1098.8	52.1
0°-60°	1795.3	85.1
0°-90°	2108.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2108.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	792	792	792	792	792	
5°	906	861	790	721	703	90
15°	1093	1002	756	602	564	313
25°	1326	1022	692	496	459	607
35°	1109	1060	602	406	376	678
45°	521	954	478	324	295	414
55°	283	586	338	237	221	256
65°	156	285	210	150	131	156
75°	71	96	103	74	67	76
85°	16	17	23	18	17	19
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°	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4
2.5°	838.2	841.4	838.9	840.4	837.9	836.7	833.5	828.8	824.1	819.7	819.4
5°	906.1	905.5	902.9	899.5	897.0	890.7	887.5	876.9	869.6	860.8	856.4
7.5°	970.8	969.2	965.5	960.8	958.6	950.4	941.6	928.1	916.8	902.9	892.6
10°	1024.8	1024.5	1021.7	1018.6	1010.1	1001.0	992.5	978.3	961.4	944.1	929.6
12.5°	1064.4	1062.9	1059.4	1054.1	1047.1	1040.9	1029.6	1016.7	995.9	978.3	958.6
15°	1093.3	1092.7	1087.7	1085.8	1072.3	1063.5	1048.4	1035.5	1019.5	1001.9	980.5
17.5°	1131.7	1132.9	1128.5	1117.8	1105.6	1092.1	1070.7	1049.7	1027.4	1006.9	989.7
20°	1181.9	1178.8	1171.2	1158.4	1136.4	1119.7	1098.4	1072.3	1042.1	1012.0	987.1
22.5°	1249.2	1245.7	1233.8	1218.1	1190.4	1159.9	1127.3	1088.3	1053.7	1019.2	986.5
25°	1326.5	1319.9	1302.3	1285.3	1246.0	1213.7	1165.0	1118.5	1068.2	1022.3	985.6
27.5°	1368.6	1368.6	1360.4	1341.8	1310.7	1263.0	1213.3	1151.5	1093.3	1030.5	978.3
30°	1364.8	1362.6	1365.7	1357.9	1337.8	1301.9	1252.6	1187.6	1113.4	1041.5	979.0
32.5°	1267.4	1268.3	1287.2	1300.1	1310.1	1301.3	1269.3	1210.5	1136.7	1052.2	976.5
35°	1109.0	1111.6	1144.9	1166.8	1211.8	1237.5	1245.1	1213.3	1147.1	1059.7	972.1
37.5°	928.1	928.1	966.7	1000.0	1050.3	1113.8	1161.2	1173.1	1140.8	1059.4	968.3
40°	764.1	763.1	793.6	834.5	888.2	958.2	1028.9	1089.6	1097.4	1047.1	955.1
42.5°	625.2	623.6	656.9	679.6	736.1	798.6	892.6	978.3	1027.4	1009.1	935.6
45°	520.9	519.6	541.3	567.1	607.0	672.0	750.9	846.1	928.4	953.5	899.2
47.5°	442.4	443.0	454.6	476.3	510.2	556.7	627.4	715.7	817.5	875.6	853.3
50°	375.1	377.3	386.1	402.5	427.3	464.7	525.3	605.1	709.7	786.7	791.4
52.5°	324.9	328.0	337.4	346.2	367.0	393.3	440.5	509.6	596.0	688.4	721.3
55°	282.8	284.3	289.7	299.1	314.5	336.5	370.7	423.5	503.6	585.9	644.1
57.5°	247.6	247.6	251.0	257.6	269.9	289.7	312.6	356.3	423.8	498.3	560.2
60°	212.4	213.6	216.2	223.4	231.5	246.6	268.9	296.6	355.0	417.2	483.8
62.5°	182.9	185.0	187.6	191.0	198.6	209.2	225.0	250.4	289.7	347.2	406.5
65°	155.8	158.0	158.3	162.4	167.5	176.3	188.2	206.7	239.4	284.6	333.7
67.5°	132.0	132.9	133.8	137.0	141.7	147.3	155.2	169.0	194.8	225.3	273.0
70°	110.6	111.2	111.5	115.0	117.2	122.2	126.3	135.1	151.4	175.0	212.1
72.5°	90.5	89.5	89.2	92.1	93.0	97.1	102.1	108.4	117.2	133.8	161.5
75°	71.0	71.3	71.6	73.2	73.5	75.4	78.5	82.6	86.7	96.5	114.0
77.5°	54.7	53.4	53.4	55.3	55.9	56.2	58.4	60.6	62.8	68.5	75.4
80°	37.1	37.7	37.7	37.7	38.0	38.6	39.9	41.8	43.4	46.8	48.1
82.5°	26.4	26.4	26.1	26.7	27.0	27.3	27.3	27.3	28.3	29.2	30.5
85°	16.3	16.7	15.7	16.3	16.7	16.7	16.7	16.7	17.6	17.3	17.6
87.5°	6.9	7.2	7.2	7.5	7.5	7.9	7.5	7.9	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°	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4
2.5°	818.4	814.7	812.8	809.0	804.0	800.8	797.7	793.3	789.8	784.5	779.8
5°	848.6	841.0	834.1	824.7	815.6	807.7	799.6	790.5	782.3	773.2	763.4
7.5°	882.2	870.3	855.8	839.2	825.0	812.8	798.9	785.4	773.2	758.7	745.5
10°	914.6	895.4	876.2	853.9	833.2	815.0	796.4	777.6	761.6	743.7	727.3
12.5°	939.7	921.5	892.9	865.2	838.2	814.7	791.4	768.5	747.4	727.6	708.2
15°	961.7	931.5	907.3	877.2	844.2	812.1	783.2	756.5	731.1	707.8	688.0
17.5°	968.0	941.0	914.6	879.4	843.9	807.4	774.1	742.4	714.1	688.4	666.1
20°	967.3	940.0	911.4	877.8	840.1	800.2	763.1	727.6	695.6	666.1	642.2
22.5°	957.9	931.5	902.6	868.7	830.4	789.2	750.3	711.0	676.1	645.3	620.8
25°	947.9	914.6	884.4	850.2	813.7	775.7	734.2	691.8	655.4	623.3	595.7
27.5°	939.1	899.2	862.1	828.5	791.1	756.9	715.7	671.4	634.0	600.4	571.8
30°	924.9	882.8	837.9	801.1	765.0	729.2	691.5	651.3	610.4	576.2	547.6
32.5°	912.7	859.6	810.9	769.4	733.3	701.9	665.7	627.1	587.2	554.5	523.7
35°	899.2	835.7	784.8	736.1	700.0	665.7	637.1	602.3	562.7	528.1	500.5
37.5°	883.1	811.2	752.8	703.1	665.7	630.6	604.8	573.7	537.9	503.6	476.3
40°	865.2	786.1	718.8	667.6	627.4	592.2	570.5	542.9	512.4	478.5	453.0
42.5°	842.6	759.4	688.0	632.1	587.5	555.8	534.1	511.2	483.2	453.7	426.0
45°	814.0	726.1	651.3	592.2	548.2	517.4	494.8	477.9	455.6	427.9	401.8
47.5°	779.2	691.2	613.6	552.3	509.9	480.4	459.3	442.4	425.4	401.5	376.7
50°	733.0	651.3	576.8	514.3	469.4	440.8	421.9	408.4	393.0	373.6	350.9
52.5°	682.1	606.4	533.5	475.0	431.7	403.1	383.6	372.3	360.7	344.7	325.2
55°	623.0	561.4	492.0	434.8	392.4	364.1	348.7	337.7	328.0	315.7	299.4
57.5°	560.5	506.5	446.1	393.3	353.4	326.7	313.2	304.1	296.0	287.2	273.6
60°	494.8	456.5	399.3	350.9	316.1	294.1	281.2	272.7	265.2	257.9	247.9
62.5°	426.3	394.6	351.9	310.7	279.6	258.9	249.5	242.2	234.4	228.1	220.9
65°	356.9	338.7	309.1	270.5	241.9	225.0	215.8	209.9	206.1	198.9	193.2
67.5°	293.8	283.7	258.6	232.5	210.5	195.1	186.6	182.2	178.1	174.7	168.4
70°	233.7	226.5	212.1	193.5	176.3	163.1	156.8	155.5	149.9	146.4	143.3
72.5°	178.1	176.3	164.3	156.1	146.4	136.0	131.3	128.8	125.0	121.9	120.6
75°	126.6	129.4	125.7	121.6	116.9	108.4	104.3	103.0	99.6	98.7	97.1
77.5°	86.4	90.5	91.7	89.9	87.7	84.8	82.0	80.7	77.3	76.7	75.7
80°	54.4	60.3	62.5	62.2	61.3	61.6	58.1	57.8	56.2	55.3	56.2
82.5°	33.0	36.1	40.2	41.2	39.9	40.5	39.6	38.3	38.3	39.0	37.7
85°	17.9	18.2	20.1	21.4	22.9	24.2	22.9	23.2	22.9	22.9	22.0
87.5°	7.9	8.2	8.2	7.9	8.5	9.1	10.4	11.0	10.7	9.7	8.5
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°	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4	792.4
2.5°	776.0	773.8	770.0	766.9	759.7	754.7	754.0	754.3	753.7	753.1	752.8
5°	757.2	749.9	743.0	737.1	728.9	720.7	716.9	715.4	714.8	711.3	713.2
7.5°	737.1	726.1	717.9	706.6	696.8	689.9	683.3	680.2	679.6	674.9	673.6
10°	715.7	702.5	690.2	678.9	669.2	659.5	651.6	648.8	645.0	641.2	635.6
12.5°	694.6	678.3	664.8	652.2	639.0	628.0	621.8	617.7	613.0	609.5	607.6
15°	669.5	655.7	639.0	625.5	612.0	602.3	593.8	586.3	581.9	579.0	571.2
17.5°	646.9	628.7	613.0	600.1	585.3	574.3	565.5	559.2	551.7	546.0	541.0
20°	622.7	603.8	589.4	574.0	558.9	545.4	534.4	529.4	524.0	518.7	515.9
22.5°	596.6	580.3	563.9	547.9	531.9	517.4	510.5	503.3	498.6	493.3	489.5
25°	574.0	556.1	539.8	521.8	504.3	495.8	486.3	479.1	475.3	470.0	465.9
27.5°	549.8	532.5	513.0	494.5	484.1	469.7	463.4	457.8	452.7	447.4	444.6
30°	527.2	507.1	487.6	473.1	459.6	449.3	443.3	436.4	429.5	427.0	423.2
32.5°	503.3	481.6	464.7	450.2	438.9	426.3	420.7	415.0	408.4	405.3	401.8
35°	478.5	457.4	440.8	427.6	416.0	406.5	400.3	394.3	390.2	385.5	383.0
37.5°	452.4	434.2	418.2	405.0	394.3	386.8	378.9	374.2	368.5	364.1	362.2
40°	427.6	411.3	395.9	383.6	373.9	364.8	357.8	351.9	348.4	344.7	341.5
42.5°	405.3	388.3	375.1	362.2	353.4	344.7	337.7	333.3	327.4	325.8	321.4
45°	381.4	365.7	352.5	340.6	331.5	324.2	316.1	310.7	307.0	303.2	301.6
47.5°	357.2	342.8	330.5	319.5	310.1	301.9	295.6	290.0	285.9	282.4	280.6
50°	333.7	321.1	308.8	298.2	288.4	282.4	274.9	268.6	265.5	261.7	259.5
52.5°	308.8	298.5	285.3	276.2	267.0	259.2	251.7	247.6	244.4	241.3	239.7
55°	285.6	274.6	263.3	253.5	244.7	236.6	230.6	227.5	223.4	221.5	221.2
57.5°	261.7	250.4	241.0	232.2	222.1	215.8	210.5	206.7	203.3	201.7	201.7
60°	235.6	226.5	217.7	208.0	200.8	193.5	187.9	185.4	181.9	181.3	179.1
62.5°	211.8	203.3	194.8	185.7	179.1	171.9	167.8	164.3	162.4	159.9	157.4
65°	186.9	179.4	171.2	163.4	158.0	150.2	146.4	142.3	140.1	137.3	134.2
67.5°	163.1	155.8	148.3	141.1	136.7	129.1	126.6	121.6	120.0	116.9	114.0
70°	137.9	132.9	126.9	119.7	115.9	110.0	107.4	102.7	100.2	98.3	96.8
72.5°	116.2	111.5	104.6	99.9	95.2	91.4	87.3	85.1	82.9	81.4	81.1
75°	94.9	88.9	84.8	80.4	77.3	73.5	71.6	70.1	69.1	68.2	67.2
77.5°	72.6	70.1	66.0	61.6	59.1	57.5	56.2	55.6	54.7	54.4	53.4
80°	54.0	50.6	48.1	46.5	44.6	43.4	42.4	40.2	39.0	38.3	37.7
82.5°	35.8	34.9	33.0	31.4	29.8	29.5	28.6	28.0	27.6	27.6	27.3
85°	21.7	19.2	19.2	18.9	18.9	18.5	17.9	17.9	17.3	18.2	18.2
87.5°	8.8	8.8	8.2	8.2	8.5	7.9	7.5	7.5	7.5	7.2	7.5
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: P243769

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CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	792.4	792.4	792.4	792.4
2.5°	752.8	751.2	751.5	749.6
5°	709.7	708.8	705.6	703.1
7.5°	670.5	666.4	666.1	663.5
10°	633.7	629.9	628.0	628.4
12.5°	601.6	597.6	597.6	595.0
15°	567.4	563.3	563.9	563.6
17.5°	539.1	536.3	534.1	532.2
20°	511.5	508.0	506.8	505.2
22.5°	486.0	483.5	483.8	483.8
25°	461.8	462.2	459.3	458.7
27.5°	440.5	439.8	439.2	438.0
30°	420.4	417.9	417.2	416.0
32.5°	399.6	399.3	396.8	397.7
35°	378.6	377.6	377.0	376.4
37.5°	359.1	357.2	356.9	356.3
40°	339.3	338.7	335.9	337.4
42.5°	317.9	316.7	316.7	316.7
45°	300.0	296.6	296.6	295.3
47.5°	279.9	278.7	278.0	275.8
50°	260.1	258.3	257.6	257.6
52.5°	239.7	239.4	240.0	238.8
55°	221.8	222.1	221.8	221.2
57.5°	202.3	200.8	200.8	201.1
60°	179.1	179.1	179.7	178.5
62.5°	156.8	156.1	153.9	153.3
65°	133.8	131.3	131.0	131.3
67.5°	113.4	112.5	110.9	111.2
70°	95.8	95.5	93.9	93.0
72.5°	80.1	80.1	79.2	79.2
75°	66.9	66.3	66.0	66.6
77.5°	51.5	50.0	50.6	49.6
80°	37.4	38.0	37.4	37.1
82.5°	27.6	27.0	27.3	27.0
85°	17.6	17.0	17.3	17.0
87.5°	7.2	7.5	7.5	6.9
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243769
 CATALOG NUMBER: S125RDRP-H610D830-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	15.93	17.47	16.29	17.78	18.10	16.62	18.16	16.99	18.48	18.79
	3H	17.01	18.39	17.39	18.72	19.08	18.10	19.48	18.48	19.81	20.17
	4H	17.37	18.66	17.77	19.01	19.39	18.63	19.92	19.02	20.27	20.65
	6H	17.59	18.78	18.00	19.15	19.54	18.98	20.18	19.39	20.54	20.94
	8H	17.64	18.78	18.07	19.17	19.57	19.08	20.22	19.51	20.61	21.01
	12H	17.68	18.77	18.11	19.15	19.58	19.14	20.23	19.57	20.61	21.04
4H	2H	17.45	18.74	17.85	19.09	19.47	17.50	18.79	17.90	19.14	19.52
	3H	18.49	19.57	18.90	19.97	20.37	19.16	20.23	19.57	20.63	21.03
	4H	18.85	19.82	19.29	20.24	20.67	19.76	20.72	20.19	21.14	21.58
	6H	19.10	19.94	19.56	20.38	20.84	20.19	21.03	20.65	21.47	21.93
	8H	19.16	19.95	19.62	20.39	20.86	20.31	21.10	20.78	21.54	22.01
	12H	19.21	19.91	19.69	20.39	20.86	20.40	21.10	20.88	21.58	22.05
8H	4H	19.22	20.00	19.68	20.44	20.91	19.91	20.69	20.37	21.14	21.60
	6H	19.51	20.16	20.00	20.65	21.12	20.43	21.08	20.93	21.57	22.05
	8H	19.60	20.18	20.12	20.69	21.18	20.61	21.19	21.12	21.70	22.19
	12H	19.69	20.20	20.20	20.69	21.26	20.75	21.26	21.26	21.75	22.32
12H	4H	19.24	19.94	19.72	20.42	20.89	19.90	20.60	20.38	21.08	21.55
	6H	19.54	20.12	20.05	20.63	21.12	20.42	21.01	20.94	21.52	22.00
	8H	19.67	20.19	20.18	20.68	21.24	20.64	21.16	21.15	21.65	22.21