

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: P243794

Luminaire Tested: S125RDRP-H610D940-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243794  
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-H610D940-X4F0-XX-UDD-A-W  
Description: DEFINE 5 REGRESSED DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

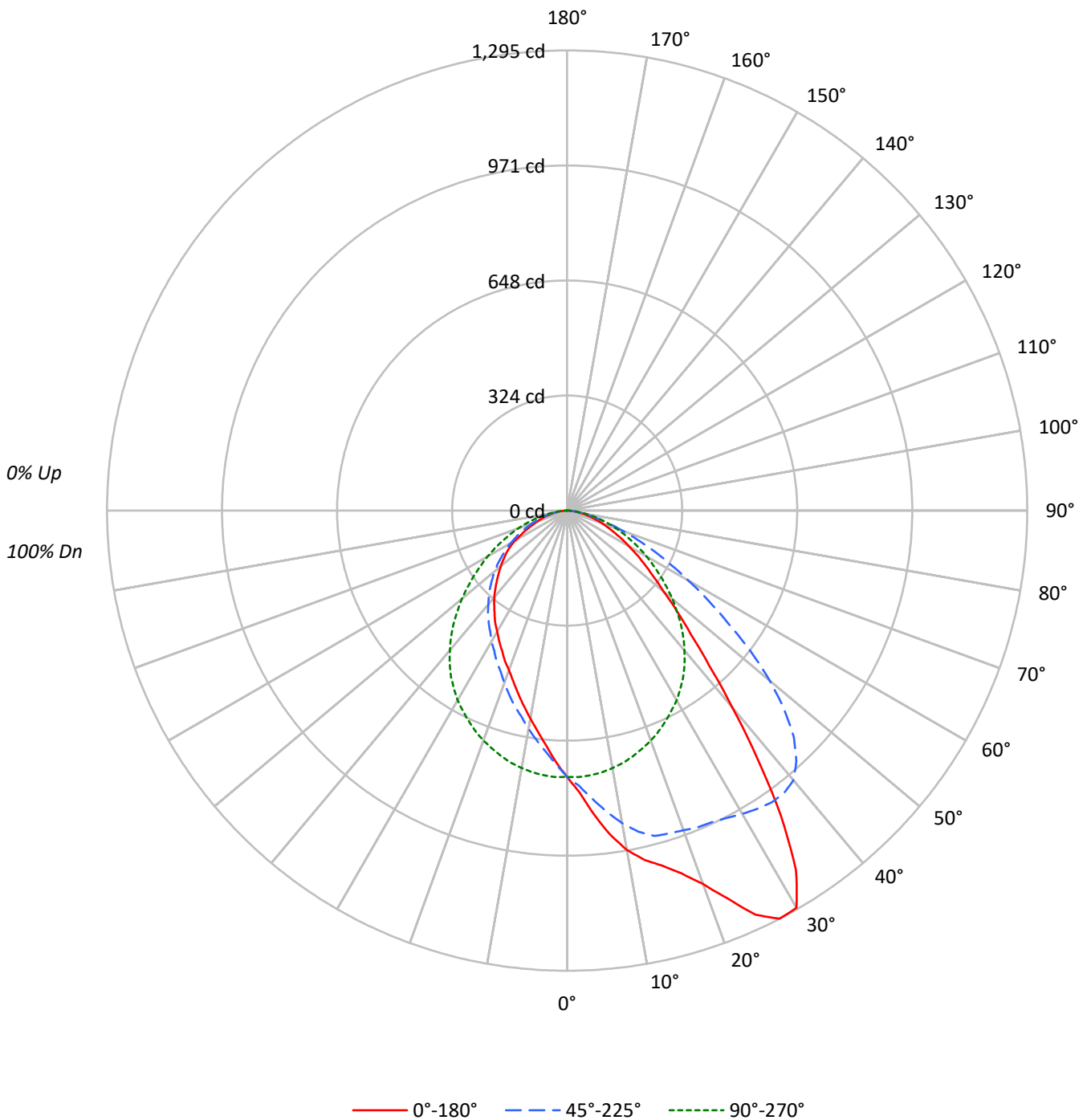
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1995.0 lumens  
Efficiency: N/A  
Efficacy: 116.0 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	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	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	66	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	48				48
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	33				33
9	59	46	38	32	57	45	38	32	44	37	32	43	37	32	42	36	32	30				30
10	55	42	35	29	54	42	34	29	41	34	29	40	34	29	39	33	29	27				27

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	5328	5328	5328	5328	5328
5°	6116	5810	5335	4865	4746
10°	6998	6446	5310	4503	4290
15°	7611	6975	5266	4193	3923
20°	8457	7241	5207	3903	3615
25°	9841	7585	5133	3678	3403
30°	10597	8086	5057	3488	3229
35°	9103	8699	4944	3337	3090
40°	6707	9192	4765	3202	2962
45°	4953	9067	4544	3083	2808
50°	3924	8230	4272	2954	2695
55°	3315	6868	3959	2773	2593
60°	2856	5611	3667	2603	2399
65°	2479	4529	3340	2390	2089
70°	2174	3441	3057	2161	1829
75°	1845	2507	2677	1911	1730
80°	1437	1813	2239	1678	1437
85°	1264	1329	1794	1427	1313

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 9067 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	3.6
10°-20°	213.5	10.7
20°-30°	340.5	17.1
30°-40°	413.4	20.7
40°-50°	372.5	18.7
50°-60°	286.5	14.4
60°-70°	185.9	9.3
70°-80°	89.4	4.5
80°-90°	21.2	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°	626.1	31.4
0°-40°	1039.5	52.1
0°-60°	1698.5	85.1
0°-90°	1995.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1995.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	750	750	750	750	750	
5°	857	814	748	682	665	85
15°	1034	948	716	570	533	297
25°	1255	967	654	469	434	574
35°	1049	1003	570	385	356	642
45°	493	902	452	307	279	391
55°	268	554	320	224	209	242
65°	147	269	199	142	124	148
75°	67	91	98	70	63	72
85°	16	16	22	18	16	18
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°	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6
2.5°	793.0	796.0	793.6	795.1	792.7	791.5	788.6	784.1	779.6	775.5	775.2
5°	857.2	856.6	854.2	851.0	848.6	842.7	839.7	829.6	822.7	814.4	810.3
7.5°	918.4	917.0	913.4	908.9	906.9	899.1	890.8	878.0	867.3	854.2	844.4
10°	969.6	969.3	966.6	963.6	955.6	947.0	939.0	925.6	909.5	893.2	879.5
12.5°	1007.0	1005.5	1002.3	997.2	990.7	984.7	974.0	961.8	942.2	925.6	906.9
15°	1034.4	1033.8	1029.0	1027.2	1014.5	1006.1	991.9	979.7	964.5	947.9	927.7
17.5°	1070.6	1071.8	1067.7	1057.6	1046.0	1033.2	1013.0	993.1	971.9	952.6	936.3
20°	1118.2	1115.2	1108.1	1095.9	1075.1	1059.3	1039.1	1014.5	985.9	957.4	933.9
22.5°	1181.8	1178.5	1167.2	1152.4	1126.2	1097.4	1066.5	1029.6	996.9	964.2	933.3
25°	1254.9	1248.7	1232.0	1216.0	1178.8	1148.2	1102.1	1058.1	1010.6	967.2	932.4
27.5°	1294.7	1294.7	1287.0	1269.5	1240.1	1194.9	1147.9	1089.4	1034.4	974.9	925.6
30°	1291.2	1289.1	1292.1	1284.6	1265.6	1231.7	1185.1	1123.5	1053.4	985.3	926.2
32.5°	1199.0	1199.9	1217.8	1229.9	1239.5	1231.1	1200.8	1145.2	1075.4	995.4	923.8
35°	1049.2	1051.6	1083.1	1103.9	1146.4	1170.8	1177.9	1147.9	1085.2	1002.6	919.6
37.5°	878.0	878.0	914.6	946.1	993.6	1053.7	1098.6	1109.9	1079.3	1002.3	916.1
40°	722.9	722.0	750.8	789.4	840.3	906.6	973.4	1030.8	1038.2	990.7	903.6
42.5°	591.5	590.0	621.5	642.9	696.4	755.6	844.4	925.6	971.9	954.7	885.2
45°	492.8	491.6	512.1	536.5	574.3	635.8	710.4	800.4	878.3	902.1	850.7
47.5°	418.5	419.1	430.1	450.6	482.7	526.7	593.6	677.1	773.4	828.4	807.3
50°	354.9	357.0	365.3	380.8	404.2	439.6	497.0	572.5	671.4	744.3	748.7
52.5°	307.3	310.3	319.2	327.6	347.2	372.1	416.7	482.1	563.8	651.2	682.4
55°	267.5	269.0	274.0	283.0	297.5	318.3	350.7	400.7	476.5	554.3	609.3
57.5°	234.2	234.2	237.5	243.7	255.3	274.0	295.7	337.1	401.0	471.4	530.0
60°	200.9	202.1	204.5	211.3	219.1	233.3	254.4	280.6	335.9	394.7	457.7
62.5°	173.0	175.1	177.4	180.7	187.9	198.0	212.8	236.9	274.0	328.4	384.6
65°	147.4	149.5	149.8	153.7	158.4	166.7	178.0	195.6	226.5	269.3	315.7
67.5°	124.8	125.7	126.6	129.6	134.1	139.4	146.8	159.9	184.3	213.1	258.3
70°	104.6	105.2	105.5	108.8	110.9	115.6	119.5	127.8	143.3	165.6	200.6
72.5°	85.6	84.7	84.4	87.1	88.0	91.8	96.6	102.5	110.9	126.6	152.8
75°	67.2	67.5	67.8	69.3	69.6	71.3	74.3	78.2	82.0	91.3	107.9
77.5°	51.7	50.5	50.5	52.3	52.9	53.2	55.3	57.4	59.4	64.8	71.3
80°	35.1	35.7	35.7	35.7	36.0	36.6	37.7	39.5	41.0	44.3	45.5
82.5°	25.0	25.0	24.7	25.3	25.6	25.9	25.9	25.9	26.8	27.6	28.8
85°	15.5	15.8	14.9	15.5	15.8	15.8	15.8	15.8	16.6	16.3	16.6
87.5°	6.5	6.8	6.8	7.1	7.1	7.4	7.1	7.4	7.1	7.1	7.4
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°	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6
2.5°	774.3	770.7	768.9	765.4	760.6	757.6	754.7	750.5	747.2	742.2	737.7
5°	802.8	795.7	789.2	780.2	771.6	764.2	756.5	747.8	740.1	731.5	722.3
7.5°	834.6	823.3	809.7	793.9	780.5	768.9	755.9	743.1	731.5	717.8	705.3
10°	865.2	847.1	829.0	807.9	788.3	771.0	753.5	735.7	720.5	703.5	688.1
12.5°	889.0	871.8	844.7	818.6	793.0	770.7	748.7	727.0	707.1	688.4	670.0
15°	909.8	881.3	858.4	829.9	798.7	768.3	741.0	715.7	691.7	669.7	650.9
17.5°	915.8	890.2	865.2	832.0	798.4	763.9	732.4	702.4	675.6	651.2	630.1
20°	915.2	889.3	862.3	830.5	794.8	757.1	722.0	688.4	658.1	630.1	607.5
22.5°	906.3	881.3	853.9	821.8	785.6	746.6	709.8	672.6	639.6	610.5	587.3
25°	896.8	865.2	836.7	804.3	769.8	733.9	694.6	654.5	620.0	589.7	563.6
27.5°	888.4	850.7	815.6	783.8	748.4	716.0	677.1	635.2	599.8	568.0	541.0
30°	875.1	835.2	792.7	757.9	723.8	689.9	654.2	616.2	577.5	545.1	518.1
32.5°	863.5	813.2	767.2	727.9	693.7	664.0	629.8	593.3	555.5	524.6	495.5
35°	850.7	790.6	742.5	696.4	662.2	629.8	602.8	569.8	532.3	499.6	473.5
37.5°	835.5	767.5	712.2	665.2	629.8	596.5	572.2	542.7	508.9	476.5	450.6
40°	818.6	743.7	680.1	631.6	593.6	560.3	539.8	513.6	484.8	452.7	428.6
42.5°	797.2	718.4	650.9	598.0	555.8	525.8	505.3	483.6	457.1	429.2	403.0
45°	770.1	686.9	616.2	560.3	518.7	489.5	468.1	452.1	431.0	404.8	380.2
47.5°	737.1	653.9	580.5	522.5	482.4	454.5	434.6	418.5	402.5	379.9	356.4
50°	693.4	616.2	545.7	486.6	444.1	417.0	399.2	386.4	371.8	353.4	332.0
52.5°	645.3	573.7	504.7	449.4	408.4	381.3	362.9	352.2	341.2	326.1	307.6
55°	589.4	531.2	465.5	411.4	371.2	344.5	329.9	319.5	310.3	298.7	283.3
57.5°	530.3	479.1	422.1	372.1	334.4	309.1	296.3	287.7	280.0	271.7	258.9
60°	468.1	431.9	377.8	332.0	299.0	278.2	266.0	258.0	250.9	244.0	234.5
62.5°	403.3	373.3	332.9	294.0	264.5	244.9	236.0	229.2	221.7	215.8	209.0
65°	337.7	320.4	292.5	255.9	228.9	212.8	204.2	198.6	195.0	188.1	182.8
67.5°	277.9	268.4	244.6	220.0	199.1	184.6	176.6	172.4	168.5	165.3	159.3
70°	221.1	214.3	200.6	183.1	166.7	154.3	148.3	147.1	141.8	138.5	135.5
72.5°	168.5	166.7	155.5	147.7	138.5	128.7	124.2	121.9	118.3	115.3	114.1
75°	119.8	122.5	118.9	115.0	110.6	102.5	98.7	97.5	94.2	93.3	91.8
77.5°	81.7	85.6	86.8	85.0	82.9	80.3	77.6	76.4	73.1	72.5	71.6
80°	51.4	57.1	59.1	58.9	58.0	58.3	55.0	54.7	53.2	52.3	53.2
82.5°	31.2	34.2	38.0	38.9	37.7	38.3	37.5	36.3	36.3	36.9	35.7
85°	16.9	17.2	19.0	20.2	21.7	22.9	21.7	22.0	21.7	21.7	20.8
87.5°	7.4	7.7	7.7	7.4	8.0	8.6	9.8	10.4	10.1	9.2	8.0
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°	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6	749.6
2.5°	734.2	732.1	728.5	725.5	718.7	714.0	713.4	713.7	713.1	712.5	712.2
5°	716.3	709.5	703.0	697.3	689.6	681.9	678.3	676.8	676.2	672.9	674.7
7.5°	697.3	686.9	679.2	668.5	659.3	652.7	646.5	643.5	642.9	638.5	637.3
10°	677.1	664.6	653.0	642.3	633.1	623.9	616.5	613.8	610.2	606.7	601.3
12.5°	657.2	641.7	628.9	617.1	604.6	594.2	588.2	584.4	579.9	576.6	574.8
15°	633.4	620.3	604.6	591.8	579.0	569.8	561.8	554.6	550.5	547.8	540.4
17.5°	612.0	594.8	579.9	567.7	553.7	543.3	535.0	529.1	521.9	516.6	511.8
20°	589.1	571.3	557.6	543.0	528.8	516.0	505.6	500.8	495.8	490.7	488.1
22.5°	564.4	549.0	533.5	518.4	503.2	489.5	483.0	476.2	471.7	466.7	463.1
25°	543.0	526.1	510.6	493.7	477.1	469.0	460.1	453.3	449.7	444.7	440.8
27.5°	520.2	503.8	485.4	467.8	458.0	444.4	438.4	433.1	428.3	423.3	420.6
30°	498.8	479.7	461.3	447.6	434.9	425.0	419.4	412.9	406.3	403.9	400.4
32.5°	476.2	455.7	439.6	425.9	415.2	403.3	398.0	392.6	386.4	383.4	380.2
35°	452.7	432.8	417.0	404.5	393.5	384.6	378.7	373.0	369.2	364.7	362.3
37.5°	428.0	410.8	395.6	383.1	373.0	365.9	358.5	354.0	348.7	344.5	342.7
40°	404.5	389.1	374.5	362.9	353.7	345.1	338.5	332.9	329.6	326.1	323.1
42.5°	383.4	367.4	354.9	342.7	334.4	326.1	319.5	315.4	309.7	308.2	304.1
45°	360.8	346.0	333.5	322.2	313.6	306.7	299.0	294.0	290.4	286.8	285.3
47.5°	338.0	324.3	312.7	302.3	293.4	285.6	279.7	274.3	270.5	267.2	265.4
50°	315.7	303.8	292.2	282.1	272.9	267.2	260.1	254.1	251.2	247.6	245.5
52.5°	292.2	282.4	269.9	261.3	252.6	245.2	238.1	234.2	231.2	228.3	226.8
55°	270.2	259.8	249.1	239.9	231.5	223.8	218.2	215.2	211.3	209.5	209.3
57.5°	247.6	236.9	228.0	219.7	210.1	204.2	199.1	195.6	192.3	190.8	190.8
60°	222.9	214.3	206.0	196.8	189.9	183.1	177.7	175.4	172.1	171.5	169.4
62.5°	200.3	192.3	184.3	175.7	169.4	162.6	158.7	155.5	153.7	151.3	148.9
65°	176.9	169.7	162.0	154.6	149.5	142.1	138.5	134.6	132.6	129.9	126.9
67.5°	154.3	147.4	140.3	133.5	129.3	122.2	119.8	115.0	113.5	110.6	107.9
70°	130.5	125.7	120.1	113.2	109.7	104.0	101.7	97.2	94.8	93.0	91.5
72.5°	110.0	105.5	99.0	94.5	90.1	86.5	82.6	80.5	78.5	77.0	76.7
75°	89.8	84.1	80.3	76.1	73.1	69.6	67.8	66.3	65.4	64.5	63.6
77.5°	68.7	66.3	62.4	58.3	55.9	54.4	53.2	52.6	51.7	51.4	50.5
80°	51.1	47.9	45.5	44.0	42.2	41.0	40.1	38.0	36.9	36.3	35.7
82.5°	33.9	33.0	31.2	29.7	28.2	27.9	27.0	26.5	26.2	26.2	25.9
85°	20.5	18.1	18.1	17.8	17.8	17.5	16.9	16.9	16.3	17.2	17.2
87.5°	8.3	8.3	7.7	7.7	8.0	7.4	7.1	7.1	7.1	6.8	7.1
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: P243794

CATALOG NUMBER: S125RDRP-H610D940-X4F0-XX-UDD-A-W

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	749.6	749.6	749.6	749.6
2.5°	712.2	710.7	711.0	709.2
5°	671.4	670.6	667.6	665.2
7.5°	634.3	630.4	630.1	627.8
10°	599.5	596.0	594.2	594.5
12.5°	569.2	565.3	565.3	563.0
15°	536.8	532.9	533.5	533.2
17.5°	510.1	507.4	505.3	503.5
20°	483.9	480.6	479.4	477.9
22.5°	459.8	457.4	457.7	457.7
25°	436.9	437.2	434.6	434.0
27.5°	416.7	416.1	415.5	414.3
30°	397.7	395.3	394.7	393.5
32.5°	378.1	377.8	375.4	376.3
35°	358.2	357.3	356.7	356.1
37.5°	339.7	338.0	337.7	337.1
40°	321.0	320.4	317.7	319.2
42.5°	300.8	299.6	299.6	299.6
45°	283.9	280.6	280.6	279.4
47.5°	264.8	263.6	263.1	261.0
50°	246.1	244.3	243.7	243.7
52.5°	226.8	226.5	227.1	225.9
55°	209.8	210.1	209.8	209.3
57.5°	191.4	189.9	189.9	190.2
60°	169.4	169.4	170.0	168.8
62.5°	148.3	147.7	145.6	145.0
65°	126.6	124.2	123.9	124.2
67.5°	107.3	106.4	104.9	105.2
70°	90.7	90.4	88.9	88.0
72.5°	75.8	75.8	74.9	74.9
75°	63.3	62.7	62.4	63.0
77.5°	48.7	47.3	47.9	47.0
80°	35.4	36.0	35.4	35.1
82.5°	26.2	25.6	25.9	25.6
85°	16.6	16.1	16.3	16.1
87.5°	6.8	7.1	7.1	6.5
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243794  
 CATALOG NUMBER: S125RDRP-H610D940-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	15.73	17.27	16.10	17.59	17.90	16.43	17.97	16.80	18.29	18.60
	3H	16.82	18.20	17.19	18.53	18.89	17.91	19.29	18.29	19.62	19.98
	4H	17.17	18.47	17.57	18.82	19.20	18.43	19.73	18.83	20.08	20.45
	6H	17.39	18.59	17.80	18.96	19.35	18.79	19.99	19.20	20.35	20.74
	8H	17.45	18.59	17.88	18.98	19.38	18.89	20.03	19.31	20.42	20.82
	12H	17.48	18.58	17.91	18.96	19.39	18.95	20.04	19.38	20.42	20.85
4H	2H	17.25	18.55	17.65	18.90	19.28	17.30	18.60	17.70	18.95	19.33
	3H	18.30	19.37	18.71	19.77	20.17	18.97	20.04	19.38	20.44	20.84
	4H	18.66	19.63	19.09	20.04	20.48	19.56	20.53	20.00	20.94	21.38
	6H	18.91	19.75	19.36	20.19	20.65	20.00	20.84	20.45	21.28	21.74
	8H	18.97	19.75	19.43	20.20	20.66	20.12	20.91	20.58	21.35	21.82
	12H	19.02	19.72	19.50	20.20	20.67	20.21	20.91	20.69	21.38	21.86
8H	4H	19.02	19.81	19.49	20.25	20.72	19.72	20.50	20.18	20.95	21.41
	6H	19.32	19.96	19.81	20.45	20.93	20.24	20.89	20.74	21.38	21.86
	8H	19.41	19.99	19.92	20.50	20.99	20.42	21.00	20.93	21.51	22.00
	12H	19.50	20.01	20.01	20.50	21.07	20.55	21.07	21.06	21.56	22.13
12H	4H	19.05	19.75	19.53	20.23	20.70	19.71	20.41	20.19	20.89	21.36
	6H	19.35	19.93	19.86	20.44	20.93	20.23	20.81	20.74	21.32	21.81
	8H	19.48	20.00	19.99	20.49	21.05	20.45	20.96	20.96	21.46	22.02