

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: P243686

Luminaire Tested: S125DRP-H610D935-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243686
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-61)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S125DRP-H610D935-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

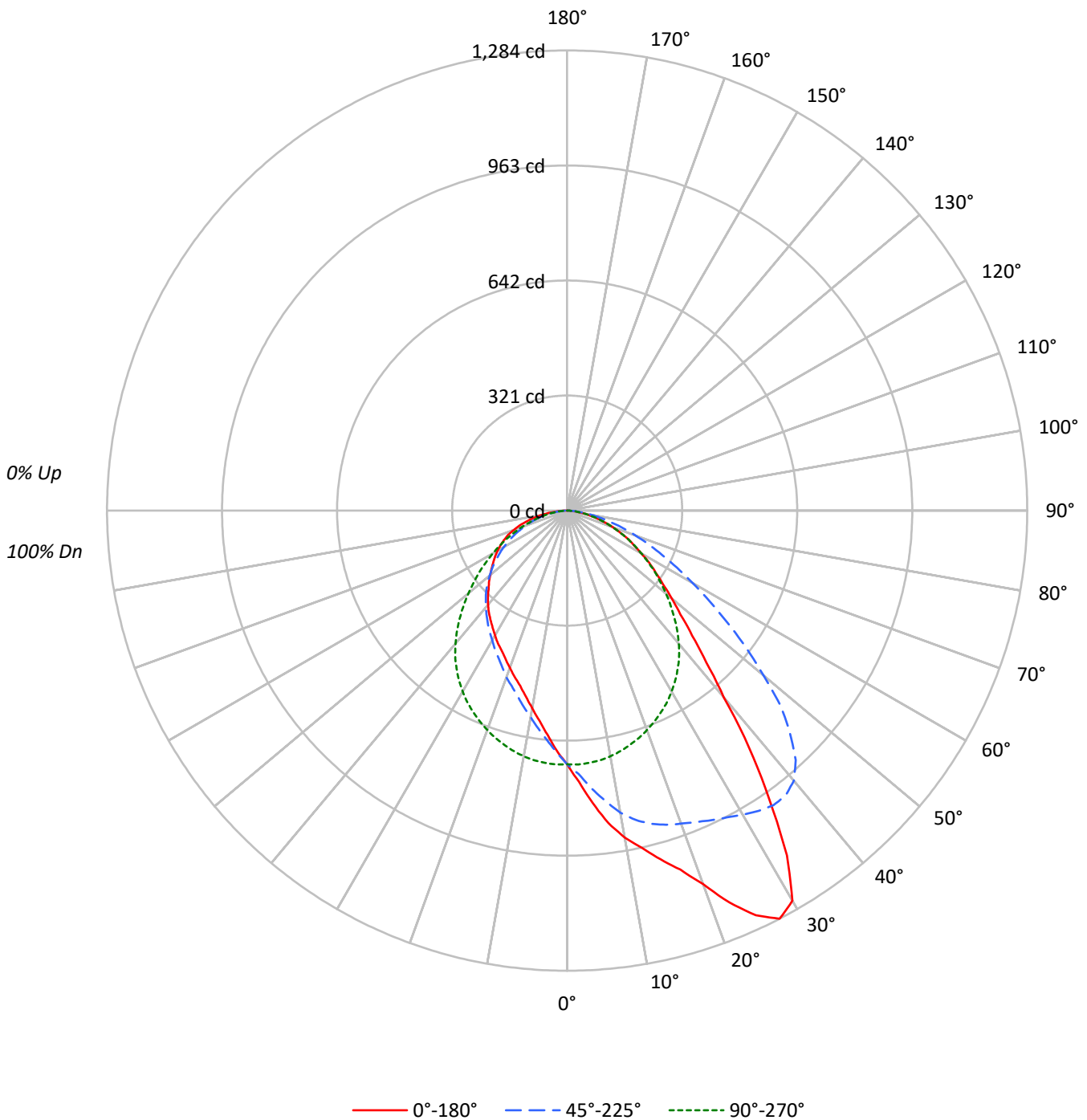
Lumens per Lamp: N/A
Luminaire Lumens: 2017.1 lumens
Efficiency: N/A
Efficacy: 117.3 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

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	109	105	101	97	107	103	99	96	99	96	93	95	92	90	91	89	87	85					85			
2	100	92	86	80	97	90	84	79	87	82	78	84	79	76	81	77	74	72					72			
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	63	61					61			
4	84	73	64	58	82	71	63	57	69	62	56	66	61	56	64	59	55	53					53			
5	78	65	56	50	75	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	40					40			
7	67	53	45	39	65	53	44	39	51	44	38	50	43	38	48	42	38	36					36			
8	62	49	40	35	60	48	40	35	47	40	34	46	39	34	44	38	34	32					32			
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	5030	5030	5030	5030	5030
5°	5844	5549	5041	4587	4480
10°	6686	6178	5024	4223	4043
15°	7413	6656	4979	3938	3725
20°	8392	7031	4930	3747	3534
25°	9772	7474	4866	3554	3385
30°	10316	8039	4786	3434	3302
35°	8531	8708	4669	3347	3232
40°	6311	9128	4500	3275	3184
45°	4961	8844	4255	3210	3116
50°	4202	7898	3979	3123	3104
55°	3741	6768	3705	3022	3115
60°	3394	5736	3403	2901	3183
65°	3147	4904	3118	2751	3273
70°	2826	4194	2791	2571	3292
75°	2411	3545	2452	2348	3246
80°	1973	2865	2010	2042	3029
85°	1354	2014	1427	1615	2577

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8844 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.4	3.4
10°-20°	204.3	10.1
20°-30°	332.1	16.5
30°-40°	404.1	20.0
40°-50°	369.8	18.3
50°-60°	295.9	14.7
60°-70°	206.1	10.2
70°-80°	109.5	5.4
80°-90°	26.9	1.3
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°	604.8	30.0
0°-40°	1008.9	50.0
0°-60°	1674.5	83.0
0°-90°	2017.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2017.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	708	708	708	708	708	
5°	819	778	707	643	628	82
15°	1007	905	677	535	506	289
25°	1246	953	620	453	432	569
35°	983	1004	538	386	372	610
45°	494	880	423	319	310	389
55°	302	546	299	244	251	272
65°	187	292	185	164	195	184
75°	88	129	89	86	118	95
85°	17	25	18	20	32	22
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°	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7
2.5°	757.7	754.5	753.6	753.9	752.2	750.8	747.3	742.7	739.6	735.6	734.4
5°	819.1	811.3	812.8	810.5	806.7	801.9	797.6	790.7	784.1	777.8	769.4
7.5°	879.4	877.9	873.9	873.3	867.3	859.0	850.4	840.9	826.8	817.1	805.9
10°	926.4	929.3	923.5	923.8	913.2	904.9	897.4	885.1	869.3	856.1	839.7
12.5°	964.3	965.5	964.6	960.9	954.0	939.9	932.7	919.8	902.6	884.5	871.9
15°	1007.4	1004.2	999.3	994.7	984.7	974.6	959.7	944.5	922.7	904.6	886.2
17.5°	1050.4	1049.8	1043.8	1034.0	1021.4	1008.2	985.8	966.3	943.1	919.2	896.3
20°	1109.5	1106.4	1097.5	1086.3	1063.0	1044.4	1016.5	989.8	959.4	929.6	902.9
22.5°	1183.6	1173.2	1164.3	1147.1	1120.4	1088.0	1056.7	1018.0	975.5	940.5	907.2
25°	1246.1	1241.5	1232.1	1212.8	1182.4	1143.4	1096.9	1053.0	999.6	953.1	909.8
27.5°	1284.0	1282.0	1276.3	1258.2	1232.9	1194.2	1144.5	1088.6	1028.0	965.2	913.2
30°	1257.0	1257.3	1260.5	1258.5	1247.3	1222.3	1178.1	1121.9	1051.8	979.5	914.1
32.5°	1141.1	1148.8	1173.5	1185.3	1201.1	1206.2	1186.4	1139.7	1071.9	993.9	916.9
35°	983.2	1002.2	1018.8	1053.3	1094.3	1127.9	1147.4	1132.2	1080.2	1003.6	918.4
37.5°	834.6	833.1	859.0	896.3	939.9	997.0	1052.4	1082.8	1065.9	1001.6	915.8
40°	680.2	693.4	709.5	742.5	793.5	863.9	929.9	995.0	1018.5	983.8	905.8
42.5°	574.6	580.6	596.7	622.5	659.2	731.0	796.1	879.9	940.2	944.2	883.7
45°	493.6	500.2	504.8	530.4	564.5	612.7	679.6	764.0	844.9	879.9	847.8
47.5°	428.8	432.5	442.5	458.0	480.4	523.2	576.6	653.2	741.3	809.3	798.4
50°	380.0	382.9	390.9	399.5	417.9	449.4	492.5	555.3	640.0	714.3	738.7
52.5°	336.9	340.7	344.7	353.0	369.9	391.2	426.2	475.3	553.9	630.0	668.7
55°	301.9	303.4	307.7	314.0	326.9	343.0	370.8	415.3	470.4	546.2	599.5
57.5°	271.5	270.1	274.7	279.0	287.6	301.1	321.1	354.2	406.7	471.2	526.9
60°	238.8	240.2	243.7	247.1	253.1	264.9	280.7	307.1	345.5	403.5	460.3
62.5°	210.7	211.8	212.7	217.5	223.0	231.3	244.2	265.8	297.6	345.5	396.3
65°	187.1	185.1	186.3	189.7	194.0	200.9	213.0	228.7	252.6	291.6	333.8
67.5°	159.6	160.1	160.4	162.4	166.2	172.8	181.4	194.3	213.8	244.5	281.5
70°	136.0	136.3	136.6	138.3	141.5	145.2	151.2	161.3	177.9	201.8	230.7
72.5°	111.9	113.1	113.1	114.5	116.8	118.8	124.6	132.9	145.5	164.4	188.8
75°	87.8	89.8	90.4	92.1	94.1	94.7	99.0	105.6	113.6	129.1	148.4
77.5°	68.3	68.3	69.5	71.5	71.5	73.2	77.8	80.6	87.0	97.6	112.2
80°	48.2	49.1	49.1	49.7	50.8	52.2	54.2	56.8	62.3	70.0	77.8
82.5°	31.6	31.9	32.1	33.6	33.0	34.4	35.3	38.5	41.0	44.8	49.7
85°	16.6	16.6	16.9	17.8	18.7	18.9	19.5	21.0	23.0	24.7	27.6
87.5°	6.9	6.6	6.6	7.2	7.2	7.5	7.7	8.3	9.5	9.5	10.6
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°	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7
2.5°	733.6	731.3	727.2	723.8	719.5	716.3	713.2	709.2	705.1	700.8	696.2
5°	762.8	755.9	748.2	740.4	731.3	723.8	715.8	706.6	698.8	690.2	681.0
7.5°	796.4	784.4	770.9	755.7	741.3	728.4	715.2	702.6	691.1	678.2	665.5
10°	828.8	807.9	791.0	770.3	749.9	731.0	712.9	696.2	679.6	663.5	648.0
12.5°	850.9	827.1	805.9	782.1	758.2	734.4	710.6	687.6	667.8	648.3	632.0
15°	866.2	849.5	821.4	792.7	761.4	730.4	703.4	676.7	653.2	630.5	611.0
17.5°	875.6	854.1	826.5	796.4	762.0	729.5	697.1	665.3	638.3	613.9	591.8
20°	878.2	852.9	824.2	793.0	758.5	722.9	686.5	651.8	622.5	594.7	572.3
22.5°	875.6	846.3	815.6	785.2	749.1	712.9	674.7	636.8	603.3	574.6	551.0
25°	871.3	836.0	803.9	768.0	734.4	700.0	660.7	620.5	585.5	555.6	529.2
27.5°	865.9	825.4	785.8	750.5	714.0	680.2	644.0	603.0	566.5	533.8	509.1
30°	859.5	811.3	767.4	725.5	691.1	657.2	621.9	583.2	546.4	515.2	488.5
32.5°	852.4	796.4	744.8	699.7	663.0	631.7	598.7	561.6	525.5	491.9	468.7
35°	842.3	776.0	720.4	671.6	633.4	599.5	570.5	538.1	502.2	471.0	446.9
37.5°	830.6	758.0	695.7	642.9	601.3	566.5	539.8	513.4	479.9	449.7	426.5
40°	814.8	736.1	669.6	612.4	568.0	533.8	507.7	485.0	457.2	426.8	405.8
42.5°	794.1	712.0	640.0	579.2	536.1	499.7	475.3	454.6	430.8	404.4	383.7
45°	770.6	684.5	607.0	547.3	500.5	465.8	442.0	423.3	405.2	381.7	362.5
47.5°	733.8	652.1	577.1	511.1	465.2	431.6	409.3	391.5	378.0	359.3	340.4
50°	690.2	615.3	541.8	475.6	429.1	396.6	375.4	359.9	348.4	334.1	319.7
52.5°	642.3	574.0	503.1	441.1	394.6	363.9	341.5	327.7	320.3	308.8	297.6
55°	586.3	527.5	461.5	404.9	359.3	328.0	308.8	299.0	290.7	285.0	274.9
57.5°	530.1	480.4	421.6	365.6	323.7	295.9	278.7	267.8	261.7	257.7	250.5
60°	468.7	429.6	375.7	327.2	289.9	263.5	248.3	239.4	233.9	231.6	226.7
62.5°	410.1	380.3	331.2	290.7	257.4	234.2	219.0	211.8	208.4	205.8	202.9
65°	352.4	328.9	290.2	252.3	224.1	203.2	191.1	185.4	182.8	179.9	179.7
67.5°	300.5	279.0	248.0	217.0	193.4	175.6	165.0	159.3	156.4	156.7	155.3
70°	249.4	232.8	207.5	182.2	162.2	148.1	138.0	134.3	133.2	132.9	131.7
72.5°	201.8	192.3	170.2	149.0	133.2	122.3	114.2	111.1	109.6	109.1	109.1
75°	159.9	153.0	134.0	118.0	105.9	97.0	91.6	89.3	87.2	88.4	87.5
77.5°	120.0	114.2	101.3	89.8	80.6	73.2	70.6	68.6	67.4	67.2	68.3
80°	84.4	80.9	72.9	63.7	56.8	52.5	50.8	49.1	48.2	47.6	48.2
82.5°	54.2	52.2	46.5	41.0	37.0	34.7	33.0	32.1	30.7	31.0	31.6
85°	29.6	29.0	25.3	23.5	19.8	19.5	18.4	17.5	17.8	17.2	18.1
87.5°	12.1	11.5	10.6	9.8	8.6	7.7	7.2	7.7	6.9	7.7	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7	707.7
2.5°	694.0	690.8	687.1	683.6	678.5	675.0	673.3	673.9	671.9	671.3	671.0
5°	675.6	668.4	661.5	655.8	649.8	642.9	638.0	636.6	636.0	634.5	631.4
7.5°	656.6	647.5	638.6	630.2	621.6	613.6	608.7	604.7	602.4	598.4	597.5
10°	636.6	625.4	615.9	603.8	593.5	585.2	578.9	575.4	573.4	569.7	566.5
12.5°	617.3	605.6	590.9	580.0	569.1	560.5	553.3	547.6	546.2	541.3	538.7
15°	596.7	582.3	569.1	556.5	546.2	535.2	530.9	525.8	520.6	516.3	515.4
17.5°	576.9	559.6	546.7	534.4	521.8	513.7	508.0	504.5	500.5	498.2	494.2
20°	553.0	539.0	524.6	513.1	502.2	495.4	487.6	484.4	481.6	476.1	474.4
22.5°	532.9	516.0	504.0	492.5	482.7	473.0	467.5	464.4	460.1	457.2	454.9
25°	512.0	497.9	482.7	471.2	462.9	453.2	449.4	445.4	441.7	439.1	436.8
27.5°	491.6	476.1	463.8	452.3	443.7	436.8	431.6	427.3	424.8	422.7	421.3
30°	470.4	456.0	444.6	433.9	424.2	418.4	413.6	411.8	409.0	407.5	405.2
32.5°	451.2	436.5	425.6	416.4	407.8	402.1	399.2	396.6	393.8	391.2	390.9
35°	429.3	416.7	406.7	396.6	390.3	385.7	382.6	380.0	377.7	375.7	374.5
37.5°	410.1	398.1	386.9	379.7	372.8	368.8	365.3	364.5	362.2	362.5	360.8
40°	389.5	378.5	369.1	361.9	357.3	353.0	350.7	347.8	346.4	346.7	345.3
42.5°	369.4	359.3	350.7	344.1	339.2	336.1	334.1	331.8	330.0	328.9	328.6
45°	349.0	340.1	332.9	326.3	322.3	319.4	316.8	314.0	312.5	312.0	311.7
47.5°	328.9	320.9	313.1	308.5	304.8	302.2	299.6	297.3	296.2	295.3	293.9
50°	308.2	300.2	294.7	289.0	285.8	282.4	279.5	278.4	276.9	276.7	278.1
52.5°	286.7	280.4	275.5	270.9	267.2	263.5	260.6	259.2	260.0	260.0	261.7
55°	266.3	259.7	255.1	251.4	247.4	243.9	241.1	241.1	241.1	242.8	245.1
57.5°	243.7	237.9	234.5	230.2	226.4	224.1	222.1	221.8	223.0	225.9	228.4
60°	220.7	216.7	213.0	209.5	205.8	204.1	203.8	203.2	204.9	207.8	213.2
62.5°	198.0	195.4	190.9	189.1	186.0	184.0	184.0	184.5	187.1	191.7	196.6
65°	176.2	172.5	169.0	167.3	165.3	163.6	163.6	165.9	169.6	173.9	179.9
67.5°	153.8	150.7	148.4	146.7	144.4	143.5	144.4	146.9	151.5	155.8	162.2
70°	129.7	129.1	127.1	124.8	123.7	123.7	124.6	127.4	130.9	137.5	142.9
72.5°	107.6	107.6	106.5	105.0	104.2	105.0	105.6	108.5	112.8	118.5	124.6
75°	87.5	86.7	85.8	85.2	85.0	85.5	86.4	88.7	93.8	99.3	104.2
77.5°	67.7	67.2	66.3	66.9	66.9	67.2	69.7	72.3	75.2	79.5	84.7
80°	48.8	49.1	48.2	47.9	49.4	49.9	51.9	54.0	56.0	60.8	64.6
82.5°	32.1	32.7	32.4	33.0	33.6	33.6	35.9	37.9	39.6	43.0	45.9
85°	18.4	18.7	18.7	19.5	20.1	19.8	21.8	23.0	23.8	26.4	28.1
87.5°	8.0	8.3	8.6	8.6	8.6	9.8	10.0	10.6	10.9	11.5	12.3
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: P243686

CATALOG NUMBER: S125DRP-H610D935-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	707.7	707.7	707.7	707.7
2.5°	668.4	668.1	669.6	670.4
5°	629.4	628.5	627.4	627.9
7.5°	594.7	592.4	591.8	591.8
10°	563.9	561.6	561.1	560.2
12.5°	537.8	534.4	532.9	531.5
15°	513.1	512.6	509.4	506.3
17.5°	490.5	491.3	488.2	486.7
20°	471.5	468.9	467.8	467.2
22.5°	452.3	450.3	450.3	448.3
25°	435.1	433.4	433.6	431.6
27.5°	419.0	418.7	418.4	417.9
30°	404.1	402.9	401.8	402.4
32.5°	389.7	388.0	387.2	386.9
35°	374.8	374.2	373.1	372.5
37.5°	360.2	360.5	359.0	358.7
40°	344.4	344.1	343.8	343.2
42.5°	327.7	326.9	327.5	327.2
45°	311.1	310.2	310.8	310.0
47.5°	294.7	295.3	295.3	295.6
50°	278.7	279.8	279.8	280.7
52.5°	263.7	266.0	266.0	265.8
55°	247.7	250.3	251.1	251.4
57.5°	232.5	235.0	237.6	238.2
60°	216.1	220.7	223.3	223.9
62.5°	201.5	205.8	209.2	209.5
65°	185.1	190.3	193.4	194.6
67.5°	168.5	172.5	176.8	178.5
70°	149.5	154.4	157.3	158.4
72.5°	129.7	135.2	138.9	139.5
75°	110.8	114.8	117.7	118.2
77.5°	89.3	93.3	95.9	96.4
80°	67.7	71.2	72.9	74.0
82.5°	47.9	50.2	51.1	52.2
85°	29.6	31.3	31.6	31.6
87.5°	12.9	13.2	13.2	13.8
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243686
 CATALOG NUMBER: S125DRP-H610D935-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	16.45	18.02	16.81	18.33	18.65	16.19	17.76	16.56	18.07	18.39
	3H	17.80	19.22	18.18	19.54	19.90	17.61	19.03	17.99	19.35	19.72
	4H	18.28	19.61	18.68	19.96	20.33	18.10	19.43	18.50	19.78	20.15
	6H	18.59	19.82	19.00	20.18	20.57	18.42	19.65	18.83	20.01	20.40
	8H	18.67	19.84	19.09	20.23	20.63	18.50	19.67	18.92	20.06	20.46
	12H	18.70	19.82	19.13	20.20	20.63	18.54	19.66	18.97	20.04	20.47
4H	2H	17.84	19.16	18.24	19.51	19.89	17.25	18.58	17.65	18.93	19.31
	3H	19.20	20.30	19.61	20.70	21.10	18.91	20.02	19.32	20.41	20.81
	4H	19.70	20.70	20.13	21.11	21.55	19.47	20.47	19.90	20.88	21.32
	6H	20.05	20.92	20.51	21.36	21.82	19.85	20.72	20.30	21.16	21.62
	8H	20.14	20.95	20.60	21.40	21.86	19.94	20.75	20.40	21.20	21.66
	12H	20.19	20.92	20.67	21.40	21.87	20.00	20.73	20.48	21.20	21.67
8H	4H	20.15	20.97	20.62	21.41	21.88	19.82	20.63	20.28	21.08	21.54
	6H	20.58	21.26	21.08	21.75	22.22	20.32	21.00	20.82	21.49	21.96
	8H	20.71	21.31	21.22	21.82	22.31	20.47	21.07	20.98	21.58	22.07
	12H	20.80	21.33	21.31	21.82	22.38	20.57	21.10	21.08	21.59	22.16
12H	4H	20.20	20.92	20.68	21.40	21.87	19.84	20.57	20.32	21.05	21.52
	6H	20.65	21.26	21.17	21.77	22.25	20.37	20.98	20.88	21.48	21.97
	8H	20.83	21.36	21.34	21.85	22.42	20.58	21.11	21.08	21.60	22.16