

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: P243681

Luminaire Tested: S125DRP-H610D930-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243681
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-H610D930-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

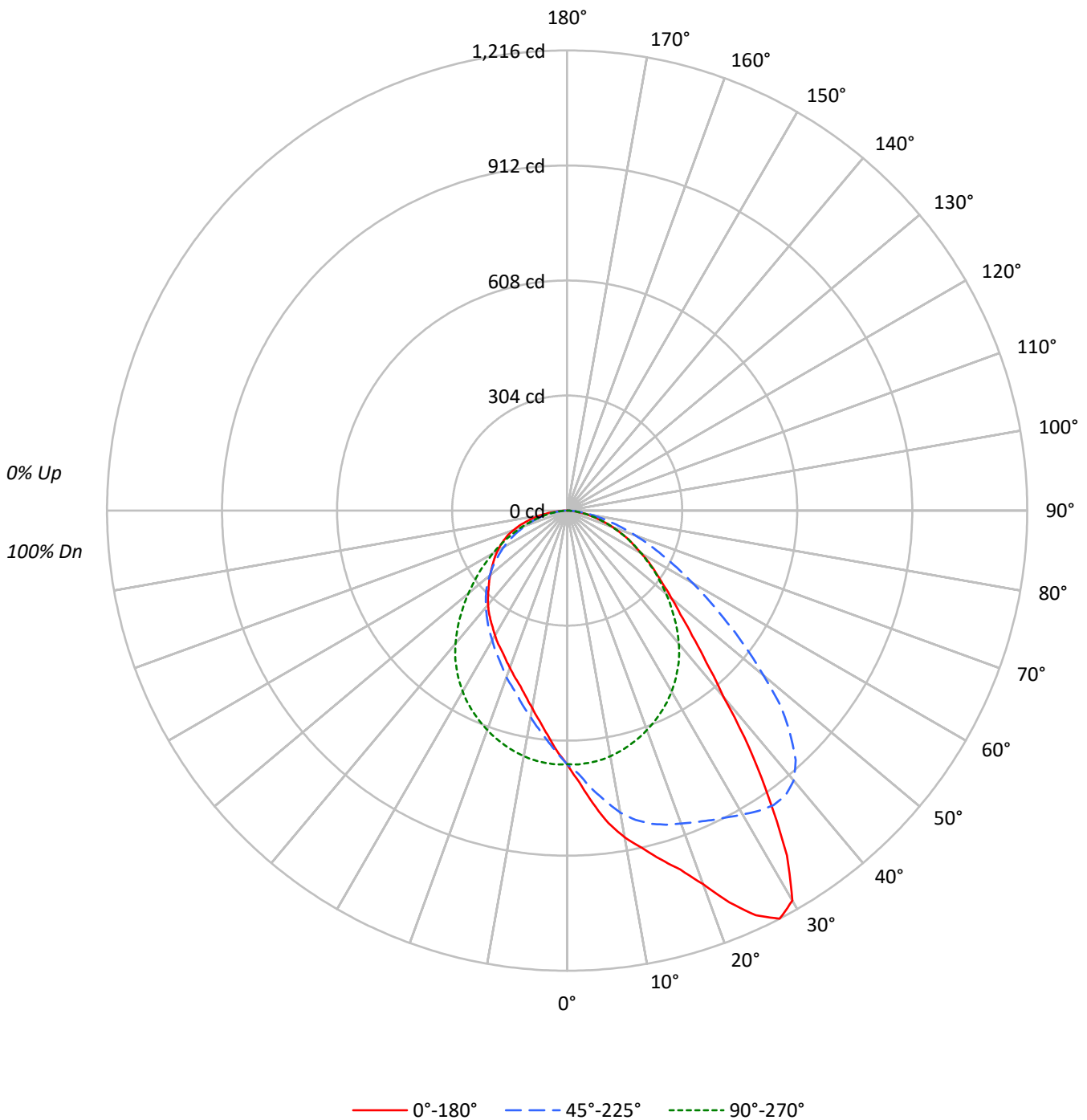
Lumens per Lamp: N/A
Luminaire Lumens: 1910.0 lumens
Efficiency: N/A
Efficacy: 111.0 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

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°	4763	4763	4763	4763	4763
5°	5534	5255	4774	4343	4242
10°	6331	5851	4758	3999	3829
15°	7019	6303	4715	3729	3527
20°	7946	6657	4668	3548	3346
25°	9254	7077	4607	3365	3205
30°	9769	7612	4532	3252	3127
35°	8079	8245	4422	3169	3060
40°	5976	8643	4261	3102	3015
45°	4698	8375	4029	3041	2950
50°	3978	7479	3768	2957	2939
55°	3543	6409	3509	2862	2950
60°	3214	5431	3221	2746	3014
65°	2980	4643	2953	2605	3099
70°	2677	3969	2643	2433	3117
75°	2285	3358	2320	2224	3076
80°	1870	2714	1903	1936	2869
85°	1288	1908	1354	1533	2438

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8375 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	3.4
10°-20°	193.5	10.1
20°-30°	314.5	16.5
30°-40°	382.6	20.0
40°-50°	350.1	18.3
50°-60°	280.2	14.7
60°-70°	195.2	10.2
70°-80°	103.7	5.4
80°-90°	25.5	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°	572.7	30.0
0°-40°	955.3	50.0
0°-60°	1585.7	83.0
0°-90°	1910.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1910.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	670	670	670	670	670	
5°	776	736	669	609	595	77
15°	954	857	641	507	479	274
25°	1180	902	588	429	409	539
35°	931	950	510	365	353	577
45°	467	833	401	302	294	369
55°	286	517	283	231	238	258
65°	177	276	176	155	184	174
75°	83	122	84	81	112	90
85°	16	23	17	19	30	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°	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2
2.5°	717.5	714.5	713.6	713.9	712.3	710.9	707.7	703.3	700.3	696.5	695.4
5°	775.6	768.3	769.6	767.5	763.9	759.3	755.2	748.7	742.5	736.5	728.6
7.5°	832.7	831.3	827.5	827.0	821.3	813.4	805.2	796.3	782.9	773.7	763.1
10°	877.2	880.0	874.5	874.8	864.7	856.9	849.8	838.1	823.2	810.7	795.2
12.5°	913.1	914.2	913.4	909.9	903.3	890.0	883.2	871.0	854.7	837.6	825.6
15°	953.9	950.9	946.3	941.9	932.4	922.9	908.8	894.4	873.7	856.6	839.2
17.5°	994.6	994.1	988.4	979.2	967.2	954.7	933.5	915.0	893.0	870.5	848.7
20°	1050.6	1047.6	1039.2	1028.6	1006.6	988.9	962.6	937.3	908.5	880.2	855.0
22.5°	1120.7	1111.0	1102.5	1086.2	1061.0	1030.2	1000.6	963.9	923.7	890.6	859.0
25°	1180.0	1175.6	1166.7	1148.5	1119.7	1082.7	1038.7	997.1	946.5	902.5	861.5
27.5°	1215.9	1214.0	1208.5	1191.4	1167.5	1130.8	1083.8	1030.8	973.4	913.9	864.7
30°	1190.3	1190.6	1193.6	1191.7	1181.1	1157.4	1115.6	1062.3	996.0	927.5	865.6
32.5°	1080.5	1087.9	1111.2	1122.4	1137.3	1142.2	1123.5	1079.2	1015.0	941.1	868.3
35°	931.1	949.0	964.8	997.4	1036.2	1068.0	1086.5	1072.1	1022.9	950.3	869.6
37.5°	790.3	788.9	813.4	848.7	890.0	944.1	996.5	1025.4	1009.3	948.4	867.2
40°	644.1	656.6	671.8	703.0	751.4	818.0	880.5	942.2	964.5	931.6	857.7
42.5°	544.1	549.8	565.0	589.5	624.2	692.2	753.9	833.2	890.3	894.1	836.8
45°	467.4	473.7	478.0	502.2	534.6	580.2	643.5	723.4	800.1	833.2	802.8
47.5°	406.0	409.5	419.1	433.7	454.9	495.4	546.0	618.5	702.0	766.4	756.0
50°	359.8	362.5	370.1	378.3	395.7	425.6	466.3	525.9	606.0	676.4	699.5
52.5°	319.0	322.6	326.4	334.3	350.3	370.4	403.6	450.0	524.5	596.5	633.2
55°	285.9	287.3	291.3	297.3	309.5	324.8	351.1	393.2	445.4	517.2	567.7
57.5°	257.1	255.7	260.1	264.2	272.3	285.1	304.1	335.4	385.1	446.2	499.0
60°	226.1	227.5	230.7	234.0	239.7	250.8	265.8	290.8	327.2	382.1	435.9
62.5°	199.5	200.6	201.4	206.0	211.2	219.0	231.3	251.7	281.8	327.2	375.3
65°	177.2	175.3	176.4	179.6	183.7	190.2	201.6	216.6	239.2	276.1	316.1
67.5°	151.1	151.6	151.9	153.8	157.3	163.6	171.8	184.0	202.5	231.5	266.6
70°	128.8	129.1	129.4	131.0	134.0	137.5	143.2	152.7	168.5	191.0	218.5
72.5°	106.0	107.1	107.1	108.4	110.6	112.5	117.9	125.8	137.8	155.7	178.8
75°	83.2	85.1	85.6	87.2	89.1	89.7	93.8	100.0	107.6	122.3	140.5
77.5°	64.7	64.7	65.8	67.7	67.7	69.3	73.6	76.4	82.3	92.4	106.3
80°	45.7	46.5	46.5	47.0	48.1	49.5	51.4	53.8	59.0	66.3	73.6
82.5°	29.9	30.2	30.4	31.8	31.3	32.6	33.4	36.4	38.9	42.4	47.0
85°	15.8	15.8	16.0	16.8	17.7	17.9	18.5	19.8	21.7	23.4	26.1
87.5°	6.5	6.3	6.3	6.8	6.8	7.1	7.3	7.9	9.0	9.0	10.1
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°	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2
2.5°	694.6	692.4	688.6	685.4	681.3	678.3	675.3	671.5	667.7	663.6	659.3
5°	722.3	715.8	708.5	701.1	692.4	685.4	677.8	669.1	661.7	653.6	644.9
7.5°	754.1	742.7	730.0	715.5	702.0	689.7	677.2	665.3	654.4	642.2	630.2
10°	784.8	765.0	749.0	729.4	710.1	692.2	675.1	659.3	643.5	628.3	613.6
12.5°	805.8	783.2	763.1	740.5	718.0	695.4	672.9	651.1	632.4	613.9	598.4
15°	820.2	804.4	777.8	750.6	721.0	691.6	666.1	640.8	618.5	597.1	578.6
17.5°	829.1	808.8	782.7	754.1	721.5	690.8	660.1	629.9	604.4	581.3	560.4
20°	831.6	807.7	780.5	750.9	718.3	684.6	650.1	617.2	589.5	563.1	541.9
22.5°	829.1	801.4	772.3	743.5	709.3	675.1	638.9	603.0	571.2	544.1	521.8
25°	825.1	791.6	761.2	727.2	695.4	662.8	625.6	587.5	554.4	526.1	501.1
27.5°	819.9	781.6	744.1	710.7	676.1	644.1	609.8	571.0	536.5	505.5	482.1
30°	813.9	768.3	726.7	687.0	654.4	622.3	588.9	552.2	517.4	487.8	462.5
32.5°	807.1	754.1	705.2	662.6	627.8	598.1	566.9	531.8	497.6	465.8	443.8
35°	797.6	734.8	682.1	635.9	599.8	567.7	540.3	509.6	475.6	446.0	423.1
37.5°	786.5	717.7	658.7	608.7	569.3	536.5	511.2	486.2	454.4	425.9	403.8
40°	771.5	697.1	634.0	579.9	537.8	505.5	480.7	459.3	432.9	404.1	384.3
42.5°	752.0	674.2	606.0	548.4	507.7	473.1	450.0	430.5	407.9	382.9	363.3
45°	729.7	648.2	574.8	518.2	474.0	441.1	418.5	400.8	383.7	361.4	343.2
47.5°	694.9	617.4	546.5	484.0	440.5	408.7	387.5	370.7	357.9	340.2	322.3
50°	653.6	582.7	513.1	450.3	406.3	375.6	355.5	340.8	329.9	316.3	302.7
52.5°	608.2	543.5	476.4	417.7	373.7	344.6	323.4	310.4	303.3	292.4	281.8
55°	555.2	499.5	437.0	383.5	340.2	310.6	292.4	283.2	275.3	269.9	260.3
57.5°	501.9	454.9	399.2	346.2	306.5	280.2	263.9	253.6	247.8	244.0	237.2
60°	443.8	406.8	355.7	309.8	274.5	249.5	235.1	226.6	221.5	219.3	214.7
62.5°	388.3	360.1	313.6	275.3	243.8	221.8	207.4	200.6	197.3	194.9	192.1
65°	333.7	311.4	274.8	238.9	212.2	192.4	181.0	175.6	173.1	170.4	170.1
67.5°	284.5	264.2	234.8	205.5	183.2	166.3	156.3	150.8	148.1	148.4	147.0
70°	236.2	220.4	196.5	172.6	153.5	140.2	130.7	127.2	126.1	125.8	124.7
72.5°	191.0	182.1	161.2	141.0	126.1	115.8	108.2	105.2	103.8	103.3	103.3
75°	151.4	144.8	126.9	111.7	100.3	91.9	86.7	84.5	82.6	83.7	82.9
77.5°	113.6	108.2	95.9	85.1	76.4	69.3	66.9	65.0	63.9	63.6	64.7
80°	79.9	76.6	69.0	60.3	53.8	49.7	48.1	46.5	45.7	45.1	45.7
82.5°	51.4	49.5	44.0	38.9	35.1	32.9	31.3	30.4	29.1	29.4	29.9
85°	28.0	27.4	23.9	22.3	18.8	18.5	17.4	16.6	16.8	16.3	17.1
87.5°	11.4	10.9	10.1	9.2	8.2	7.3	6.8	7.3	6.5	7.3	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2	670.2
2.5°	657.1	654.1	650.6	647.3	642.4	639.2	637.6	638.1	636.2	635.7	635.4
5°	639.7	632.9	626.4	621.0	615.3	608.7	604.1	602.8	602.2	600.9	597.9
7.5°	621.8	613.1	604.7	596.8	588.6	581.0	576.4	572.6	570.4	566.6	565.8
10°	602.8	592.2	583.2	571.8	562.0	554.1	548.1	544.9	543.0	539.4	536.5
12.5°	584.6	573.4	559.6	549.2	538.9	530.8	524.0	518.5	517.2	512.5	510.1
15°	565.0	551.4	538.9	526.9	517.2	506.8	502.8	497.9	493.0	488.9	488.1
17.5°	546.2	529.9	517.7	506.0	494.1	486.5	481.0	477.8	474.0	471.8	468.0
20°	523.7	510.4	496.8	485.9	475.6	469.1	461.7	458.7	456.0	450.9	449.2
22.5°	504.7	488.6	477.2	466.3	457.1	447.9	442.7	439.7	435.6	432.9	430.7
25°	484.8	471.5	457.1	446.2	438.4	429.1	425.6	421.8	418.2	415.8	413.6
27.5°	465.5	450.9	439.2	428.3	420.1	413.6	408.7	404.7	402.2	400.3	398.9
30°	445.4	431.8	421.0	410.9	401.7	396.2	391.6	390.0	387.3	385.9	383.7
32.5°	427.2	413.3	403.0	394.3	386.2	380.7	378.0	375.6	372.9	370.4	370.1
35°	406.6	394.6	385.1	375.6	369.6	365.2	362.3	359.8	357.6	355.7	354.6
37.5°	388.3	376.9	366.3	359.5	353.0	349.2	346.0	345.1	343.0	343.2	341.6
40°	368.8	358.5	349.5	342.7	338.3	334.3	332.1	329.4	328.0	328.3	326.9
42.5°	349.8	340.2	332.1	325.8	321.2	318.2	316.3	314.2	312.5	311.4	311.2
45°	330.5	322.0	315.2	309.0	305.2	302.5	300.0	297.3	295.9	295.4	295.1
47.5°	311.4	303.8	296.5	292.1	288.6	286.2	283.7	281.5	280.5	279.6	278.3
50°	291.9	284.3	279.1	273.7	270.7	267.4	264.7	263.6	262.2	262.0	263.3
52.5°	271.5	265.5	260.9	256.5	253.0	249.5	246.8	245.4	246.2	246.2	247.8
55°	252.2	245.9	241.6	238.1	234.3	231.0	228.3	228.3	228.3	229.9	232.1
57.5°	230.7	225.3	222.0	218.0	214.4	212.2	210.3	210.1	211.2	213.9	216.3
60°	209.0	205.2	201.6	198.4	194.9	193.2	193.0	192.4	194.0	196.8	201.9
62.5°	187.5	185.1	180.7	179.1	176.1	174.2	174.2	174.7	177.2	181.5	186.2
65°	166.9	163.3	160.1	158.4	156.5	154.9	154.9	157.1	160.6	164.7	170.4
67.5°	145.7	142.7	140.5	138.9	136.7	135.9	136.7	139.1	143.5	147.6	153.5
70°	122.8	122.3	120.4	118.2	117.1	117.1	117.9	120.7	123.9	130.2	135.3
72.5°	101.9	101.9	100.8	99.5	98.6	99.5	100.0	102.7	106.8	112.2	117.9
75°	82.9	82.1	81.3	80.7	80.4	81.0	81.8	84.0	88.9	94.0	98.6
77.5°	64.1	63.6	62.8	63.3	63.3	63.6	66.0	68.5	71.2	75.3	80.2
80°	46.2	46.5	45.7	45.4	46.7	47.3	49.2	51.1	53.0	57.6	61.1
82.5°	30.4	31.0	30.7	31.3	31.8	31.8	34.0	35.9	37.5	40.8	43.5
85°	17.4	17.7	17.7	18.5	19.0	18.8	20.7	21.7	22.6	25.0	26.6
87.5°	7.6	7.9	8.2	8.2	8.2	9.2	9.5	10.1	10.3	10.9	11.7
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: P243681

CATALOG NUMBER: S125DRP-H610D930-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	670.2	670.2	670.2	670.2
2.5°	632.9	632.7	634.0	634.8
5°	596.0	595.2	594.1	594.6
7.5°	563.1	560.9	560.4	560.4
10°	534.0	531.8	531.3	530.5
12.5°	509.3	506.0	504.7	503.3
15°	485.9	485.4	482.4	479.4
17.5°	464.4	465.3	462.3	460.9
20°	446.5	444.1	443.0	442.4
22.5°	428.3	426.4	426.4	424.5
25°	412.0	410.4	410.6	408.7
27.5°	396.8	396.5	396.2	395.7
30°	382.6	381.6	380.5	381.0
32.5°	369.1	367.4	366.6	366.3
35°	354.9	354.4	353.3	352.7
37.5°	341.1	341.3	340.0	339.7
40°	326.1	325.8	325.6	325.0
42.5°	310.4	309.5	310.1	309.8
45°	294.6	293.8	294.3	293.5
47.5°	279.1	279.6	279.6	279.9
50°	263.9	265.0	265.0	265.8
52.5°	249.7	251.9	251.9	251.7
55°	234.5	237.0	237.8	238.1
57.5°	220.1	222.6	225.0	225.6
60°	204.6	209.0	211.4	212.0
62.5°	190.8	194.9	198.1	198.4
65°	175.3	180.2	183.2	184.3
67.5°	159.5	163.3	167.4	169.0
70°	141.6	146.2	148.9	150.0
72.5°	122.8	128.0	131.5	132.1
75°	104.9	108.7	111.4	112.0
77.5°	84.5	88.3	90.8	91.3
80°	64.1	67.4	69.0	70.1
82.5°	45.4	47.6	48.4	49.5
85°	28.0	29.6	29.9	29.9
87.5°	12.2	12.5	12.5	13.0
90°	0.0	0.0	0.0	0.0



TEST NUMBER: P243681
 CATALOG NUMBER: S125DRP-H610D930-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	16.26	17.83	16.62	18.14	18.46	16.00	17.57	16.37	17.88	18.20
	3H	17.61	19.03	17.99	19.35	19.71	17.43	18.84	17.80	19.17	19.53
	4H	18.09	19.42	18.49	19.77	20.14	17.91	19.24	18.31	19.59	19.96
	6H	18.40	19.63	18.81	19.99	20.39	18.23	19.46	18.64	19.82	20.21
	8H	18.48	19.65	18.90	20.04	20.44	18.31	19.48	18.73	19.87	20.27
	12H	18.51	19.63	18.94	20.01	20.44	18.35	19.47	18.78	19.85	20.28
4H	2H	17.65	18.97	18.05	19.32	19.70	17.06	18.39	17.46	18.74	19.12
	3H	19.01	20.11	19.42	20.51	20.91	18.72	19.83	19.13	20.22	20.63
	4H	19.51	20.51	19.94	20.92	21.36	19.28	20.28	19.71	20.69	21.13
	6H	19.86	20.73	20.32	21.17	21.63	19.66	20.53	20.11	20.97	21.43
	8H	19.95	20.76	20.41	21.21	21.67	19.75	20.56	20.21	21.01	21.47
	12H	20.00	20.73	20.48	21.21	21.68	19.81	20.54	20.29	21.01	21.48
8H	4H	19.97	20.78	20.43	21.22	21.69	19.63	20.44	20.09	20.89	21.35
	6H	20.39	21.07	20.89	21.56	22.03	20.13	20.81	20.63	21.30	21.77
	8H	20.52	21.13	21.03	21.63	22.12	20.28	20.88	20.79	21.39	21.88
	12H	20.61	21.14	21.12	21.63	22.20	20.38	20.91	20.89	21.41	21.97
12H	4H	20.01	20.73	20.49	21.21	21.68	19.65	20.38	20.13	20.86	21.33
	6H	20.46	21.07	20.98	21.58	22.06	20.18	20.79	20.69	21.29	21.78
	8H	20.64	21.17	21.15	21.67	22.23	20.39	20.92	20.90	21.41	21.97