

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: P243676

Luminaire Tested: S125DRP-H610D840-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243676
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-H610D840-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

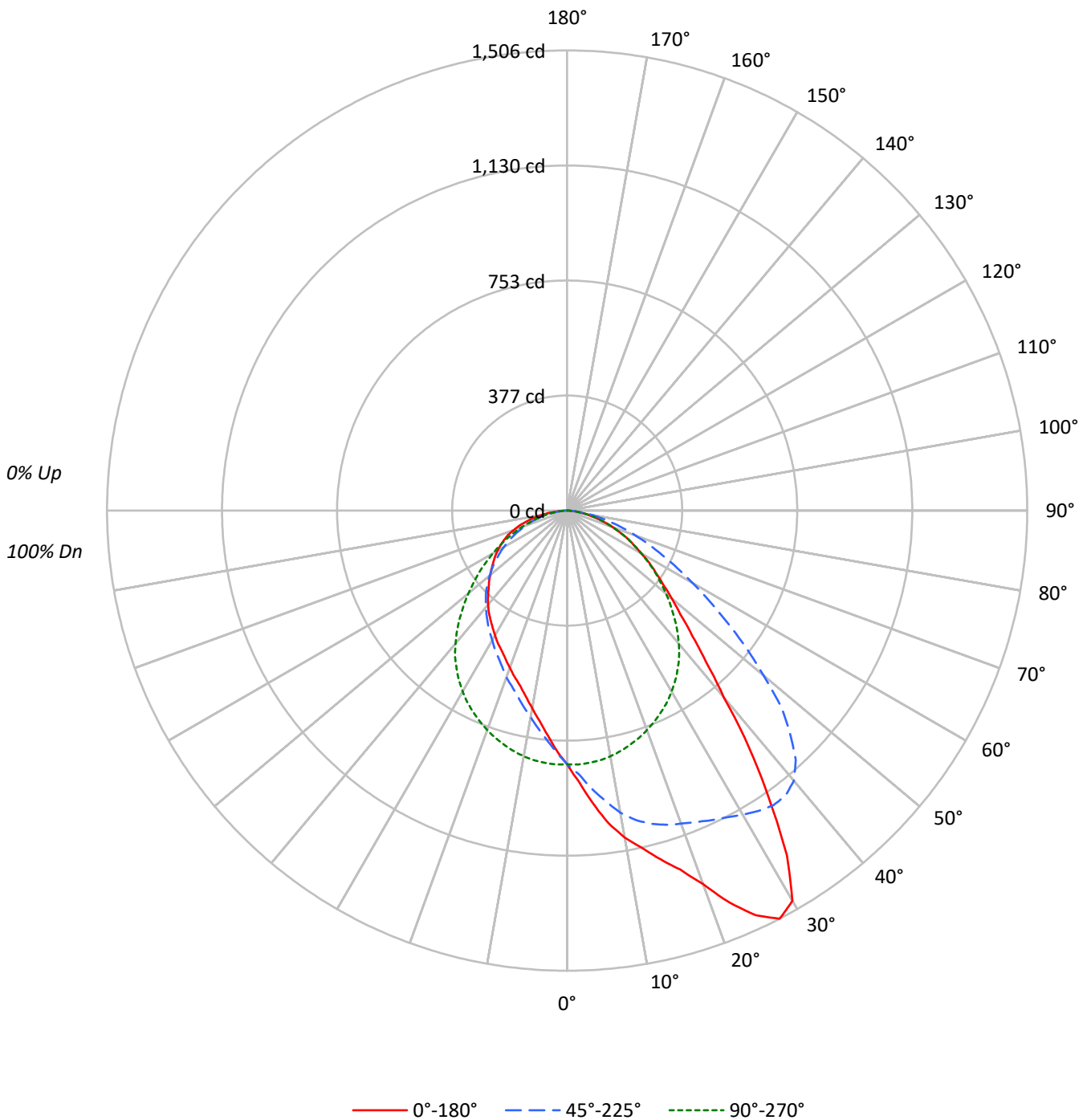
Lumens per Lamp: N/A
Luminaire Lumens: 2365.8 lumens
Efficiency: N/A
Efficacy: 137.5 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P243676

CATALOG NUMBER: S125DRP-H610D840-X4F0-XX-UDD-A-W

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°	5900	5900	5900	5900	5900
5°	6854	6508	5912	5379	5255
10°	7842	7247	5893	4954	4742
15°	8694	7807	5840	4619	4369
20°	9843	8246	5782	4394	4145
25°	11462	8767	5707	4168	3970
30°	12100	9429	5613	4028	3873
35°	10006	10213	5477	3925	3791
40°	7402	10706	5278	3841	3735
45°	5820	10374	4990	3766	3654
50°	4928	9264	4667	3662	3640
55°	4388	7938	4347	3545	3654
60°	3982	6728	3990	3402	3733
65°	3691	5752	3658	3227	3838
70°	3317	4917	3273	3015	3861
75°	2828	4160	2875	2754	3809
80°	2317	3360	2358	2398	3553
85°	1590	2357	1672	1892	3017

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10374 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.2	3.4
10°-20°	239.6	10.1
20°-30°	389.6	16.5
30°-40°	473.9	20.0
40°-50°	433.7	18.3
50°-60°	347.1	14.7
60°-70°	241.7	10.2
70°-80°	128.5	5.4
80°-90°	31.5	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°	709.4	30.0
0°-40°	1183.3	50.0
0°-60°	1964.1	83.0
0°-90°	2365.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2365.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	830	830	830	830	830	
5°	961	912	829	754	736	96
15°	1182	1061	794	628	594	339
25°	1462	1118	728	532	506	667
35°	1153	1177	631	452	437	715
45°	579	1032	496	375	364	457
55°	354	641	351	286	295	319
65°	220	342	218	192	228	216
75°	103	152	105	100	139	111
85°	20	29	20	23	37	25
90°	0	0	0	0	0	



TEST NUMBER: P243676

CATALOG NUMBER: S125DRP-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1
2.5°	888.7	885.0	884.0	884.3	882.3	880.6	876.5	871.2	867.5	862.7	861.4
5°	960.7	951.6	953.3	950.6	946.2	940.5	935.5	927.4	919.6	912.2	902.5
7.5°	1031.4	1029.7	1025.0	1024.3	1017.3	1007.5	997.4	986.3	969.8	958.3	945.2
10°	1086.6	1090.0	1083.2	1083.6	1071.1	1061.3	1052.6	1038.1	1019.6	1004.1	984.9
12.5°	1131.0	1132.4	1131.4	1127.0	1118.9	1102.4	1094.0	1078.9	1058.7	1037.4	1022.6
15°	1181.5	1177.8	1172.1	1166.7	1154.9	1143.1	1125.6	1107.8	1082.2	1061.0	1039.5
17.5°	1232.0	1231.3	1224.3	1212.8	1198.0	1182.5	1156.3	1133.4	1106.1	1078.2	1051.3
20°	1301.4	1297.7	1287.2	1274.1	1246.8	1224.9	1192.3	1161.0	1125.3	1090.3	1059.0
22.5°	1388.2	1376.1	1365.6	1345.5	1314.1	1276.1	1239.4	1194.0	1144.2	1103.1	1064.0
25°	1461.6	1456.2	1445.1	1422.5	1386.9	1341.1	1286.5	1235.0	1172.4	1117.9	1067.1
27.5°	1506.0	1503.7	1496.9	1475.7	1446.1	1400.7	1342.4	1276.8	1205.8	1132.0	1071.1
30°	1474.4	1474.7	1478.4	1476.1	1462.9	1433.6	1381.8	1315.8	1233.7	1148.9	1072.1
32.5°	1338.4	1347.5	1376.4	1390.2	1408.7	1414.8	1391.6	1336.7	1257.3	1165.7	1075.5
35°	1153.2	1175.5	1195.0	1235.4	1283.5	1322.9	1345.8	1327.9	1267.0	1177.1	1077.2
37.5°	978.9	977.2	1007.5	1051.3	1102.4	1169.4	1234.4	1270.1	1250.2	1174.8	1074.1
40°	797.8	813.3	832.1	870.8	930.7	1013.2	1090.6	1167.0	1194.6	1153.9	1062.4
42.5°	673.9	681.0	699.8	730.1	773.2	857.4	933.8	1032.1	1102.8	1107.5	1036.4
45°	579.0	586.7	592.1	622.1	662.1	718.7	797.1	896.1	991.0	1032.1	994.4
47.5°	502.9	507.3	519.1	537.2	563.5	613.7	676.3	766.1	869.5	949.3	936.5
50°	445.7	449.0	458.5	468.6	490.1	527.1	577.6	651.4	750.7	837.8	866.4
52.5°	395.2	399.6	404.3	414.0	433.9	458.8	499.9	557.4	649.7	738.9	784.3
55°	354.1	355.8	360.9	368.3	383.4	402.3	434.9	487.1	551.7	640.6	703.2
57.5°	318.4	316.8	322.1	327.2	337.3	353.1	376.7	415.4	477.0	552.7	618.0
60°	280.1	281.7	285.8	289.8	296.9	310.7	329.2	360.2	405.3	473.3	539.9
62.5°	247.1	248.4	249.4	255.2	261.6	271.3	286.5	311.7	349.1	405.3	464.9
65°	219.5	217.1	218.5	222.5	227.6	235.6	249.8	268.3	296.2	342.0	391.5
67.5°	187.2	187.8	188.2	190.5	194.9	202.6	212.7	227.9	250.8	286.8	330.2
70°	159.6	159.9	160.2	162.2	166.0	170.3	177.4	189.2	208.7	236.6	270.6
72.5°	131.3	132.6	132.6	134.3	137.0	139.4	146.1	155.9	170.7	192.9	221.5
75°	103.0	105.4	106.0	108.1	110.4	111.1	116.1	123.9	133.3	151.5	174.0
77.5°	80.1	80.1	81.5	83.8	83.8	85.8	91.2	94.6	102.0	114.4	131.6
80°	56.6	57.6	57.6	58.2	59.6	61.3	63.6	66.6	73.0	82.1	91.2
82.5°	37.0	37.4	37.7	39.4	38.7	40.4	41.4	45.1	48.1	52.5	58.2
85°	19.5	19.5	19.9	20.9	21.9	22.2	22.9	24.6	26.9	28.9	32.3
87.5°	8.1	7.7	7.7	8.4	8.4	8.8	9.1	9.8	11.1	11.1	12.5
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: P243676

CATALOG NUMBER: S125DRP-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1
2.5°	860.4	857.7	853.0	848.9	843.9	840.2	836.5	831.8	827.1	822.0	816.6
5°	894.7	886.6	877.6	868.5	857.7	848.9	839.5	828.7	819.7	809.6	798.8
7.5°	934.1	920.0	904.1	886.3	869.5	854.3	838.8	824.0	810.6	795.4	780.6
10°	972.1	947.6	927.7	903.5	879.6	857.4	836.2	816.6	797.1	778.3	760.1
12.5°	998.1	970.1	945.2	917.3	889.3	861.4	833.5	806.5	783.3	760.4	741.2
15°	1015.9	996.4	963.4	929.7	893.0	856.7	825.0	793.7	766.1	739.5	716.7
17.5°	1027.0	1001.8	969.5	934.1	893.7	855.7	817.6	780.3	748.6	720.0	694.1
20°	1030.0	1000.4	966.8	930.1	889.7	847.9	805.2	764.5	730.1	697.5	671.2
22.5°	1027.0	992.7	956.7	921.0	878.6	836.2	791.4	746.9	707.6	673.9	646.3
25°	1022.0	980.6	942.9	900.8	861.4	821.0	774.9	727.8	686.7	651.7	620.7
27.5°	1015.6	968.1	921.7	880.2	837.5	797.8	755.4	707.2	664.5	626.1	597.2
30°	1008.2	951.6	900.1	851.0	810.6	770.8	729.4	684.0	640.9	604.2	572.9
32.5°	999.7	934.1	873.5	820.7	777.6	740.9	702.2	658.8	616.3	577.0	549.7
35°	988.0	910.2	844.9	787.7	742.9	703.2	669.2	631.2	589.1	552.4	524.1
37.5°	974.2	889.0	816.0	754.0	705.2	664.5	633.2	602.2	562.8	527.5	500.2
40°	955.7	863.4	785.3	718.3	666.2	626.1	595.5	568.9	536.2	500.5	476.0
42.5°	931.4	835.1	750.7	679.3	628.8	586.0	557.4	533.2	505.3	474.3	450.1
45°	903.8	802.8	711.9	641.9	587.1	546.3	518.4	496.5	475.3	447.7	425.1
47.5°	860.7	764.8	676.9	599.5	545.7	506.3	480.0	459.1	443.3	421.4	399.2
50°	809.6	721.7	635.5	557.8	503.2	465.2	440.3	422.1	408.7	391.8	375.0
52.5°	753.3	673.2	590.1	517.4	462.8	426.8	400.6	384.4	375.7	362.2	349.1
55°	687.7	618.7	541.3	475.0	421.4	384.8	362.2	350.8	341.0	334.3	322.5
57.5°	621.7	563.5	494.5	428.8	379.7	347.1	326.9	314.1	307.0	302.3	293.9
60°	549.7	503.9	440.6	383.7	340.0	309.0	291.2	280.7	274.3	271.6	265.9
62.5°	481.0	446.0	388.5	341.0	301.9	274.7	256.8	248.4	244.4	241.4	238.0
65°	413.4	385.8	340.3	295.9	262.9	238.3	224.2	217.5	214.4	211.1	210.7
67.5°	352.4	327.2	290.8	254.5	226.9	206.0	193.6	186.8	183.5	183.8	182.1
70°	292.5	273.0	243.4	213.8	190.2	173.7	161.9	157.5	156.2	155.9	154.5
72.5°	236.6	225.5	199.6	174.7	156.2	143.4	134.0	130.3	128.6	127.9	127.9
75°	187.5	179.4	157.2	138.3	124.2	113.8	107.4	104.7	102.3	103.7	102.7
77.5°	140.7	134.0	118.8	105.4	94.6	85.8	82.8	80.5	79.1	78.8	80.1
80°	99.0	94.9	85.5	74.7	66.6	61.6	59.6	57.6	56.6	55.9	56.6
82.5°	63.6	61.3	54.5	48.1	43.4	40.7	38.7	37.7	36.0	36.4	37.0
85°	34.7	34.0	29.6	27.6	23.2	22.9	21.5	20.5	20.9	20.2	21.2
87.5°	14.1	13.5	12.5	11.4	10.1	9.1	8.4	9.1	8.1	9.1	8.8
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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CATALOG NUMBER: S125DRP-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1	830.1
2.5°	813.9	810.2	805.9	801.8	795.8	791.7	789.7	790.4	788.0	787.3	787.0
5°	792.4	784.0	775.9	769.2	762.1	754.0	748.3	746.6	745.9	744.3	740.6
7.5°	770.2	759.4	749.0	739.2	729.1	719.7	714.0	709.2	706.6	701.8	700.8
10°	746.6	733.5	722.4	708.2	696.1	686.4	679.0	674.9	672.6	668.2	664.5
12.5°	724.1	710.3	693.1	680.3	667.5	657.4	649.0	642.3	640.6	634.9	631.8
15°	699.8	683.0	667.5	652.7	640.6	627.8	622.7	616.7	610.6	605.6	604.6
17.5°	676.6	656.4	641.3	626.8	612.0	602.5	595.8	591.8	587.1	584.4	579.7
20°	648.7	632.2	615.3	601.9	589.1	581.0	571.9	568.2	564.8	558.4	556.4
22.5°	625.1	605.2	591.1	577.6	566.2	554.7	548.3	544.6	539.6	536.2	533.5
25°	600.5	584.0	566.2	552.7	543.0	531.5	527.1	522.4	518.1	515.0	512.3
27.5°	576.6	558.4	544.0	530.5	520.4	512.3	506.3	501.2	498.2	495.8	494.2
30°	551.7	534.9	521.4	509.0	497.5	490.8	485.1	483.0	479.7	478.0	475.3
32.5°	529.2	512.0	499.2	488.4	478.3	471.6	468.2	465.2	461.8	458.8	458.5
35°	503.6	488.8	477.0	465.2	457.8	452.4	448.7	445.7	443.0	440.6	439.3
37.5°	481.0	466.9	453.8	445.3	437.3	432.6	428.5	427.5	424.8	425.1	423.1
40°	456.8	444.0	432.9	424.5	419.1	414.0	411.3	408.0	406.3	406.6	404.9
42.5°	433.2	421.4	411.3	403.6	397.9	394.2	391.8	389.1	387.1	385.8	385.4
45°	409.3	398.9	390.5	382.7	378.0	374.7	371.6	368.3	366.6	365.9	365.6
47.5°	385.8	376.3	367.2	361.9	357.5	354.5	351.4	348.7	347.4	346.4	344.7
50°	361.5	352.1	345.7	339.0	335.3	331.2	327.9	326.5	324.8	324.5	326.2
52.5°	336.3	328.9	323.2	317.8	313.4	309.0	305.6	304.0	305.0	305.0	307.0
55°	312.4	304.6	299.3	294.9	290.2	286.1	282.8	282.8	282.8	284.8	287.5
57.5°	285.8	279.1	275.0	270.0	265.6	262.9	260.5	260.2	261.6	264.9	267.9
60°	258.9	254.1	249.8	245.7	241.4	239.3	239.0	238.3	240.3	243.7	250.1
62.5°	232.3	229.2	223.8	221.8	218.1	215.8	215.8	216.4	219.5	224.9	230.6
65°	206.7	202.3	198.3	196.2	193.9	191.9	191.9	194.6	198.9	204.0	211.1
67.5°	180.4	176.7	174.0	172.0	169.3	168.3	169.3	172.3	177.7	182.8	190.2
70°	152.2	151.5	149.1	146.4	145.1	145.1	146.1	149.5	153.5	161.2	167.6
72.5°	126.2	126.2	124.9	123.2	122.2	123.2	123.9	127.2	132.3	139.0	146.1
75°	102.7	101.7	100.6	100.0	99.6	100.3	101.3	104.0	110.1	116.5	122.2
77.5°	79.4	78.8	77.8	78.4	78.4	78.8	81.8	84.8	88.2	93.2	99.3
80°	57.2	57.6	56.6	56.2	57.9	58.6	60.9	63.3	65.6	71.4	75.7
82.5°	37.7	38.4	38.0	38.7	39.4	39.4	42.1	44.4	46.5	50.5	53.9
85°	21.5	21.9	21.9	22.9	23.6	23.2	25.6	26.9	27.9	31.0	33.0
87.5°	9.4	9.8	10.1	10.1	10.1	11.4	11.8	12.5	12.8	13.5	14.5
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: P243676

CATALOG NUMBER: S125DRP-H610D840-X4F0-XX-UDD-A-W

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	830.1	830.1	830.1	830.1
2.5°	784.0	783.6	785.3	786.3
5°	738.2	737.2	735.8	736.5
7.5°	697.5	694.8	694.1	694.1
10°	661.4	658.8	658.1	657.1
12.5°	630.8	626.8	625.1	623.4
15°	601.9	601.2	597.5	593.8
17.5°	575.3	576.3	572.6	570.9
20°	553.1	550.0	548.7	548.0
22.5°	530.5	528.1	528.1	525.8
25°	510.3	508.3	508.6	506.3
27.5°	491.5	491.1	490.8	490.1
30°	474.0	472.6	471.3	471.9
32.5°	457.1	455.1	454.1	453.8
35°	439.6	438.9	437.6	436.9
37.5°	422.5	422.8	421.1	420.8
40°	403.9	403.6	403.3	402.6
42.5°	384.4	383.4	384.1	383.7
45°	364.9	363.9	364.6	363.5
47.5°	345.7	346.4	346.4	346.7
50°	326.9	328.2	328.2	329.2
52.5°	309.3	312.0	312.0	311.7
55°	290.5	293.5	294.5	294.9
57.5°	272.7	275.7	278.7	279.4
60°	253.5	258.9	261.9	262.6
62.5°	236.3	241.4	245.4	245.7
65°	217.1	223.2	226.9	228.2
67.5°	197.6	202.3	207.4	209.4
70°	175.4	181.1	184.5	185.8
72.5°	152.2	158.5	162.9	163.6
75°	129.9	134.6	138.0	138.7
77.5°	104.7	109.4	112.4	113.1
80°	79.4	83.5	85.5	86.8
82.5°	56.2	58.9	59.9	61.3
85°	34.7	36.7	37.0	37.0
87.5°	15.1	15.5	15.5	16.2
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P243676

CATALOG NUMBER: S125DRP-H610D840-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	17.00	18.57	17.37	18.89	19.20	16.74	18.32	17.11	18.63	18.94
	3H	18.36	19.77	18.73	20.10	20.46	18.17	19.58	18.55	19.91	20.27
	4H	18.84	20.16	19.23	20.51	20.89	18.66	19.98	19.06	20.33	20.71
	6H	19.14	20.37	19.56	20.74	21.13	18.97	20.20	19.38	20.57	20.96
	8H	19.22	20.39	19.65	20.78	21.18	19.05	20.22	19.48	20.61	21.01
	12H	19.25	20.38	19.68	20.76	21.19	19.09	20.21	19.52	20.59	21.02
4H	2H	18.39	19.72	18.79	20.07	20.44	17.81	19.13	18.21	19.48	19.86
	3H	19.75	20.86	20.16	21.25	21.65	19.46	20.57	19.87	20.97	21.37
	4H	20.25	21.25	20.69	21.66	22.10	20.02	21.02	20.46	21.43	21.87
	6H	20.61	21.47	21.06	21.92	22.37	20.40	21.27	20.86	21.71	22.17
	8H	20.70	21.51	21.16	21.95	22.42	20.50	21.31	20.96	21.75	22.22
	12H	20.75	21.47	21.23	21.95	22.42	20.55	21.28	21.03	21.76	22.23
8H	4H	20.71	21.52	21.17	21.96	22.43	20.38	21.19	20.84	21.63	22.10
	6H	21.14	21.81	21.63	22.30	22.78	20.88	21.55	21.37	22.04	22.52
	8H	21.26	21.87	21.78	22.38	22.86	21.02	21.63	21.54	22.14	22.62
	12H	21.35	21.88	21.86	22.38	22.94	21.12	21.66	21.63	22.15	22.71
12H	4H	20.75	21.48	21.23	21.95	22.42	20.40	21.12	20.88	21.60	22.07
	6H	21.21	21.81	21.72	22.32	22.81	20.93	21.53	21.44	22.04	22.53
	8H	21.38	21.92	21.89	22.41	22.97	21.13	21.66	21.64	22.16	22.72