

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: P243671

Luminaire Tested: S125DRP-H610D835-X4F0-XX-UDD-A-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243671
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-H610D835-X4F0-XX-UDD-A-W
Description: DEFINE 5 DIRECT RECESSED WITH ASYMMETRIC FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

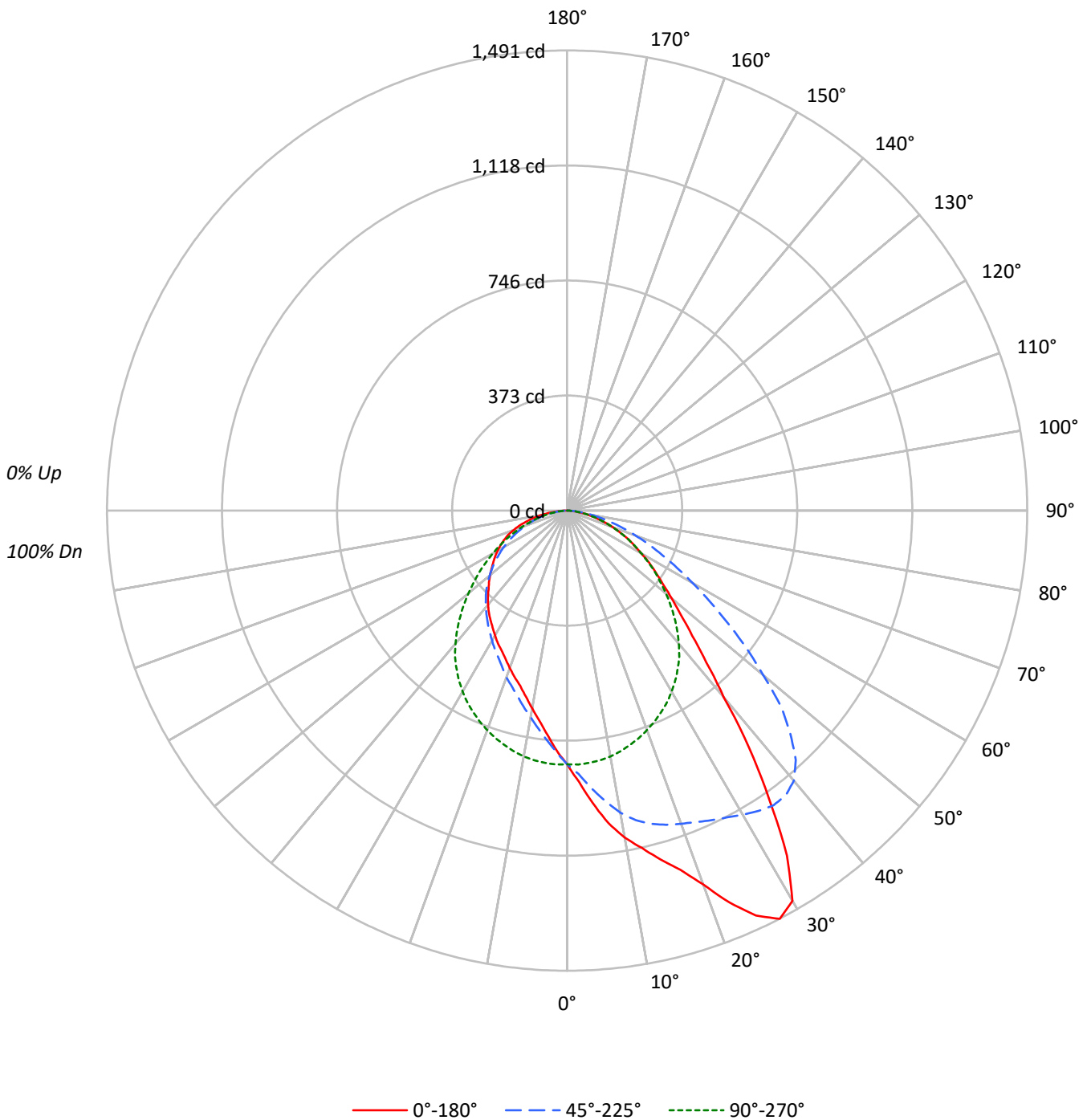
Lumens per Lamp: N/A
Luminaire Lumens: 2342.7 lumens
Efficiency: N/A
Efficacy: 136.2 lumens/watt
Spacing Criteria (0/90/45): 1.43 / 1.22 / 1.53
Luminous Opening: Rectangular (W 3.88' x L: 0.39' x H: 0')
CIE Type: Direct

Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): 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	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°	5842	5842	5842	5842	5842
5°	6787	6445	5855	5327	5203
10°	7765	7176	5836	4905	4696
15°	8609	7730	5783	4575	4327
20°	9746	8166	5726	4351	4105
25°	11350	8681	5652	4127	3931
30°	11982	9336	5559	3989	3835
35°	9909	10113	5423	3887	3754
40°	7330	10601	5226	3804	3699
45°	5762	10272	4942	3729	3618
50°	4879	9174	4622	3627	3605
55°	4346	7860	4303	3510	3618
60°	3942	6662	3952	3369	3696
65°	3654	5696	3621	3195	3801
70°	3283	4869	3242	2986	3824
75°	2801	4119	2848	2727	3770
80°	2292	3328	2333	2374	3520
85°	1574	2340	1655	1876	2993

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10272 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	3.4
10°-20°	237.3	10.1
20°-30°	385.8	16.5
30°-40°	469.3	20.0
40°-50°	429.5	18.3
50°-60°	343.7	14.7
60°-70°	239.4	10.2
70°-80°	127.2	5.4
80°-90°	31.2	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°	702.4	30.0
0°-40°	1171.7	50.0
0°-60°	1944.9	83.0
0°-90°	2342.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2342.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	822	822	822	822	822	
5°	951	903	821	747	729	95
15°	1170	1051	786	622	588	336
25°	1447	1107	721	526	501	661
35°	1142	1166	625	448	433	708
45°	573	1022	492	371	360	452
55°	351	634	347	283	292	316
65°	217	339	215	190	226	214
75°	102	150	104	99	137	110
85°	19	29	20	23	37	25
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°	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0
2.5°	880.0	876.3	875.3	875.7	873.7	872.0	868.0	862.7	859.0	854.3	853.0
5°	951.3	942.3	944.0	941.3	937.0	931.3	926.3	918.3	910.6	903.3	893.7
7.5°	1021.3	1019.6	1015.0	1014.3	1007.3	997.6	987.6	976.6	960.3	949.0	936.0
10°	1076.0	1079.3	1072.6	1073.0	1060.6	1051.0	1042.3	1028.0	1009.6	994.3	975.3
12.5°	1120.0	1121.3	1120.3	1116.0	1108.0	1091.6	1083.3	1068.3	1048.3	1027.3	1012.6
15°	1170.0	1166.3	1160.6	1155.3	1143.6	1132.0	1114.6	1097.0	1071.6	1050.6	1029.3
17.5°	1220.0	1219.3	1212.3	1201.0	1186.3	1171.0	1145.0	1122.3	1095.3	1067.6	1041.0
20°	1288.6	1285.0	1274.6	1261.6	1234.6	1213.0	1180.6	1149.6	1114.3	1079.6	1048.6
22.5°	1374.6	1362.6	1352.3	1332.3	1301.3	1263.6	1227.3	1182.3	1133.0	1092.3	1053.6
25°	1447.3	1442.0	1431.0	1408.6	1373.3	1328.0	1274.0	1223.0	1161.0	1107.0	1056.6
27.5°	1491.3	1489.0	1482.3	1461.3	1432.0	1387.0	1329.3	1264.3	1194.0	1121.0	1060.6
30°	1460.0	1460.3	1464.0	1461.6	1448.6	1419.6	1368.3	1303.0	1221.6	1137.6	1061.6
32.5°	1325.3	1334.3	1363.0	1376.6	1395.0	1401.0	1378.0	1323.6	1245.0	1154.3	1065.0
35°	1142.0	1164.0	1183.3	1223.3	1271.0	1310.0	1332.6	1315.0	1254.6	1165.6	1066.6
37.5°	969.3	967.6	997.6	1041.0	1091.6	1158.0	1222.3	1257.6	1238.0	1163.3	1063.6
40°	790.0	805.3	824.0	862.3	921.6	1003.3	1080.0	1155.6	1183.0	1142.6	1052.0
42.5°	667.3	674.3	693.0	723.0	765.7	849.0	924.6	1022.0	1092.0	1096.6	1026.3
45°	573.3	581.0	586.3	616.0	655.7	711.7	789.3	887.3	981.3	1022.0	984.6
47.5°	498.0	502.3	514.0	532.0	558.0	607.7	669.7	758.7	861.0	940.0	927.3
50°	441.3	444.7	454.0	464.0	485.3	522.0	572.0	645.0	743.3	829.7	858.0
52.5°	391.3	395.7	400.3	410.0	429.7	454.3	495.0	552.0	643.3	731.7	776.7
55°	350.7	352.3	357.3	364.7	379.7	398.3	430.7	482.3	546.3	634.3	696.3
57.5°	315.3	313.7	319.0	324.0	334.0	349.7	373.0	411.3	472.3	547.3	612.0
60°	277.3	279.0	283.0	287.0	294.0	307.7	326.0	356.7	401.3	468.7	534.7
62.5°	244.7	246.0	247.0	252.7	259.0	268.7	283.7	308.7	345.7	401.3	460.3
65°	217.3	215.0	216.3	220.3	225.3	233.3	247.3	265.7	293.3	338.7	387.7
67.5°	185.3	186.0	186.3	188.7	193.0	200.7	210.7	225.7	248.3	284.0	327.0
70°	158.0	158.3	158.7	160.7	164.3	168.7	175.7	187.3	206.7	234.3	268.0
72.5°	130.0	131.3	131.3	133.0	135.7	138.0	144.7	154.3	169.0	191.0	219.3
75°	102.0	104.3	105.0	107.0	109.3	110.0	115.0	122.7	132.0	150.0	172.3
77.5°	79.3	79.3	80.7	83.0	83.0	85.0	90.3	93.7	101.0	113.3	130.3
80°	56.0	57.0	57.0	57.7	59.0	60.7	63.0	66.0	72.3	81.3	90.3
82.5°	36.7	37.0	37.3	39.0	38.3	40.0	41.0	44.7	47.7	52.0	57.7
85°	19.3	19.3	19.7	20.7	21.7	22.0	22.7	24.3	26.7	28.7	32.0
87.5°	8.0	7.7	7.7	8.3	8.3	8.7	9.0	9.7	11.0	11.0	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



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0
2.5°	852.0	849.3	844.7	840.7	835.7	832.0	828.3	823.7	819.0	814.0	808.7
5°	886.0	878.0	869.0	860.0	849.3	840.7	831.3	820.7	811.7	801.7	791.0
7.5°	925.0	911.0	895.3	877.7	861.0	846.0	830.7	816.0	802.7	787.7	773.0
10°	962.6	938.3	918.6	894.7	871.0	849.0	828.0	808.7	789.3	770.7	752.7
12.5°	988.3	960.6	936.0	908.3	880.7	853.0	825.3	798.7	775.7	753.0	734.0
15°	1006.0	986.6	954.0	920.6	884.3	848.3	817.0	786.0	758.7	732.3	709.7
17.5°	1017.0	992.0	960.0	925.0	885.0	847.3	809.7	772.7	741.3	713.0	687.3
20°	1020.0	990.6	957.3	921.0	881.0	839.7	797.3	757.0	723.0	690.7	664.7
22.5°	1017.0	983.0	947.3	912.0	870.0	828.0	783.7	739.7	700.7	667.3	640.0
25°	1012.0	971.0	933.6	892.0	853.0	813.0	767.3	720.7	680.0	645.3	614.7
27.5°	1005.6	958.6	912.6	871.7	829.3	790.0	748.0	700.3	658.0	620.0	591.3
30°	998.3	942.3	891.3	842.7	802.7	763.3	722.3	677.3	634.7	598.3	567.3
32.5°	990.0	925.0	865.0	812.7	770.0	733.7	695.3	652.3	610.3	571.3	544.3
35°	978.3	901.3	836.7	780.0	735.7	696.3	662.7	625.0	583.3	547.0	519.0
37.5°	964.6	880.3	808.0	746.7	698.3	658.0	627.0	596.3	557.3	522.3	495.3
40°	946.3	855.0	777.7	711.3	659.7	620.0	589.7	563.3	531.0	495.7	471.3
42.5°	922.3	827.0	743.3	672.7	622.7	580.3	552.0	528.0	500.3	469.7	445.7
45°	895.0	795.0	705.0	635.7	581.3	541.0	513.3	491.7	470.7	443.3	421.0
47.5°	852.3	757.3	670.3	593.7	540.3	501.3	475.3	454.7	439.0	417.3	395.3
50°	801.7	714.7	629.3	552.3	498.3	460.7	436.0	418.0	404.7	388.0	371.3
52.5°	746.0	666.7	584.3	512.3	458.3	422.7	396.7	380.7	372.0	358.7	345.7
55°	681.0	612.7	536.0	470.3	417.3	381.0	358.7	347.3	337.7	331.0	319.3
57.5°	615.7	558.0	489.7	424.7	376.0	343.7	323.7	311.0	304.0	299.3	291.0
60°	544.3	499.0	436.3	380.0	336.7	306.0	288.3	278.0	271.7	269.0	263.3
62.5°	476.3	441.7	384.7	337.7	299.0	272.0	254.3	246.0	242.0	239.0	235.7
65°	409.3	382.0	337.0	293.0	260.3	236.0	222.0	215.3	212.3	209.0	208.7
67.5°	349.0	324.0	288.0	252.0	224.7	204.0	191.7	185.0	181.7	182.0	180.3
70°	289.7	270.3	241.0	211.7	188.3	172.0	160.3	156.0	154.7	154.3	153.0
72.5°	234.3	223.3	197.7	173.0	154.7	142.0	132.7	129.0	127.3	126.7	126.7
75°	185.7	177.7	155.7	137.0	123.0	112.7	106.3	103.7	101.3	102.7	101.7
77.5°	139.3	132.7	117.7	104.3	93.7	85.0	82.0	79.7	78.3	78.0	79.3
80°	98.0	94.0	84.7	74.0	66.0	61.0	59.0	57.0	56.0	55.3	56.0
82.5°	63.0	60.7	54.0	47.7	43.0	40.3	38.3	37.3	35.7	36.0	36.7
85°	34.3	33.7	29.3	27.3	23.0	22.7	21.3	20.3	20.7	20.0	21.0
87.5°	14.0	13.3	12.3	11.3	10.0	9.0	8.3	9.0	8.0	9.0	8.7
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°	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0	822.0
2.5°	806.0	802.3	798.0	794.0	788.0	784.0	782.0	782.7	780.3	779.7	779.3
5°	784.7	776.3	768.3	761.7	754.7	746.7	741.0	739.3	738.7	737.0	733.3
7.5°	762.7	752.0	741.7	732.0	722.0	712.7	707.0	702.3	699.7	695.0	694.0
10°	739.3	726.3	715.3	701.3	689.3	679.7	672.3	668.3	666.0	661.7	658.0
12.5°	717.0	703.3	686.3	673.7	661.0	651.0	642.7	636.0	634.3	628.7	625.7
15°	693.0	676.3	661.0	646.3	634.3	621.7	616.7	610.7	604.7	599.7	598.7
17.5°	670.0	650.0	635.0	620.7	606.0	596.7	590.0	586.0	581.3	578.7	574.0
20°	642.3	626.0	609.3	596.0	583.3	575.3	566.3	562.7	559.3	553.0	551.0
22.5°	619.0	599.3	585.3	572.0	560.7	549.3	543.0	539.3	534.3	531.0	528.3
25°	594.7	578.3	560.7	547.3	537.7	526.3	522.0	517.3	513.0	510.0	507.3
27.5°	571.0	553.0	538.7	525.3	515.3	507.3	501.3	496.3	493.3	491.0	489.3
30°	546.3	529.7	516.3	504.0	492.7	486.0	480.3	478.3	475.0	473.3	470.7
32.5°	524.0	507.0	494.3	483.7	473.7	467.0	463.7	460.7	457.3	454.3	454.0
35°	498.7	484.0	472.3	460.7	453.3	448.0	444.3	441.3	438.7	436.3	435.0
37.5°	476.3	462.3	449.3	441.0	433.0	428.3	424.3	423.3	420.7	421.0	419.0
40°	452.3	439.7	428.7	420.3	415.0	410.0	407.3	404.0	402.3	402.7	401.0
42.5°	429.0	417.3	407.3	399.7	394.0	390.3	388.0	385.3	383.3	382.0	381.7
45°	405.3	395.0	386.7	379.0	374.3	371.0	368.0	364.7	363.0	362.3	362.0
47.5°	382.0	372.7	363.7	358.3	354.0	351.0	348.0	345.3	344.0	343.0	341.3
50°	358.0	348.7	342.3	335.7	332.0	328.0	324.7	323.3	321.7	321.3	323.0
52.5°	333.0	325.7	320.0	314.7	310.3	306.0	302.7	301.0	302.0	302.0	304.0
55°	309.3	301.7	296.3	292.0	287.3	283.3	280.0	280.0	280.0	282.0	284.7
57.5°	283.0	276.3	272.3	267.3	263.0	260.3	258.0	257.7	259.0	262.3	265.3
60°	256.3	251.7	247.3	243.3	239.0	237.0	236.7	236.0	238.0	241.3	247.7
62.5°	230.0	227.0	221.7	219.7	216.0	213.7	213.7	214.3	217.3	222.7	228.3
65°	204.7	200.3	196.3	194.3	192.0	190.0	190.0	192.7	197.0	202.0	209.0
67.5°	178.7	175.0	172.3	170.3	167.7	166.7	167.7	170.7	176.0	181.0	188.3
70°	150.7	150.0	147.7	145.0	143.7	143.7	144.7	148.0	152.0	159.7	166.0
72.5°	125.0	125.0	123.7	122.0	121.0	122.0	122.7	126.0	131.0	137.7	144.7
75°	101.7	100.7	99.7	99.0	98.7	99.3	100.3	103.0	109.0	115.3	121.0
77.5°	78.7	78.0	77.0	77.7	77.7	78.0	81.0	84.0	87.3	92.3	98.3
80°	56.7	57.0	56.0	55.7	57.3	58.0	60.3	62.7	65.0	70.7	75.0
82.5°	37.3	38.0	37.7	38.3	39.0	39.0	41.7	44.0	46.0	50.0	53.3
85°	21.3	21.7	21.7	22.7	23.3	23.0	25.3	26.7	27.7	30.7	32.7
87.5°	9.3	9.7	10.0	10.0	10.0	11.3	11.7	12.3	12.7	13.3	14.3
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):

	165°	170°	175°	180°
0°	822.0	822.0	822.0	822.0
2.5°	776.3	776.0	777.7	778.7
5°	731.0	730.0	728.7	729.3
7.5°	690.7	688.0	687.3	687.3
10°	655.0	652.3	651.7	650.7
12.5°	624.7	620.7	619.0	617.3
15°	596.0	595.3	591.7	588.0
17.5°	569.7	570.7	567.0	565.3
20°	547.7	544.7	543.3	542.7
22.5°	525.3	523.0	523.0	520.7
25°	505.3	503.3	503.7	501.3
27.5°	486.7	486.3	486.0	485.3
30°	469.3	468.0	466.7	467.3
32.5°	452.7	450.7	449.7	449.3
35°	435.3	434.7	433.3	432.7
37.5°	418.3	418.7	417.0	416.7
40°	400.0	399.7	399.3	398.7
42.5°	380.7	379.7	380.3	380.0
45°	361.3	360.3	361.0	360.0
47.5°	342.3	343.0	343.0	343.3
50°	323.7	325.0	325.0	326.0
52.5°	306.3	309.0	309.0	308.7
55°	287.7	290.7	291.7	292.0
57.5°	270.0	273.0	276.0	276.7
60°	251.0	256.3	259.3	260.0
62.5°	234.0	239.0	243.0	243.3
65°	215.0	221.0	224.7	226.0
67.5°	195.7	200.3	205.3	207.3
70°	173.7	179.3	182.7	184.0
72.5°	150.7	157.0	161.3	162.0
75°	128.7	133.3	136.7	137.3
77.5°	103.7	108.3	111.3	112.0
80°	78.7	82.7	84.7	86.0
82.5°	55.7	58.3	59.3	60.7
85°	34.3	36.3	36.7	36.7
87.5°	15.0	15.3	15.3	16.0
90°	0.0	0.0	0.0	0.0

TEST NUMBER: P243671

CATALOG NUMBER: S125DRP-H610D835-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	16.97	18.54	17.33	18.85	19.17	16.71	18.28	17.08	18.59	18.91
	3H	18.32	19.74	18.70	20.06	20.42	18.13	19.55	18.51	19.88	20.24
	4H	18.80	20.13	19.20	20.48	20.85	18.62	19.95	19.02	20.30	20.67
	6H	19.11	20.34	19.52	20.70	21.09	18.94	20.17	19.35	20.53	20.92
	8H	19.19	20.36	19.61	20.75	21.15	19.02	20.19	19.44	20.58	20.98
	12H	19.22	20.34	19.65	20.72	21.15	19.06	20.18	19.49	20.56	20.99
4H	2H	18.36	19.68	18.75	20.03	20.41	17.77	19.10	18.17	19.45	19.83
	3H	19.72	20.82	20.13	21.22	21.62	19.43	20.54	19.84	20.93	21.33
	4H	20.22	21.22	20.65	21.63	22.07	19.99	20.99	20.42	21.40	21.84
	6H	20.57	21.44	21.03	21.88	22.34	20.37	21.24	20.82	21.68	22.14
	8H	20.66	21.47	21.12	21.92	22.38	20.46	21.27	20.92	21.72	22.18
	12H	20.71	21.44	21.19	21.92	22.39	20.52	21.25	21.00	21.72	22.19
8H	4H	20.67	21.49	21.14	21.93	22.40	20.34	21.15	20.80	21.60	22.06
	6H	21.10	21.78	21.60	22.27	22.74	20.84	21.52	21.34	22.01	22.48
	8H	21.23	21.83	21.74	22.34	22.83	20.99	21.59	21.50	22.10	22.59
	12H	21.32	21.85	21.83	22.34	22.91	21.09	21.62	21.60	22.11	22.68
12H	4H	20.72	21.44	21.20	21.92	22.39	20.36	21.09	20.84	21.57	22.04
	6H	21.17	21.78	21.69	22.29	22.77	20.89	21.50	21.40	22.00	22.49
	8H	21.35	21.88	21.86	22.37	22.94	21.10	21.63	21.60	22.12	22.68