

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P832181

Luminaire Tested: S123RDIP-S560D1025U850-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832181
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D1025U850-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

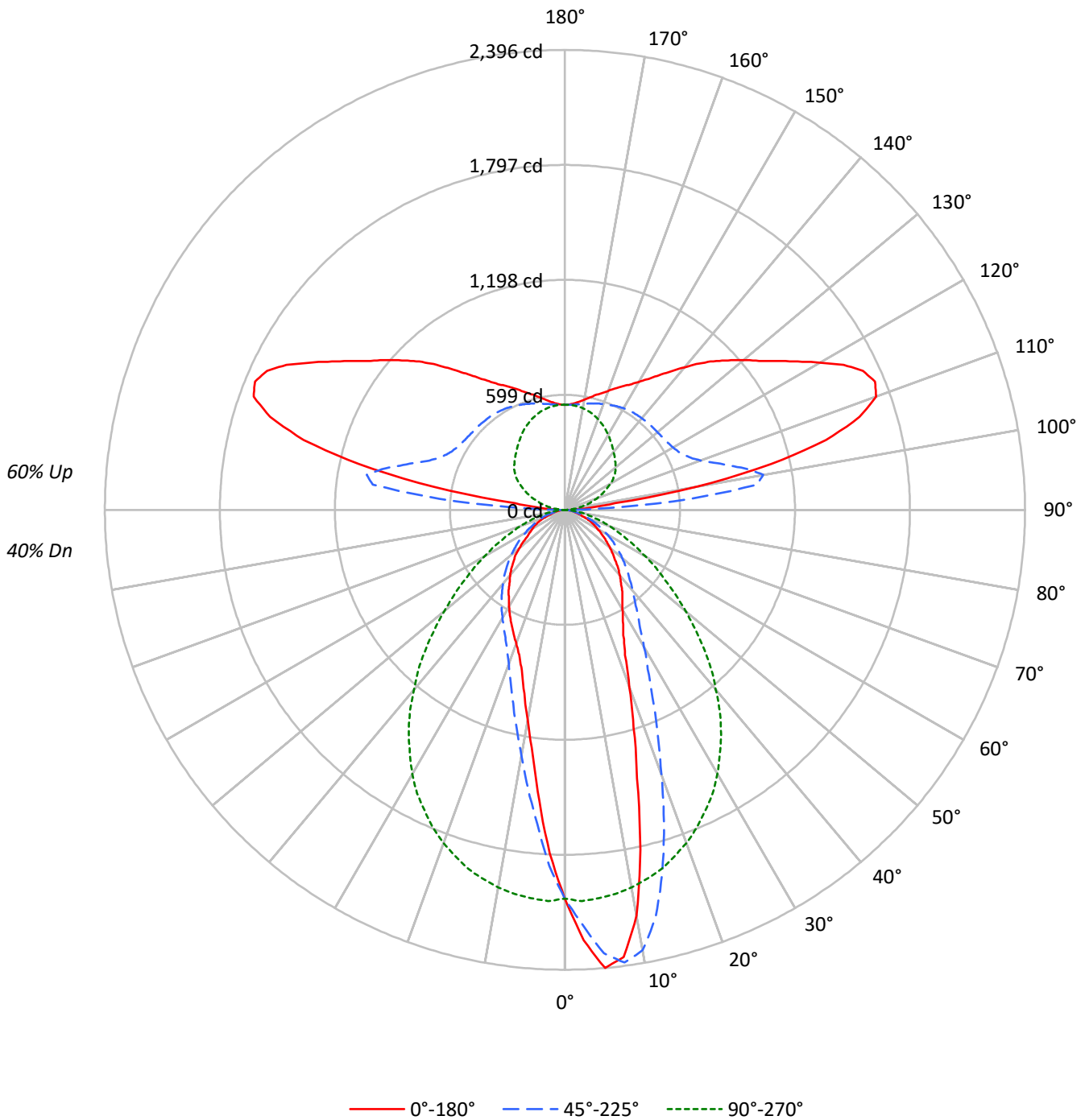
Lumens per Lamp: N/A
Luminaire Lumens: 6801.9 lumens
Efficiency: N/A
Efficacy: 149.5 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 45.5
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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40				
1	96	92	88	85	87	84	81	78	69	67	65	55	53	52	42	41	40	35				
2	88	81	75	71	80	74	69	65	61	58	55	49	47	45	38	36	35	30				
3	81	72	65	60	73	66	60	55	54	50	47	44	41	39	34	32	31	26				
4	74	64	57	51	67	59	52	48	49	44	41	40	36	34	31	29	27	23				
5	68	57	50	44	62	53	46	41	44	39	35	36	32	30	28	26	24	21				
6	63	52	44	39	58	48	41	36	40	35	31	33	29	26	26	24	22	19				
7	59	47	40	34	53	43	37	32	37	32	28	30	26	24	24	22	20	17				
8	55	43	36	31	50	40	33	29	34	29	25	28	24	21	22	20	18	16				
9	51	39	32	28	47	36	30	26	31	26	23	26	22	20	21	18	16	14				
10	48	36	29	25	44	34	28	23	29	24	21	24	20	18	19	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	21801	21801	21801	21801	21801
5°	25887	25061	21939	17735	16466
10°	23455	25456	21829	14210	12190
15°	16148	21826	21599	11614	9643
20°	11234	16804	21165	9793	8475
25°	8561	12807	20535	8704	7811
30°	7452	10239	19745	8081	7235
35°	6842	8637	18628	7557	6711
40°	6243	7713	17165	7043	6232
45°	5638	7054	15586	6555	5751
50°	5117	6507	13725	6077	5159
55°	4628	5977	11937	5611	4425
60°	4148	5436	10370	5096	4183
65°	3828	4821	8925	4579	3955
70°	3109	4170	7789	4142	3213
75°	2728	3315	6596	3435	2832
80°	2473	2808	5405	2882	2678
85°	2260	2458	4100	2618	2458

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 16446 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.6	2.7
10°-20°	427.2	6.3
20°-30°	490.1	7.2
30°-40°	483.1	7.1
40°-50°	426.0	6.3
50°-60°	327.8	4.8
60°-70°	215.5	3.2
70°-80°	104.7	1.5
80°-90°	29.4	0.4
90°-100°	296.8	4.4
100°-110°	868.8	12.8
110°-120°	848.4	12.5
120°-130°	675.7	9.9
130°-140°	533.1	7.8
140°-150°	397.7	5.8
150°-160°	277.3	4.1
160°-170°	162.9	2.4
170°-180°	53.0	0.8
0°-30°	1102.0	16.2
0°-40°	1585.1	23.3
0°-60°	2338.9	34.4
0°-90°	2688.5	39.5
90°-120°	2013.9	29.6
90°-150°	3620.3	53.2
90°-180°	4113.0	60.5
0°-180°	6801.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2025	2025	2025	2025	2025	
5°	2396	2319	2030	1641	1524	219
15°	1449	1959	1938	1042	865	409
25°	721	1078	1729	733	658	340
35°	521	657	1418	575	511	325
45°	370	463	1024	431	378	288
55°	247	318	636	299	236	221
65°	150	189	350	180	155	147
75°	66	80	159	83	68	71
85°	18	20	33	21	20	19
90°	32	28	2	28	32	18
95°	128	656	38	656	128	209
105°	1408	890	128	890	1408	1405
115°	1712	681	227	681	1712	1670
125°	1350	635	316	635	1350	1222
135°	1095	627	370	627	1095	849
145°	856	619	422	619	856	543
155°	710	599	479	599	710	331
165°	619	573	524	573	619	177
175°	557	550	546	550	557	54
180°	547	547	547	547	547	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4
2.5°	2244.7	2237.6	2230.6	2228.5	2226.4	2219.8	2213.1	2198.2	2183.2	2167.9	2152.5
5°	2395.8	2396.6	2397.5	2395.4	2393.3	2384.6	2375.9	2357.6	2339.3	2319.4	2299.5
7.5°	2349.3	2362.6	2375.9	2378.4	2380.9	2387.5	2394.2	2390.0	2385.8	2378.4	2370.9
10°	2145.9	2145.0	2144.2	2159.1	2174.1	2218.5	2262.9	2285.8	2308.6	2329.0	2349.3
12.5°	1813.7	1814.9	1816.2	1865.2	1914.2	1956.1	1998.0	2056.2	2114.3	2177.0	2239.7
15°	1449.1	1469.5	1489.8	1533.4	1577.0	1640.1	1703.2	1781.3	1859.4	1958.6	2057.8
17.5°	1190.0	1198.7	1207.5	1249.4	1291.3	1351.1	1410.9	1499.4	1587.8	1715.7	1843.6
20°	980.7	988.6	996.5	1026.8	1057.1	1114.4	1171.7	1256.0	1340.3	1467.0	1593.6
22.5°	818.8	834.2	849.5	869.9	890.2	931.8	973.3	1059.2	1145.2	1260.6	1376.0
25°	720.8	727.9	734.9	752.4	769.8	809.7	849.5	906.4	963.3	1078.3	1193.3
27.5°	654.4	656.5	658.5	671.4	684.3	710.0	735.8	788.5	841.2	935.9	1030.6
30°	599.6	603.3	607.1	617.0	627.0	645.7	664.4	701.7	739.1	823.8	908.5
32.5°	557.2	559.3	561.4	569.7	578.0	591.7	605.4	634.9	664.4	729.1	793.9
35°	520.7	521.1	521.5	527.7	534.0	547.3	560.5	585.0	609.5	657.3	705.0
37.5°	479.2	482.1	485.0	489.5	494.1	505.7	517.4	537.3	557.2	596.7	636.1
40°	444.3	446.8	449.3	454.7	460.1	469.2	478.3	496.6	514.9	548.9	583.0
42.5°	409.4	411.1	412.7	418.1	423.5	434.7	445.9	460.5	475.0	503.2	531.5
45°	370.4	374.5	378.7	384.5	390.3	399.9	409.4	424.4	439.3	463.4	487.5
47.5°	338.0	340.1	342.1	347.1	352.1	363.7	375.4	388.6	401.9	424.4	446.8
50°	305.6	306.4	307.3	311.8	316.4	326.8	337.2	352.5	367.9	388.6	409.4
52.5°	274.9	277.0	279.0	283.6	288.2	295.2	302.3	318.1	333.8	354.2	374.5
55°	246.6	247.9	249.1	252.5	255.8	264.1	272.4	286.1	299.8	318.5	337.2
57.5°	220.1	221.7	223.4	225.9	228.4	235.8	243.3	255.4	267.4	286.1	304.8
60°	192.7	194.7	196.8	199.7	202.6	208.4	214.3	225.0	235.8	252.5	269.1
62.5°	172.7	173.1	173.6	176.1	178.5	182.7	186.8	195.6	204.3	220.9	237.5
65°	150.3	151.6	152.8	154.0	155.3	158.6	161.9	169.4	176.9	189.3	201.8
67.5°	127.1	128.3	129.5	131.6	133.7	136.6	139.5	144.5	149.5	161.1	172.7
70°	98.8	98.8	98.8	102.1	105.5	110.4	115.4	119.2	122.9	132.5	142.0
72.5°	80.6	81.0	81.4	81.8	82.2	85.1	88.0	94.3	100.5	106.3	112.1
75°	65.6	66.0	66.4	66.9	67.3	68.1	68.9	71.0	73.1	79.7	86.4
77.5°	52.3	52.7	53.1	53.6	54.0	54.8	55.6	56.5	57.3	59.8	62.3
80°	39.9	40.3	40.7	41.1	41.5	41.9	42.4	43.2	44.0	45.3	46.5
82.5°	29.1	29.1	29.1	29.1	29.1	29.9	30.7	30.7	30.7	31.6	32.4
85°	18.3	18.3	18.3	18.7	19.1	19.1	19.1	19.5	19.9	19.9	19.9
87.5°	8.3	7.9	7.5	7.9	8.3	8.3	8.3	8.7	9.1	9.1	9.1
90°	32.1	33.2	32.1	31.0	32.1	29.9	28.8	27.7	26.6	27.7	24.4
92.5°	58.7	60.9	59.8	64.2	66.4	74.2	85.2	109.6	153.9	205.9	228.0
95°	128.4	132.8	140.6	150.5	171.6	211.4	270.1	398.5	532.5	656.4	584.5
97.5°	263.5	275.6	302.2	344.3	418.4	544.6	690.8	915.5	1043.9	1009.6	753.9
100°	694.1	693.0	736.1	817.0	928.8	1085.9	1215.5	1305.1	1266.4	1048.3	708.5
102.5°	1099.2	1131.3	1165.7	1225.4	1306.2	1391.5	1453.5	1434.6	1277.5	976.4	642.0
105°	1408.1	1413.6	1449.0	1491.1	1542.0	1570.8	1549.8	1439.1	1207.7	890.0	590.0
107.5°	1609.5	1621.7	1636.1	1656.0	1662.7	1632.8	1546.5	1372.7	1108.1	813.6	552.4
110°	1724.7	1726.9	1729.1	1720.2	1689.3	1611.8	1472.3	1268.6	1015.1	750.5	532.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1747.9	1746.8	1735.7	1703.6	1640.5	1535.4	1374.9	1165.7	934.3	708.5	521.4
115°	1712.5	1707.0	1684.8	1636.1	1553.1	1432.4	1269.7	1077.1	872.3	680.8	520.3
117.5°	1635.0	1627.3	1594.1	1539.8	1453.5	1328.4	1178.9	1008.5	831.3	662.0	521.4
120°	1533.2	1526.5	1500.0	1438.0	1350.5	1238.7	1105.9	956.4	800.3	649.8	525.8
122.5°	1438.0	1429.1	1399.2	1345.0	1269.7	1167.9	1047.2	915.5	774.9	642.0	533.6
125°	1350.5	1342.8	1315.1	1266.4	1195.5	1107.0	1000.7	880.0	753.9	635.4	541.3
127.5°	1275.2	1268.6	1243.1	1201.1	1136.9	1055.0	957.5	847.9	733.9	632.1	550.2
130°	1213.3	1204.4	1181.1	1141.3	1082.6	1007.4	917.7	818.1	718.4	628.8	559.0
132.5°	1152.4	1146.8	1126.9	1087.1	1032.8	962.0	880.0	790.4	704.0	627.7	565.7
135°	1094.8	1087.1	1067.1	1033.9	979.7	916.6	844.6	766.0	691.9	626.6	572.3
137.5°	1033.9	1027.3	1010.7	976.4	929.9	873.4	809.2	742.8	680.8	624.3	576.7
140°	969.7	970.8	953.1	922.1	880.0	832.4	779.3	722.9	670.8	623.2	581.2
142.5°	909.9	911.0	895.5	869.0	834.7	794.8	750.5	704.0	662.0	621.0	584.5
145°	855.7	853.5	844.6	821.4	793.7	761.6	726.2	689.6	654.2	618.8	585.6
147.5°	809.2	808.1	799.2	782.6	760.5	737.2	707.4	677.5	646.5	615.5	585.6
150°	769.4	769.4	762.7	750.5	733.9	712.9	689.6	664.2	638.7	611.1	585.6
152.5°	736.1	736.1	732.8	721.8	709.6	693.0	673.0	652.0	629.9	605.5	582.3
155°	709.6	708.5	706.3	697.4	687.4	674.2	657.5	639.8	621.0	598.9	580.1
157.5°	684.1	684.1	681.9	675.3	666.4	655.3	642.0	626.6	611.1	593.3	576.7
160°	659.8	660.9	660.9	654.2	646.5	638.7	627.7	615.5	601.1	586.7	574.5
162.5°	637.6	638.7	638.7	633.2	628.8	622.1	612.2	602.2	591.1	580.1	570.1
165°	618.8	618.8	619.9	615.5	611.1	605.5	597.8	591.1	582.3	573.4	565.7
167.5°	600.0	600.0	601.1	597.8	595.6	591.1	586.7	581.2	573.4	566.8	561.2
170°	583.4	583.4	584.5	582.3	581.2	579.0	574.5	571.2	565.7	560.1	556.8
172.5°	567.9	569.0	571.2	569.0	569.0	567.9	564.6	562.3	557.9	554.6	553.5
175°	556.8	557.9	559.0	557.9	557.9	557.9	555.7	554.6	552.4	550.2	550.2
177.5°	549.1	549.1	551.3	550.2	551.3	551.3	550.2	549.1	548.0	546.8	548.0
180°	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4
2.5°	2150.4	2148.3	2128.4	2108.5	2089.0	2069.5	2054.9	2040.4	2015.9	1991.4	1976.0
5°	2283.7	2267.9	2236.4	2204.8	2157.5	2110.1	2070.3	2030.4	1979.8	1929.1	1886.8
7.5°	2358.0	2345.2	2307.0	2268.8	2206.1	2143.4	2081.1	2018.8	1944.1	1869.3	1805.4
10°	2360.1	2370.9	2339.3	2307.8	2237.2	2166.6	2081.9	1997.2	1896.7	1796.2	1713.6
12.5°	2286.2	2332.7	2326.1	2319.4	2247.6	2175.7	2072.8	1969.8	1846.5	1723.2	1619.8
15°	2147.9	2238.0	2264.6	2291.2	2231.8	2172.4	2055.3	1938.2	1793.3	1648.4	1529.7
17.5°	1969.8	2096.0	2166.2	2236.4	2193.2	2150.0	2021.7	1893.4	1730.2	1567.0	1437.9
20°	1758.9	1924.1	2034.2	2144.2	2128.4	2112.6	1980.2	1847.7	1671.7	1495.6	1355.7
22.5°	1550.4	1724.8	1876.8	2028.8	2045.0	2061.1	1927.4	1793.7	1601.1	1408.4	1266.0
25°	1370.6	1547.9	1729.0	1910.0	1946.5	1983.1	1856.0	1729.0	1529.3	1329.5	1187.9
27.5°	1199.2	1367.7	1567.0	1766.3	1832.8	1899.2	1783.0	1666.7	1458.7	1250.6	1109.5
30°	1059.2	1209.9	1413.4	1616.9	1709.5	1802.1	1695.3	1588.6	1382.3	1175.9	1037.6
32.5°	928.8	1063.8	1268.1	1472.4	1579.9	1687.5	1595.3	1503.1	1304.6	1106.1	969.5
35°	825.9	946.7	1137.3	1327.9	1448.3	1568.7	1493.1	1417.6	1223.7	1029.7	900.6
37.5°	737.4	838.7	1017.7	1196.7	1324.5	1452.4	1389.3	1326.2	1143.9	961.6	839.6
40°	664.4	745.7	912.2	1078.7	1204.1	1329.5	1275.6	1221.6	1058.4	895.2	781.0
42.5°	601.7	671.8	821.3	970.8	1085.8	1200.8	1165.1	1129.4	981.6	833.8	727.9
45°	546.4	605.4	737.0	868.6	974.5	1080.4	1052.2	1023.9	896.5	769.0	671.8
47.5°	497.4	548.1	665.6	783.1	878.2	973.3	947.1	921.0	815.5	710.0	621.6
50°	452.6	495.8	593.8	691.8	777.3	862.8	841.2	819.6	732.4	645.3	568.9
52.5°	410.2	445.9	534.0	622.0	690.9	759.9	743.2	726.6	659.4	592.1	522.8
55°	370.0	402.8	477.1	551.4	610.4	669.3	652.7	636.1	583.8	531.5	470.4
57.5°	333.4	362.1	422.3	482.5	529.4	576.3	568.4	560.5	516.9	473.3	423.1
60°	294.8	320.5	372.5	424.4	462.1	499.9	490.8	481.7	450.5	419.4	376.2
62.5°	260.3	283.2	324.7	366.2	396.9	427.7	421.0	414.4	390.7	367.1	331.3
65°	224.2	246.6	280.3	313.9	338.0	362.1	356.3	350.4	332.6	314.7	286.1
67.5°	191.4	210.1	239.2	268.2	284.4	300.6	297.3	294.0	280.3	266.6	244.1
70°	158.2	174.4	198.5	222.6	233.8	245.0	246.2	247.5	235.0	222.6	205.9
72.5°	125.0	137.9	160.3	182.7	191.4	200.1	199.7	199.3	191.8	184.4	169.4
75°	95.9	105.5	122.9	140.3	147.8	155.3	157.0	158.6	151.6	144.5	136.2
77.5°	68.9	75.6	88.9	102.1	110.4	118.8	119.6	120.4	117.1	113.8	105.9
80°	48.6	50.7	59.0	67.3	76.0	84.7	86.0	87.2	83.9	80.6	75.6
82.5°	33.6	34.9	37.8	40.7	47.8	54.8	56.5	58.1	56.5	54.8	49.4
85°	20.3	20.8	22.0	23.3	26.6	29.9	31.6	33.2	32.4	31.6	28.7
87.5°	9.1	9.1	9.6	10.0	10.8	11.6	13.7	15.8	14.5	13.3	12.0
90°	21.0	17.7	14.4	12.2	10.0	6.6	4.4	2.2	4.4	6.6	10.0
92.5°	170.5	111.8	76.4	56.5	45.4	35.4	24.4	16.6	24.4	35.4	45.4
95°	402.9	238.0	143.9	100.7	72.0	53.1	41.0	37.6	41.0	53.1	72.0
97.5°	448.3	256.8	163.8	116.2	87.5	70.8	60.9	59.8	60.9	70.8	87.5
100°	417.3	253.5	176.0	132.8	106.3	90.8	83.0	81.9	83.0	90.8	106.3
102.5°	390.8	257.9	190.4	151.7	128.4	114.0	107.4	105.2	107.4	114.0	128.4
105°	380.8	266.8	207.0	172.7	151.7	138.4	131.7	128.4	131.7	138.4	151.7
107.5°	378.6	281.2	228.0	195.9	176.0	162.7	156.1	152.8	156.1	162.7	176.0
110°	384.1	300.0	250.2	219.2	200.4	188.2	182.7	179.3	182.7	188.2	200.4



TEST NUMBER: P832181

CATALOG NUMBER: S123RDIP-S560D1025U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	395.2	318.8	273.4	243.5	224.7	212.5	207.0	203.7	207.0	212.5	224.7
115°	407.4	339.8	297.8	267.9	249.1	238.0	231.4	226.9	231.4	238.0	249.1
117.5°	422.9	362.0	319.9	292.2	271.2	261.2	255.7	250.2	255.7	261.2	271.2
120°	440.6	383.0	343.2	315.5	294.5	283.4	277.9	274.5	277.9	283.4	294.5
122.5°	457.2	405.2	366.4	336.5	316.6	304.4	298.9	295.6	298.9	304.4	316.6
125°	474.9	426.2	387.4	357.6	336.5	324.3	317.7	315.5	317.7	324.3	336.5
127.5°	489.3	445.0	407.4	377.5	354.2	342.1	334.3	331.0	334.3	342.1	354.2
130°	503.7	461.6	425.1	395.2	371.9	358.7	348.7	345.4	348.7	358.7	371.9
132.5°	517.0	476.0	440.6	411.8	388.6	371.9	360.9	356.4	360.9	371.9	388.6
135°	528.0	490.4	456.1	426.2	402.9	386.3	374.2	369.7	374.2	386.3	402.9
137.5°	536.9	500.4	467.1	439.5	416.2	398.5	386.3	381.9	386.3	398.5	416.2
140°	543.5	510.3	478.2	450.5	428.4	410.7	399.6	394.1	399.6	410.7	428.4
142.5°	550.2	518.1	487.1	461.6	439.5	424.0	411.8	407.4	411.8	424.0	439.5
145°	554.6	524.7	495.9	470.5	451.6	435.0	425.1	421.8	425.1	435.0	451.6
147.5°	557.9	530.2	503.7	481.5	462.7	448.3	438.4	436.2	438.4	448.3	462.7
150°	559.0	535.8	510.3	490.4	474.9	460.5	451.6	450.5	451.6	460.5	474.9
152.5°	561.2	539.1	518.1	499.2	486.0	473.8	464.9	464.9	464.9	473.8	486.0
155°	561.2	543.5	524.7	509.2	497.0	486.0	479.3	479.3	479.3	486.0	497.0
157.5°	562.3	545.7	530.2	518.1	507.0	497.0	491.5	490.4	491.5	497.0	507.0
160°	562.3	549.1	535.8	524.7	517.0	508.1	503.7	503.7	503.7	508.1	517.0
162.5°	561.2	550.2	539.1	530.2	523.6	517.0	513.6	513.6	513.6	517.0	523.6
165°	559.0	551.3	542.4	534.7	530.2	524.7	522.5	523.6	522.5	524.7	530.2
167.5°	557.9	551.3	544.6	539.1	535.8	531.4	530.2	531.4	530.2	531.4	535.8
170°	554.6	550.2	544.6	542.4	540.2	536.9	535.8	538.0	535.8	536.9	540.2
172.5°	553.5	550.2	545.7	544.6	543.5	541.3	541.3	542.4	541.3	541.3	543.5
175°	551.3	549.1	546.8	545.7	545.7	543.5	544.6	545.7	544.6	543.5	545.7
177.5°	550.2	548.0	546.8	546.8	546.8	545.7	546.8	548.0	546.8	545.7	546.8
180°	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8



TEST NUMBER: P832181

CATALOG NUMBER: S123RDIP-S560D1025U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4	2025.4
2.5°	1960.7	1937.0	1913.3	1896.3	1879.3	1858.1	1836.9	1836.1	1835.3	1819.5	1803.7
5°	1844.4	1803.3	1762.2	1721.9	1681.6	1641.4	1601.1	1592.0	1582.8	1569.1	1555.4
7.5°	1741.4	1675.8	1610.2	1558.7	1507.2	1467.0	1426.7	1399.3	1371.9	1350.7	1329.5
10°	1631.0	1549.6	1468.2	1405.9	1343.6	1300.1	1256.5	1224.9	1193.3	1178.4	1163.4
12.5°	1516.4	1427.9	1339.5	1278.5	1217.4	1165.1	1112.8	1084.1	1055.5	1034.7	1014.0
15°	1410.9	1315.8	1220.7	1156.0	1091.2	1042.2	993.2	964.6	935.9	915.1	894.4
17.5°	1308.8	1212.9	1116.9	1051.3	985.7	941.3	896.9	869.1	841.2	828.4	815.5
20°	1215.8	1119.0	1022.3	960.4	898.5	854.9	811.3	796.4	781.4	769.4	757.4
22.5°	1123.6	1030.6	937.6	878.2	818.8	787.3	755.7	743.7	731.6	722.5	713.3
25°	1046.4	953.8	861.2	809.3	757.4	732.9	708.4	700.5	692.6	683.5	674.3
27.5°	968.3	880.3	792.2	750.7	709.2	689.3	669.3	659.4	649.4	641.9	634.5
30°	899.4	818.0	736.6	702.1	667.7	650.2	632.8	622.0	611.2	604.1	597.1
32.5°	832.9	760.7	688.4	659.0	629.5	612.4	595.4	585.0	574.7	566.4	558.1
35°	771.5	708.8	646.1	619.1	592.1	575.1	558.1	547.7	537.3	529.0	520.7
37.5°	717.5	660.6	603.7	578.4	553.1	538.1	523.2	512.4	501.6	492.9	484.1
40°	666.8	616.6	566.4	541.9	517.4	501.2	485.0	475.4	465.9	458.0	450.1
42.5°	622.0	575.9	529.8	505.7	481.7	466.3	450.9	439.7	428.5	423.9	419.4
45°	574.7	534.0	493.3	470.0	446.8	430.6	414.4	404.8	395.3	391.1	387.0
47.5°	533.1	495.4	457.6	434.7	411.9	397.4	382.8	375.4	367.9	362.1	356.3
50°	492.5	455.9	419.4	397.4	375.4	362.9	350.4	341.3	332.2	328.0	323.9
52.5°	453.4	420.2	387.0	364.6	342.1	330.1	318.1	310.2	302.3	293.6	284.8
55°	409.4	380.3	351.3	331.3	311.4	299.0	286.5	277.4	268.2	259.1	250.0
57.5°	372.9	344.2	315.6	297.7	279.9	267.8	255.8	245.8	235.8	228.4	220.9
60°	333.0	308.1	283.2	265.7	248.3	236.7	225.0	215.5	205.9	202.2	198.5
62.5°	295.6	272.4	249.1	233.8	218.4	207.2	196.0	189.8	183.5	181.0	178.5
65°	257.4	237.5	217.6	203.5	189.3	179.8	170.2	167.3	164.4	162.4	160.3
67.5°	221.7	204.7	187.7	175.2	162.8	156.1	149.5	146.2	142.8	140.3	137.9
70°	189.3	174.4	159.4	148.6	137.9	131.6	125.4	122.5	119.6	115.0	110.4
72.5°	154.5	142.8	131.2	122.9	114.6	109.2	103.8	98.0	92.2	88.0	83.9
75°	127.9	116.3	104.6	96.7	88.9	82.6	76.4	74.3	72.2	71.0	69.8
77.5°	98.0	88.0	78.1	71.8	65.6	62.7	59.8	58.5	57.3	56.9	56.5
80°	70.6	62.3	54.0	50.7	47.3	46.5	45.7	44.8	44.0	43.6	43.2
82.5°	44.0	39.9	35.7	34.9	34.0	33.6	33.2	32.8	32.4	32.0	31.6
85°	25.7	24.1	22.4	22.0	21.6	21.2	20.8	20.8	20.8	20.8	20.8
87.5°	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.4	10.0
90°	12.2	14.4	17.7	21.0	24.4	27.7	26.6	27.7	28.8	29.9	32.1
92.5°	56.5	76.4	111.8	170.5	228.0	205.9	153.9	109.6	85.2	74.2	66.4
95°	100.7	143.9	238.0	402.9	584.5	656.4	532.5	398.5	270.1	211.4	171.6
97.5°	116.2	163.8	256.8	448.3	753.9	1009.6	1043.9	915.5	690.8	544.6	418.4
100°	132.8	176.0	253.5	417.3	708.5	1048.3	1266.4	1305.1	1215.5	1085.9	928.8
102.5°	151.7	190.4	257.9	390.8	642.0	976.4	1277.5	1434.6	1453.5	1391.5	1306.2
105°	172.7	207.0	266.8	380.8	590.0	890.0	1207.7	1439.1	1549.8	1570.8	1542.0
107.5°	195.9	228.0	281.2	378.6	552.4	813.6	1108.1	1372.7	1546.5	1632.8	1662.7
110°	219.2	250.2	300.0	384.1	532.5	750.5	1015.1	1268.6	1472.3	1611.8	1689.3



TEST NUMBER: P832181

CATALOG NUMBER: S123RDIP-S560D1025U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	243.5	273.4	318.8	395.2	521.4	708.5	934.3	1165.7	1374.9	1535.4	1640.5
115°	267.9	297.8	339.8	407.4	520.3	680.8	872.3	1077.1	1269.7	1432.4	1553.1
117.5°	292.2	319.9	362.0	422.9	521.4	662.0	831.3	1008.5	1178.9	1328.4	1453.5
120°	315.5	343.2	383.0	440.6	525.8	649.8	800.3	956.4	1105.9	1238.7	1350.5
122.5°	336.5	366.4	405.2	457.2	533.6	642.0	774.9	915.5	1047.2	1167.9	1269.7
125°	357.6	387.4	426.2	474.9	541.3	635.4	753.9	880.0	1000.7	1107.0	1195.5
127.5°	377.5	407.4	445.0	489.3	550.2	632.1	733.9	847.9	957.5	1055.0	1136.9
130°	395.2	425.1	461.6	503.7	559.0	628.8	718.4	818.1	917.7	1007.4	1082.6
132.5°	411.8	440.6	476.0	517.0	565.7	627.7	704.0	790.4	880.0	962.0	1032.8
135°	426.2	456.1	490.4	528.0	572.3	626.6	691.9	766.0	844.6	916.6	979.7
137.5°	439.5	467.1	500.4	536.9	576.7	624.3	680.8	742.8	809.2	873.4	929.9
140°	450.5	478.2	510.3	543.5	581.2	623.2	670.8	722.9	779.3	832.4	880.0
142.5°	461.6	487.1	518.1	550.2	584.5	621.0	662.0	704.0	750.5	794.8	834.7
145°	470.5	495.9	524.7	554.6	585.6	618.8	654.2	689.6	726.2	761.6	793.7
147.5°	481.5	503.7	530.2	557.9	585.6	615.5	646.5	677.5	707.4	737.2	760.5
150°	490.4	510.3	535.8	559.0	585.6	611.1	638.7	664.2	689.6	712.9	733.9
152.5°	499.2	518.1	539.1	561.2	582.3	605.5	629.9	652.0	673.0	693.0	709.6
155°	509.2	524.7	543.5	561.2	580.1	598.9	621.0	639.8	657.5	674.2	687.4
157.5°	518.1	530.2	545.7	562.3	576.7	593.3	611.1	626.6	642.0	655.3	666.4
160°	524.7	535.8	549.1	562.3	574.5	586.7	601.1	615.5	627.7	638.7	646.5
162.5°	530.2	539.1	550.2	561.2	570.1	580.1	591.1	602.2	612.2	622.1	628.8
165°	534.7	542.4	551.3	559.0	565.7	573.4	582.3	591.1	597.8	605.5	611.1
167.5°	539.1	544.6	551.3	557.9	561.2	566.8	573.4	581.2	586.7	591.1	595.6
170°	542.4	544.6	550.2	554.6	556.8	560.1	565.7	571.2	574.5	579.0	581.2
172.5°	544.6	545.7	550.2	553.5	553.5	554.6	557.9	562.3	564.6	567.9	569.0
175°	545.7	546.8	549.1	551.3	550.2	550.2	552.4	554.6	555.7	557.9	557.9
177.5°	546.8	546.8	548.0	550.2	548.0	546.8	548.0	549.1	550.2	551.3	551.3
180°	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8	546.8



TEST NUMBER: P832181

CATALOG NUMBER: S123RDIP-S560D1025U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2025.4	2025.4	2025.4	2025.4
2.5°	1799.6	1795.4	1793.7	1792.1
5°	1542.5	1529.7	1526.8	1523.9
7.5°	1324.1	1318.7	1300.9	1283.0
10°	1146.8	1130.2	1122.8	1115.3
12.5°	998.6	983.2	980.7	978.3
15°	883.6	872.8	869.1	865.3
17.5°	808.0	800.5	796.0	791.4
20°	752.0	746.6	743.2	739.9
22.5°	709.2	705.0	702.6	700.1
25°	668.1	661.9	659.8	657.7
27.5°	629.1	623.7	621.6	619.5
30°	592.5	588.0	585.0	582.1
32.5°	552.7	547.3	545.6	543.9
35°	517.4	514.0	512.4	510.7
37.5°	480.0	475.8	473.3	470.9
40°	448.0	445.9	444.7	443.5
42.5°	415.6	411.9	411.5	411.1
45°	383.2	379.5	378.7	377.8
47.5°	352.9	349.6	349.2	348.8
50°	319.3	314.7	311.4	308.1
52.5°	280.7	276.5	273.6	270.7
55°	245.4	240.8	238.3	235.8
57.5°	218.8	216.7	215.5	214.3
60°	197.2	196.0	195.2	194.3
62.5°	177.3	176.1	176.1	176.1
65°	159.0	157.8	156.5	155.3
67.5°	135.4	132.9	132.5	132.0
70°	106.7	103.0	102.6	102.1
72.5°	83.5	83.0	82.2	81.4
75°	68.9	68.1	68.1	68.1
77.5°	55.6	54.8	54.8	54.8
80°	42.8	42.4	42.8	43.2
82.5°	31.6	31.6	31.1	30.7
85°	20.3	19.9	19.9	19.9
87.5°	10.0	10.0	10.0	10.0
90°	31.0	32.1	33.2	32.1
92.5°	64.2	59.8	60.9	58.7
95°	150.5	140.6	132.8	128.4
97.5°	344.3	302.2	275.6	263.5
100°	817.0	736.1	693.0	694.1
102.5°	1225.4	1165.7	1131.3	1099.2
105°	1491.1	1449.0	1413.6	1408.1
107.5°	1656.0	1636.1	1621.7	1609.5
110°	1720.2	1729.1	1726.9	1724.7



TEST NUMBER: P832181

CATALOG NUMBER: S123RDIP-S560D1025U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1703.6	1735.7	1746.8	1747.9
115°	1636.1	1684.8	1707.0	1712.5
117.5°	1539.8	1594.1	1627.3	1635.0
120°	1438.0	1500.0	1526.5	1533.2
122.5°	1345.0	1399.2	1429.1	1438.0
125°	1266.4	1315.1	1342.8	1350.5
127.5°	1201.1	1243.1	1268.6	1275.2
130°	1141.3	1181.1	1204.4	1213.3
132.5°	1087.1	1126.9	1146.8	1152.4
135°	1033.9	1067.1	1087.1	1094.8
137.5°	976.4	1010.7	1027.3	1033.9
140°	922.1	953.1	970.8	969.7
142.5°	869.0	895.5	911.0	909.9
145°	821.4	844.6	853.5	855.7
147.5°	782.6	799.2	808.1	809.2
150°	750.5	762.7	769.4	769.4
152.5°	721.8	732.8	736.1	736.1
155°	697.4	706.3	708.5	709.6
157.5°	675.3	681.9	684.1	684.1
160°	654.2	660.9	660.9	659.8
162.5°	633.2	638.7	638.7	637.6
165°	615.5	619.9	618.8	618.8
167.5°	597.8	601.1	600.0	600.0
170°	582.3	584.5	583.4	583.4
172.5°	569.0	571.2	569.0	567.9
175°	557.9	559.0	557.9	556.8
177.5°	550.2	551.3	549.1	549.1
180°	546.8	546.8	546.8	546.8



TEST NUMBER: P832181

CATALOG NUMBER: S123RDIP-S560D1025U850-4F0-1E-UDD-G4

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	10.38	11.12	11.44	12.17	13.58	15.05	15.78	16.10	16.83	18.25
	3H	11.60	12.25	12.66	13.31	14.75	16.54	17.20	17.60	18.25	19.69
	4H	11.97	12.60	13.05	13.66	15.10	17.02	17.65	18.10	18.71	20.15
	6H	12.25	12.82	13.33	13.89	15.34	17.33	17.90	18.41	18.97	20.42
	8H	12.34	12.88	13.42	13.96	15.41	17.41	17.95	18.49	19.03	20.48
	12H	12.39	12.90	13.48	13.97	15.45	17.44	17.95	18.53	19.03	20.50
4H	2H	11.09	11.72	12.17	12.78	14.22	15.03	15.65	16.11	16.71	18.16
	3H	12.45	12.97	13.54	14.06	15.51	16.68	17.20	17.77	18.29	19.74
	4H	12.91	13.38	14.00	14.46	15.94	17.28	17.76	18.37	18.84	20.31
	6H	13.27	13.68	14.37	14.78	16.25	17.72	18.12	18.82	19.22	20.69
	8H	13.39	13.77	14.49	14.87	16.35	17.85	18.22	18.94	19.32	20.80
	12H	13.47	13.81	14.58	14.91	16.41	17.90	18.25	19.02	19.35	20.84
8H	4H	13.21	13.59	14.31	14.69	16.17	17.24	17.62	18.34	18.72	20.20
	6H	13.68	13.99	14.80	15.12	16.61	17.74	18.05	18.86	19.18	20.67
	8H	13.87	14.14	15.00	15.26	16.76	17.92	18.20	19.05	19.31	20.82
	12H	14.01	14.25	15.14	15.36	16.90	18.04	18.27	19.17	19.39	20.93
12H	4H	13.22	13.56	14.34	14.67	16.16	17.19	17.53	18.31	18.64	20.13
	6H	13.73	14.01	14.86	15.12	16.63	17.71	17.98	18.84	19.10	20.60
	8H	13.95	14.19	15.08	15.30	16.84	17.90	18.14	19.03	19.25	20.79