

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: P832206

Luminaire Tested: S123RDIP-S560D1195U850-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832206
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S560D1195U850-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

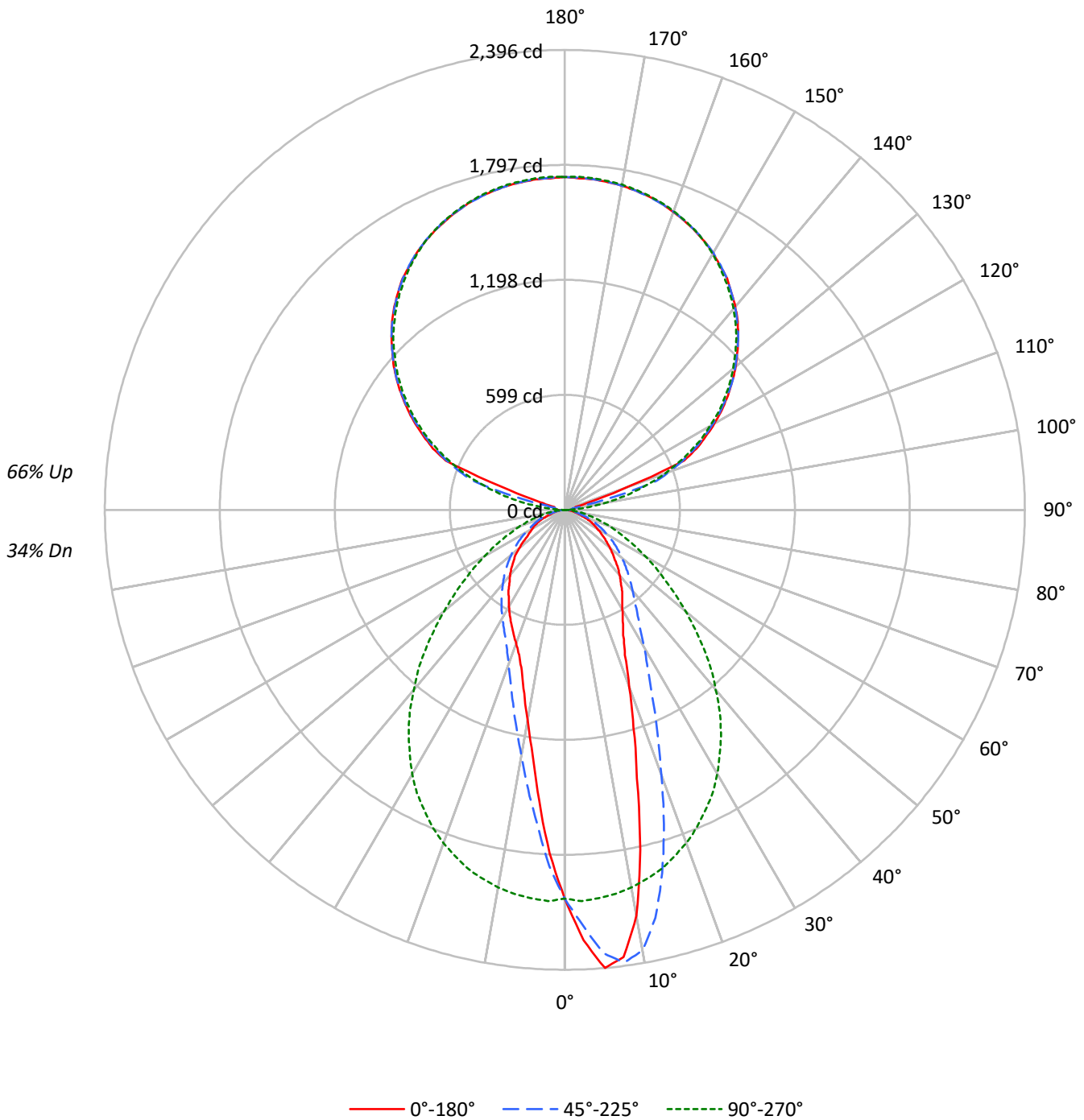
Lumens per Lamp: N/A
Luminaire Lumens: 7975.7 lumens
Efficiency: N/A
Efficacy: 157.6 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 50.6
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	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	34				
1	95	91	87	84	85	82	79	76	66	64	62	51	50	48	37	36	36	29				
2	87	80	74	69	78	72	68	63	58	55	52	45	43	41	33	32	31	26				
3	79	71	64	58	71	64	58	54	52	48	44	41	38	36	30	28	27	22				
4	73	63	56	50	66	57	51	46	47	42	38	37	34	31	27	25	24	20				
5	67	56	49	43	60	51	45	40	42	37	34	33	30	27	25	23	21	18				
6	62	51	43	38	56	46	40	35	38	33	30	30	27	24	23	21	19	16				
7	57	46	38	33	52	42	36	31	35	30	26	28	24	22	21	19	17	14				
8	53	42	35	30	48	38	32	28	32	27	24	25	22	20	20	17	16	13				
9	50	38	31	26	45	35	29	25	29	25	21	24	20	18	18	16	14	12				
10	47	35	28	24	42	32	26	22	27	22	19	22	19	16	17	15	13	11				

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	2.3
10°-20°	427.2	5.4
20°-30°	490.1	6.1
30°-40°	483.1	6.1
40°-50°	426.0	5.3
50°-60°	327.8	4.1
60°-70°	215.5	2.7
70°-80°	104.7	1.3
80°-90°	29.9	0.4
90°-100°	61.1	0.8
100°-110°	295.6	3.7
110°-120°	724.5	9.1
120°-130°	919.8	11.5
130°-140°	982.6	12.3
140°-150°	918.9	11.5
150°-160°	741.1	9.3
160°-170°	478.3	6.0
170°-180°	164.8	2.1
0°-30°	1102.0	13.8
0°-40°	1585.1	19.9
0°-60°	2338.9	29.3
0°-90°	2688.9	33.7
90°-120°	1081.2	13.6
90°-150°	3902.5	48.9
90°-180°	5287.0	66.3
0°-180°	7975.7	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°	39	31	1	31	39	18
95°	49	40	79	40	49	41
105°	57	282	384	282	57	118
115°	758	740	720	740	758	713
125°	1036	1031	1015	1031	1036	926
135°	1277	1277	1264	1277	1277	985
145°	1473	1470	1458	1470	1473	920
155°	1604	1605	1607	1605	1604	740
165°	1690	1689	1694	1689	1690	478
175°	1728	1729	1734	1729	1728	164
180°	1734	1734	1734	1734	1734	



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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°	38.7	38.1	37.5	36.9	36.4	35.5	34.4	33.2	32.1	30.9	27.2
92.5°	43.8	43.5	43.2	42.9	42.7	41.5	39.5	37.5	35.5	33.5	30.9
95°	49.0	49.0	49.0	49.0	49.0	48.0	46.0	44.0	41.9	39.9	36.8
97.5°	52.8	52.5	52.3	52.0	51.7	50.4	48.1	45.8	43.5	41.2	55.8
100°	54.1	53.8	53.5	53.3	53.0	51.7	49.4	47.1	44.8	42.5	87.2
102.5°	55.4	54.8	54.3	53.7	53.1	57.6	67.0	76.4	85.9	95.3	145.2
105°	56.7	56.1	55.5	55.0	54.4	79.5	130.1	180.8	231.5	282.2	307.9
107.5°	134.0	171.5	209.0	246.5	284.0	324.8	368.9	413.0	457.1	501.2	496.9
110°	354.3	395.3	436.2	477.2	518.1	543.3	552.7	562.2	571.6	581.1	577.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	671.3	671.9	672.4	673.0	673.6	672.6	670.0	667.4	664.8	662.3	659.1
115°	757.6	756.5	755.3	754.2	753.0	751.0	748.2	745.3	742.4	739.6	737.0
117.5°	827.2	826.9	826.6	826.3	826.0	824.7	822.5	820.2	817.9	815.6	814.2
120°	899.3	899.3	899.3	899.3	899.3	898.2	895.9	893.6	891.3	889.0	888.2
122.5°	970.2	969.9	969.6	969.3	969.1	968.2	966.8	965.3	963.9	962.5	961.3
125°	1035.9	1035.3	1034.8	1034.2	1033.6	1033.0	1032.5	1031.9	1031.3	1030.8	1029.6
127.5°	1100.3	1100.9	1101.5	1102.1	1102.6	1102.5	1101.6	1100.8	1099.9	1099.0	1097.6
130°	1162.2	1162.8	1163.3	1163.9	1164.5	1164.2	1163.0	1161.9	1160.7	1159.6	1158.5
132.5°	1218.9	1219.7	1220.6	1221.4	1222.3	1222.2	1221.0	1219.9	1218.7	1217.6	1216.7
135°	1276.9	1277.7	1278.6	1279.4	1280.3	1280.3	1279.4	1278.6	1277.7	1276.9	1275.7
137.5°	1332.3	1332.8	1333.4	1334.0	1334.5	1334.1	1332.7	1331.3	1329.8	1328.4	1327.8
140°	1381.2	1381.8	1382.4	1382.9	1383.5	1383.2	1382.1	1380.9	1379.8	1378.6	1377.8
142.5°	1426.3	1427.2	1428.0	1428.9	1429.7	1429.7	1428.9	1428.0	1427.2	1426.3	1425.5
145°	1472.7	1472.7	1472.7	1472.7	1472.7	1472.4	1471.8	1471.3	1470.7	1470.1	1469.5
147.5°	1506.2	1507.6	1509.1	1510.5	1511.9	1512.4	1511.8	1511.2	1510.6	1510.1	1509.5
150°	1544.8	1545.7	1546.6	1547.4	1548.3	1548.4	1547.9	1547.3	1546.7	1546.1	1545.6
152.5°	1575.8	1577.2	1578.6	1580.1	1581.5	1581.6	1580.5	1579.3	1578.2	1577.1	1576.8
155°	1604.1	1605.8	1607.6	1609.3	1611.0	1611.1	1609.7	1608.3	1606.8	1605.4	1605.1
157.5°	1628.6	1630.9	1633.2	1635.5	1637.8	1638.0	1636.3	1634.6	1632.9	1631.2	1631.5
160°	1651.8	1653.8	1655.8	1657.8	1659.8	1659.9	1658.2	1656.5	1654.8	1653.1	1653.4
162.5°	1673.7	1675.4	1677.1	1678.8	1680.6	1680.4	1678.4	1676.4	1674.4	1672.4	1672.7
165°	1690.4	1692.4	1694.5	1696.5	1698.5	1698.3	1696.0	1693.7	1691.4	1689.2	1689.4
167.5°	1703.3	1705.6	1707.9	1710.2	1712.5	1712.5	1710.2	1707.9	1705.6	1703.3	1703.3
170°	1714.9	1717.2	1719.5	1721.8	1724.1	1724.1	1721.8	1719.5	1717.2	1714.9	1714.9
172.5°	1721.4	1723.9	1726.5	1729.1	1731.7	1731.8	1729.5	1727.2	1724.9	1722.7	1722.4
175°	1727.8	1730.1	1732.4	1734.7	1737.0	1737.1	1735.1	1733.1	1731.1	1729.1	1728.8
177.5°	1729.1	1732.0	1734.8	1737.7	1740.5	1740.8	1738.5	1736.3	1734.0	1731.7	1731.4
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



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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°	23.5	19.8	16.0	12.7	9.9	7.0	4.2	1.3	4.2	7.0	9.9
92.5°	28.3	25.8	23.2	22.8	24.5	26.2	27.9	29.6	27.9	26.2	24.5
95°	33.6	30.5	27.3	31.6	43.4	55.1	66.9	78.6	66.9	55.1	43.4
97.5°	70.4	85.0	99.6	110.9	119.0	127.0	135.0	143.0	135.0	127.0	119.0
100°	131.9	176.5	221.2	240.7	234.9	229.2	223.5	217.7	223.5	229.2	234.9
102.5°	195.0	244.8	294.6	317.7	314.0	310.2	306.5	302.8	306.5	310.2	314.0
105°	333.7	359.5	385.2	396.6	393.4	390.3	387.1	384.0	387.1	390.3	393.4
107.5°	492.6	488.3	484.0	480.6	478.0	475.4	472.9	470.3	472.9	475.4	478.0
110°	574.8	571.6	568.5	565.8	563.5	561.2	558.9	556.6	558.9	561.2	563.5



TEST NUMBER: P832206

CATALOG NUMBER: S123RDIP-S560D1195U850-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	656.0	652.8	649.7	647.1	645.1	643.1	641.1	639.1	641.1	643.1	645.1
115°	734.4	731.8	729.3	727.1	725.4	723.7	722.0	720.2	722.0	723.7	725.4
117.5°	812.7	811.3	809.9	808.1	806.1	804.1	802.1	800.1	802.1	804.1	806.1
120°	887.3	886.5	885.6	883.9	881.3	878.7	876.1	873.6	876.1	878.7	881.3
122.5°	960.2	959.0	957.9	956.3	954.3	952.3	950.3	948.3	950.3	952.3	954.3
125°	1028.5	1027.3	1026.2	1024.5	1022.2	1019.9	1017.6	1015.3	1017.6	1019.9	1022.2
127.5°	1096.2	1094.8	1093.3	1091.5	1089.2	1086.9	1084.6	1082.3	1084.6	1086.9	1089.2
130°	1157.3	1156.2	1155.0	1153.3	1151.0	1148.7	1146.4	1144.1	1146.4	1148.7	1151.0
132.5°	1215.9	1215.0	1214.1	1212.6	1210.3	1208.0	1205.7	1203.4	1205.7	1208.0	1210.3
135°	1274.6	1273.4	1272.3	1270.8	1269.1	1267.4	1265.7	1264.0	1265.7	1267.4	1269.1
137.5°	1327.2	1326.7	1326.1	1324.7	1322.4	1320.1	1317.8	1315.5	1317.8	1320.1	1322.4
140°	1376.9	1376.1	1375.2	1373.9	1372.2	1370.5	1368.8	1367.0	1368.8	1370.5	1372.2
142.5°	1424.6	1423.7	1422.9	1421.6	1419.9	1418.2	1416.4	1414.7	1416.4	1418.2	1419.9
145°	1469.0	1468.4	1467.8	1466.5	1464.5	1462.5	1460.5	1458.5	1460.5	1462.5	1464.5
147.5°	1508.9	1508.3	1507.8	1506.8	1505.3	1503.9	1502.5	1501.0	1502.5	1503.9	1505.3
150°	1545.0	1544.4	1543.8	1543.1	1542.3	1541.4	1540.6	1539.7	1540.6	1541.4	1542.3
152.5°	1576.5	1576.2	1575.9	1575.6	1575.3	1575.1	1574.8	1574.5	1574.8	1575.1	1575.3
155°	1604.8	1604.5	1604.3	1604.4	1605.0	1605.5	1606.1	1606.7	1606.1	1605.5	1605.0
157.5°	1631.7	1632.0	1632.3	1632.5	1632.5	1632.5	1632.5	1632.5	1632.5	1632.5	1632.5
160°	1653.7	1653.9	1654.2	1654.5	1654.8	1655.1	1655.4	1655.7	1655.4	1655.1	1654.8
162.5°	1673.0	1673.3	1673.5	1674.1	1675.0	1675.8	1676.7	1677.6	1676.7	1675.8	1675.0
165°	1689.7	1690.0	1690.3	1690.9	1691.7	1692.6	1693.4	1694.3	1693.4	1692.6	1691.7
167.5°	1703.3	1703.3	1703.3	1703.9	1705.0	1706.2	1707.3	1708.5	1707.3	1706.2	1705.0
170°	1714.9	1714.9	1714.9	1715.5	1716.6	1717.8	1718.9	1720.1	1718.9	1717.8	1716.6
172.5°	1722.1	1721.8	1721.5	1722.1	1723.5	1724.9	1726.4	1727.8	1726.4	1724.9	1723.5
175°	1728.5	1728.2	1728.0	1728.5	1730.0	1731.4	1732.8	1734.2	1732.8	1731.4	1730.0
177.5°	1731.1	1730.8	1730.5	1731.1	1732.5	1734.0	1735.4	1736.8	1735.4	1734.0	1732.5
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



TEST NUMBER: P832206

CATALOG NUMBER: S123RDIP-S560D1195U850-4F0-1E-UDD-G

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°	12.7	16.0	19.8	23.5	27.2	30.9	32.1	33.2	34.4	35.5	36.4
92.5°	22.8	23.2	25.8	28.3	30.9	33.5	35.5	37.5	39.5	41.5	42.7
95°	31.6	27.3	30.5	33.6	36.8	39.9	41.9	44.0	46.0	48.0	49.0
97.5°	110.9	99.6	85.0	70.4	55.8	41.2	43.5	45.8	48.1	50.4	51.7
100°	240.7	221.2	176.5	131.9	87.2	42.5	44.8	47.1	49.4	51.7	53.0
102.5°	317.7	294.6	244.8	195.0	145.2	95.3	85.9	76.4	67.0	57.6	53.1
105°	396.6	385.2	359.5	333.7	307.9	282.2	231.5	180.8	130.1	79.5	54.4
107.5°	480.6	484.0	488.3	492.6	496.9	501.2	457.1	413.0	368.9	324.8	284.0
110°	565.8	568.5	571.6	574.8	577.9	581.1	571.6	562.2	552.7	543.3	518.1



TEST NUMBER: P832206

CATALOG NUMBER: S123RDIP-S560D1195U850-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	647.1	649.7	652.8	656.0	659.1	662.3	664.8	667.4	670.0	672.6	673.6
115°	727.1	729.3	731.8	734.4	737.0	739.6	742.4	745.3	748.2	751.0	753.0
117.5°	808.1	809.9	811.3	812.7	814.2	815.6	817.9	820.2	822.5	824.7	826.0
120°	883.9	885.6	886.5	887.3	888.2	889.0	891.3	893.6	895.9	898.2	899.3
122.5°	956.3	957.9	959.0	960.2	961.3	962.5	963.9	965.3	966.8	968.2	969.1
125°	1024.5	1026.2	1027.3	1028.5	1029.6	1030.8	1031.3	1031.9	1032.5	1033.0	1033.6
127.5°	1091.5	1093.3	1094.8	1096.2	1097.6	1099.0	1099.9	1100.8	1101.6	1102.5	1102.6
130°	1153.3	1155.0	1156.2	1157.3	1158.5	1159.6	1160.7	1161.9	1163.0	1164.2	1164.5
132.5°	1212.6	1214.1	1215.0	1215.9	1216.7	1217.6	1218.7	1219.9	1221.0	1222.2	1222.3
135°	1270.8	1272.3	1273.4	1274.6	1275.7	1276.9	1277.7	1278.6	1279.4	1280.3	1280.3
137.5°	1324.7	1326.1	1326.7	1327.2	1327.8	1328.4	1329.8	1331.3	1332.7	1334.1	1334.5
140°	1373.9	1375.2	1376.1	1376.9	1377.8	1378.6	1379.8	1380.9	1382.1	1383.2	1383.5
142.5°	1421.6	1422.9	1423.7	1424.6	1425.5	1426.3	1427.2	1428.0	1428.9	1429.7	1429.7
145°	1466.5	1467.8	1468.4	1469.0	1469.5	1470.1	1470.7	1471.3	1471.8	1472.4	1472.7
147.5°	1506.8	1507.8	1508.3	1508.9	1509.5	1510.1	1510.6	1511.2	1511.8	1512.4	1511.9
150°	1543.1	1543.8	1544.4	1545.0	1545.6	1546.1	1546.7	1547.3	1547.9	1548.4	1548.3
152.5°	1575.6	1575.9	1576.2	1576.5	1576.8	1577.1	1578.2	1579.3	1580.5	1581.6	1581.5
155°	1604.4	1604.3	1604.5	1604.8	1605.1	1605.4	1606.8	1608.3	1609.7	1611.1	1611.0
157.5°	1632.5	1632.3	1632.0	1631.7	1631.5	1631.2	1632.9	1634.6	1636.3	1638.0	1637.8
160°	1654.5	1654.2	1653.9	1653.7	1653.4	1653.1	1654.8	1656.5	1658.2	1659.9	1659.8
162.5°	1674.1	1673.5	1673.3	1673.0	1672.7	1672.4	1674.4	1676.4	1678.4	1680.4	1680.6
165°	1690.9	1690.3	1690.0	1689.7	1689.4	1689.2	1691.4	1693.7	1696.0	1698.3	1698.5
167.5°	1703.9	1703.3	1703.3	1703.3	1703.3	1703.3	1705.6	1707.9	1710.2	1712.5	1712.5
170°	1715.5	1714.9	1714.9	1714.9	1714.9	1714.9	1717.2	1719.5	1721.8	1724.1	1724.1
172.5°	1722.1	1721.5	1721.8	1722.1	1722.4	1722.7	1724.9	1727.2	1729.5	1731.8	1731.7
175°	1728.5	1728.0	1728.2	1728.5	1728.8	1729.1	1731.1	1733.1	1735.1	1737.1	1737.0
177.5°	1731.1	1730.5	1730.8	1731.1	1731.4	1731.7	1734.0	1736.3	1738.5	1740.8	1740.5
180°	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2	1734.2



TEST NUMBER: P832206

CATALOG NUMBER: S123RDIP-S560D1195U850-4F0-1E-UDD-G

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°	36.9	37.5	38.1	38.7
92.5°	42.9	43.2	43.5	43.8
95°	49.0	49.0	49.0	49.0
97.5°	52.0	52.3	52.5	52.8
100°	53.3	53.5	53.8	54.1
102.5°	53.7	54.3	54.8	55.4
105°	55.0	55.5	56.1	56.7
107.5°	246.5	209.0	171.5	134.0
110°	477.2	436.2	395.3	354.3



TEST NUMBER: P832206

CATALOG NUMBER: S123RDIP-S560D1195U850-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	673.0	672.4	671.9	671.3
115°	754.2	755.3	756.5	757.6
117.5°	826.3	826.6	826.9	827.2
120°	899.3	899.3	899.3	899.3
122.5°	969.3	969.6	969.9	970.2
125°	1034.2	1034.8	1035.3	1035.9
127.5°	1102.1	1101.5	1100.9	1100.3
130°	1163.9	1163.3	1162.8	1162.2
132.5°	1221.4	1220.6	1219.7	1218.9
135°	1279.4	1278.6	1277.7	1276.9
137.5°	1334.0	1333.4	1332.8	1332.3
140°	1382.9	1382.4	1381.8	1381.2
142.5°	1428.9	1428.0	1427.2	1426.3
145°	1472.7	1472.7	1472.7	1472.7
147.5°	1510.5	1509.1	1507.6	1506.2
150°	1547.4	1546.6	1545.7	1544.8
152.5°	1580.1	1578.6	1577.2	1575.8
155°	1609.3	1607.6	1605.8	1604.1
157.5°	1635.5	1633.2	1630.9	1628.6
160°	1657.8	1655.8	1653.8	1651.8
162.5°	1678.8	1677.1	1675.4	1673.7
165°	1696.5	1694.5	1692.4	1690.4
167.5°	1710.2	1707.9	1705.6	1703.3
170°	1721.8	1719.5	1717.2	1714.9
172.5°	1729.1	1726.5	1723.9	1721.4
175°	1734.7	1732.4	1730.1	1727.8
177.5°	1737.7	1734.8	1732.0	1729.1
180°	1734.2	1734.2	1734.2	1734.2



TEST NUMBER: P832206

CATALOG NUMBER: S123RDIP-S560D1195U850-4F0-1E-UDD-G

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	9.70	10.40	10.79	11.48	12.97	14.36	15.06	15.46	16.15	17.64
	3H	10.91	11.53	12.01	12.63	14.13	15.85	16.48	16.95	17.57	19.08
	4H	11.28	11.88	12.40	12.97	14.49	16.33	16.93	17.45	18.02	19.54
	6H	11.56	12.10	12.68	13.20	14.73	16.64	17.18	17.76	18.28	19.81
	8H	11.64	12.16	12.77	13.28	14.79	16.72	17.23	17.84	18.35	19.86
	12H	11.69	12.18	12.82	13.29	14.83	16.74	17.23	17.87	18.34	19.88
4H	2H	10.40	11.00	11.52	12.09	13.61	14.34	14.93	15.46	16.03	17.54
	3H	11.76	12.25	12.89	13.38	14.90	15.99	16.48	17.11	17.60	19.13
	4H	12.21	12.66	13.34	13.78	15.32	16.59	17.04	17.72	18.15	19.70
	6H	12.57	12.96	13.71	14.10	15.63	17.02	17.41	18.16	18.54	20.08
	8H	12.70	13.06	13.83	14.18	15.74	17.15	17.51	18.28	18.64	20.19
	12H	12.77	13.09	13.92	14.23	15.79	17.21	17.53	18.36	18.67	20.23
8H	4H	12.52	12.88	13.65	14.01	15.56	16.55	16.91	17.68	18.03	19.59
	6H	12.98	13.27	14.13	14.44	15.99	17.04	17.34	18.19	18.51	20.06
	8H	13.17	13.43	14.33	14.58	16.15	17.22	17.48	18.39	18.63	20.20
	12H	13.31	13.53	14.47	14.68	16.29	17.34	17.56	18.50	18.71	20.31
12H	4H	12.52	12.85	13.67	13.99	15.55	16.49	16.82	17.64	17.96	19.51
	6H	13.04	13.30	14.20	14.44	16.01	17.01	17.27	18.18	18.42	19.99
	8H	13.25	13.48	14.41	14.62	16.23	17.20	17.43	18.37	18.57	20.18