

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: P832178

Luminaire Tested: S123RDIP-S560D1025U840-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832178  
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-S560D1025U840-4F0-1E-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: -

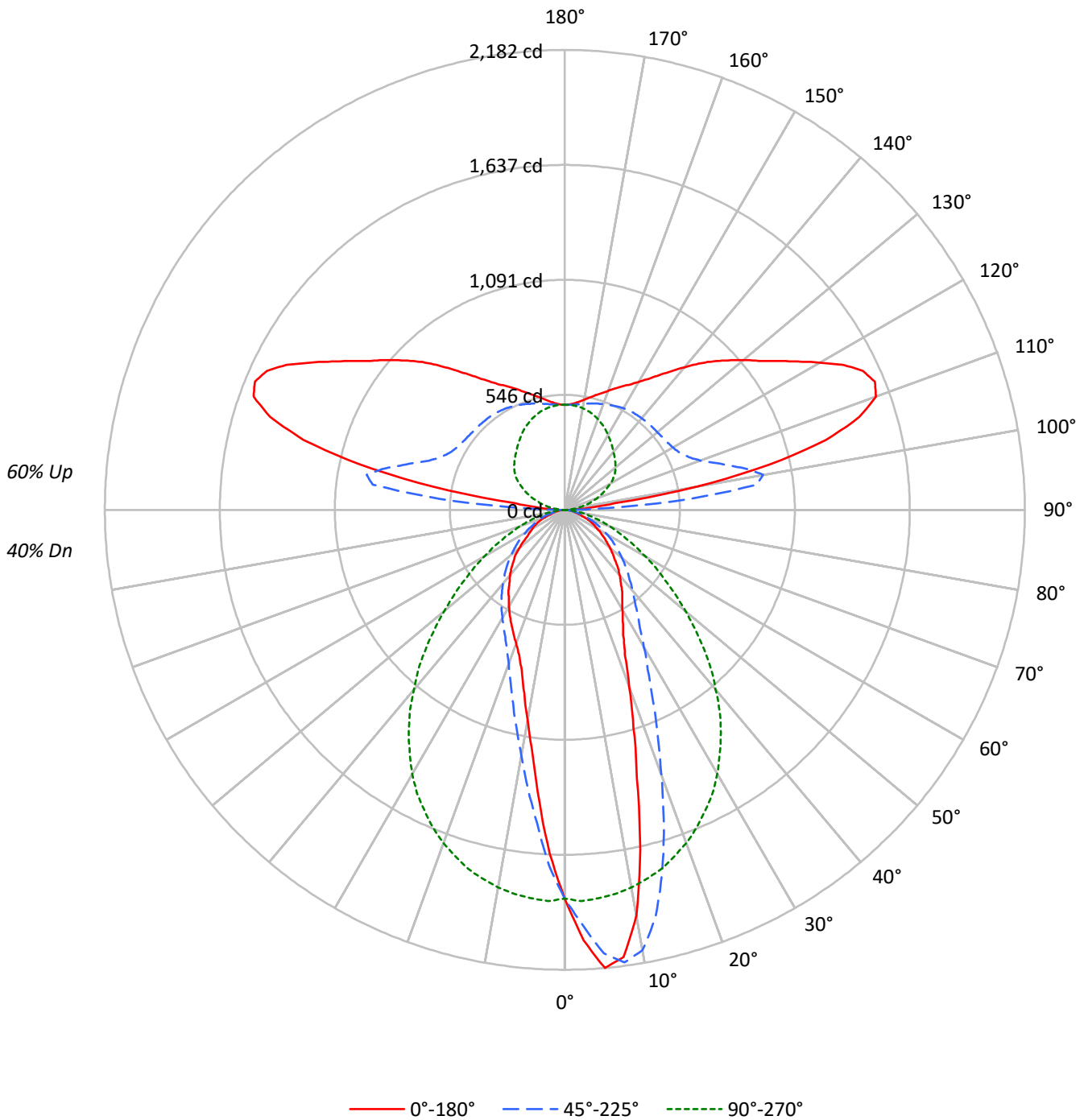
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6193.9 lumens  
Efficiency: N/A  
Efficacy: 136.1 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°	19853	19853	19853	19853	19853
5°	23573	22821	19977	16149	14993
10°	21357	23180	19878	12939	11100
15°	14705	19875	19668	10575	8781
20°	10230	15301	19274	8917	7718
25°	7796	11662	18699	7926	7113
30°	6786	9324	17980	7359	6589
35°	6230	7864	16962	6882	6112
40°	5685	7024	15631	6413	5674
45°	5135	6424	14193	5969	5238
50°	4660	5926	12499	5534	4699
55°	4215	5442	10871	5108	4031
60°	3776	4949	9442	4639	3810
65°	3487	4391	8127	4169	3601
70°	2832	3795	7091	3773	2927
75°	2483	3019	6005	3127	2578
80°	2250	2554	4922	2622	2436
85°	2050	2235	3730	2384	2235

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 14976 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	168.1	2.7
10°-20°	389.0	6.3
20°-30°	446.3	7.2
30°-40°	439.9	7.1
40°-50°	388.0	6.3
50°-60°	298.5	4.8
60°-70°	196.2	3.2
70°-80°	95.3	1.5
80°-90°	26.8	0.4
90°-100°	270.2	4.4
100°-110°	791.1	12.8
110°-120°	772.6	12.5
120°-130°	615.3	9.9
130°-140°	485.4	7.8
140°-150°	362.1	5.8
150°-160°	252.5	4.1
160°-170°	148.3	2.4
170°-180°	48.2	0.8
0°-30°	1003.5	16.2
0°-40°	1443.4	23.3
0°-60°	2129.8	34.4
0°-90°	2448.1	39.5
90°-120°	1833.9	29.6
90°-150°	3296.7	53.2
90°-180°	3746.0	60.5
0°-180°	6193.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1844	1844	1844	1844	1844	
5°	2182	2112	1849	1495	1388	199
15°	1320	1784	1765	949	788	372
25°	656	982	1574	667	599	310
35°	474	598	1291	524	465	296
45°	337	422	932	392	344	262
55°	225	290	579	272	215	201
65°	137	172	319	164	141	134
75°	60	73	144	75	62	64
85°	17	18	30	19	18	18
90°	29	25	2	25	29	16
95°	117	598	34	598	117	190
105°	1282	810	117	810	1282	1279
115°	1559	620	207	620	1559	1521
125°	1230	579	287	579	1230	1113
135°	997	570	337	570	997	773
145°	779	564	384	564	779	495
155°	646	545	436	545	646	301
165°	564	522	477	522	564	161
175°	507	501	497	501	507	49
180°	498	498	498	498	498	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4
2.5°	2044.0	2037.6	2031.2	2029.3	2027.4	2021.3	2015.3	2001.7	1988.1	1974.1	1960.1
5°	2181.7	2182.4	2183.2	2181.3	2179.4	2171.4	2163.5	2146.9	2130.2	2112.1	2093.9
7.5°	2139.3	2151.4	2163.5	2165.8	2168.0	2174.1	2180.1	2176.4	2172.6	2165.8	2159.0
10°	1954.0	1953.3	1952.5	1966.1	1979.7	2020.2	2060.7	2081.5	2102.2	2120.8	2139.3
12.5°	1651.6	1652.7	1653.8	1698.4	1743.1	1781.2	1819.4	1872.4	1925.3	1982.4	2039.5
15°	1319.6	1338.1	1356.6	1396.3	1436.0	1493.5	1551.0	1622.1	1693.1	1783.5	1873.9
17.5°	1083.6	1091.6	1099.5	1137.7	1175.9	1230.3	1284.8	1365.3	1445.9	1562.3	1678.8
20°	893.1	900.3	907.4	935.0	962.6	1014.8	1067.0	1143.8	1220.5	1335.8	1451.2
22.5°	745.6	759.6	773.6	792.1	810.7	848.5	886.3	964.5	1042.8	1147.9	1253.0
25°	656.4	662.8	669.2	685.1	701.0	737.3	773.6	825.4	877.2	981.9	1086.7
27.5°	595.9	597.8	599.7	611.4	623.1	646.6	670.0	718.0	766.0	852.2	938.5
30°	546.0	549.4	552.8	561.9	570.9	587.9	605.0	639.0	673.0	750.2	827.3
32.5°	507.4	509.3	511.2	518.8	526.3	538.8	551.3	578.1	605.0	663.9	722.9
35°	474.1	474.5	474.9	480.6	486.2	498.3	510.4	532.7	555.1	598.5	642.0
37.5°	436.3	439.0	441.6	445.8	449.9	460.5	471.1	489.3	507.4	543.3	579.3
40°	404.6	406.8	409.1	414.0	418.9	427.3	435.6	452.2	468.8	499.9	530.9
42.5°	372.8	374.3	375.8	380.7	385.7	395.9	406.1	419.3	432.5	458.3	484.0
45°	337.3	341.0	344.8	350.1	355.4	364.1	372.8	386.4	400.0	422.0	443.9
47.5°	307.8	309.7	311.6	316.1	320.6	331.2	341.8	353.9	366.0	386.4	406.8
50°	278.3	279.0	279.8	284.0	288.1	297.6	307.0	321.0	335.0	353.9	372.8
52.5°	250.3	252.2	254.1	258.2	262.4	268.8	275.3	289.6	304.0	322.5	341.0
55°	224.6	225.7	226.9	229.9	232.9	240.5	248.0	260.5	273.0	290.0	307.0
57.5°	200.4	201.9	203.4	205.7	208.0	214.8	221.6	232.5	243.5	260.5	277.5
60°	175.4	177.3	179.2	181.9	184.5	189.8	195.1	204.9	214.8	229.9	245.0
62.5°	157.3	157.7	158.0	160.3	162.6	166.4	170.1	178.1	186.0	201.2	216.3
65°	136.9	138.0	139.1	140.3	141.4	144.4	147.5	154.3	161.1	172.4	183.8
67.5°	115.7	116.8	118.0	119.9	121.7	124.4	127.0	131.6	136.1	146.7	157.3
70°	90.0	90.0	90.0	93.0	96.0	100.6	105.1	108.5	111.9	120.6	129.3
72.5°	73.4	73.7	74.1	74.5	74.9	77.5	80.2	85.8	91.5	96.8	102.1
75°	59.7	60.1	60.5	60.9	61.3	62.0	62.8	64.7	66.5	72.6	78.6
77.5°	47.6	48.0	48.4	48.8	49.2	49.9	50.7	51.4	52.2	54.4	56.7
80°	36.3	36.7	37.1	37.4	37.8	38.2	38.6	39.3	40.1	41.2	42.3
82.5°	26.5	26.5	26.5	26.5	26.5	27.2	28.0	28.0	28.0	28.7	29.5
85°	16.6	16.6	16.6	17.0	17.4	17.4	17.4	17.8	18.1	18.1	18.1
87.5°	7.6	7.2	6.8	7.2	7.6	7.6	7.6	7.9	8.3	8.3	8.3
90°	29.2	30.2	29.2	28.2	29.2	27.2	26.2	25.2	24.2	25.2	22.2
92.5°	53.4	55.4	54.4	58.5	60.5	67.5	77.6	99.8	140.1	187.5	207.7
95°	116.9	121.0	128.0	137.1	156.2	192.5	246.0	362.9	484.9	597.8	532.2
97.5°	239.9	251.0	275.2	313.5	381.0	495.9	629.0	833.6	950.6	919.3	686.5
100°	632.0	631.0	670.3	743.9	845.7	988.9	1106.8	1188.5	1153.2	954.6	645.1
102.5°	1001.0	1030.2	1061.5	1115.9	1189.5	1267.1	1323.5	1306.4	1163.3	889.1	584.7
105°	1282.2	1287.3	1319.5	1357.8	1404.2	1430.4	1411.2	1310.4	1099.8	810.5	537.3
107.5°	1465.7	1476.8	1489.9	1508.0	1514.1	1486.8	1408.2	1250.0	1009.0	740.9	503.0
110°	1570.5	1572.5	1574.5	1566.5	1538.2	1467.7	1340.7	1155.2	924.4	683.4	484.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1591.7	1590.7	1580.6	1551.4	1493.9	1398.1	1252.0	1061.5	850.8	645.1	474.8
115°	1559.4	1554.4	1534.2	1489.9	1414.3	1304.4	1156.2	980.8	794.3	619.9	473.8
117.5°	1488.9	1481.8	1451.6	1402.2	1323.5	1209.6	1073.5	918.3	757.0	602.8	474.8
120°	1396.1	1390.1	1365.9	1309.4	1229.8	1128.0	1007.0	870.9	728.8	591.7	478.8
122.5°	1309.4	1301.4	1274.1	1224.8	1156.2	1063.5	953.6	833.6	705.6	584.7	485.9
125°	1229.8	1222.7	1197.5	1153.2	1088.7	1008.0	911.3	801.4	686.5	578.6	492.9
127.5°	1161.2	1155.2	1132.0	1093.7	1035.2	960.6	871.9	772.1	668.3	575.6	501.0
130°	1104.8	1096.7	1075.6	1039.3	985.9	917.3	835.7	744.9	654.2	572.6	509.1
132.5°	1049.4	1044.3	1026.2	989.9	940.5	876.0	801.4	719.7	641.1	571.6	515.1
135°	996.9	989.9	971.7	941.5	892.1	834.6	769.1	697.6	630.0	570.5	521.1
137.5°	941.5	935.4	920.3	889.1	846.7	795.3	736.9	676.4	619.9	568.5	525.2
140°	883.0	884.0	867.9	839.7	801.4	758.0	709.7	658.2	610.9	567.5	529.2
142.5°	828.6	829.6	815.5	791.3	760.1	723.8	683.4	641.1	602.8	565.5	532.2
145°	779.2	777.2	769.1	748.0	722.8	693.5	661.3	628.0	595.7	563.5	533.2
147.5°	736.9	735.9	727.8	712.7	692.5	671.3	644.1	616.9	588.7	560.5	533.2
150°	700.6	700.6	694.5	683.4	668.3	649.2	628.0	604.8	581.6	556.4	533.2
152.5°	670.3	670.3	667.3	657.2	646.1	631.0	612.9	593.7	573.6	551.4	530.2
155°	646.1	645.1	643.1	635.1	626.0	613.9	598.8	582.6	565.5	545.3	528.2
157.5°	623.0	623.0	620.9	614.9	606.8	596.8	584.7	570.5	556.4	540.3	525.2
160°	600.8	601.8	601.8	595.7	588.7	581.6	571.6	560.5	547.4	534.3	523.2
162.5°	580.6	581.6	581.6	576.6	572.6	566.5	557.4	548.4	538.3	528.2	519.1
165°	563.5	563.5	564.5	560.5	556.4	551.4	544.3	538.3	530.2	522.2	515.1
167.5°	546.4	546.4	547.4	544.3	542.3	538.3	534.3	529.2	522.2	516.1	511.1
170°	531.2	531.2	532.2	530.2	529.2	527.2	523.2	520.1	515.1	510.1	507.0
172.5°	517.1	518.1	520.1	518.1	518.1	517.1	514.1	512.1	508.0	505.0	504.0
175°	507.0	508.0	509.1	508.0	508.0	508.0	506.0	505.0	503.0	501.0	501.0
177.5°	500.0	500.0	502.0	501.0	502.0	502.0	501.0	500.0	499.0	498.0	499.0
180°	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4
2.5°	1958.2	1956.3	1938.2	1920.0	1902.2	1884.5	1871.2	1858.0	1835.7	1813.4	1799.4
5°	2079.6	2065.2	2036.5	2007.7	1964.6	1921.5	1885.2	1848.9	1802.8	1756.7	1718.1
7.5°	2147.2	2135.5	2100.7	2066.0	2008.9	1951.8	1895.0	1838.3	1770.3	1702.2	1644.0
10°	2149.1	2159.0	2130.2	2101.5	2037.2	1972.9	1895.8	1818.7	1727.2	1635.7	1560.4
12.5°	2081.8	2124.2	2118.1	2112.1	2046.7	1981.3	1887.5	1793.7	1681.4	1569.1	1475.0
15°	1955.9	2038.0	2062.2	2086.4	2032.3	1978.2	1871.6	1765.0	1633.0	1501.1	1392.9
17.5°	1793.7	1908.7	1972.6	2036.5	1997.1	1957.8	1841.0	1724.1	1575.6	1427.0	1309.4
20°	1601.6	1752.1	1852.3	1952.5	1938.2	1923.8	1803.2	1682.6	1522.2	1361.9	1234.5
22.5°	1411.8	1570.6	1709.0	1847.4	1862.2	1876.9	1755.2	1633.4	1458.0	1282.5	1152.8
25°	1248.1	1409.6	1574.4	1739.3	1772.5	1805.8	1690.1	1574.4	1392.6	1210.7	1081.8
27.5°	1092.0	1245.5	1427.0	1608.4	1668.9	1729.4	1623.6	1517.7	1328.3	1138.8	1010.3
30°	964.5	1101.8	1287.1	1472.3	1556.6	1641.0	1543.8	1446.6	1258.7	1070.8	944.9
32.5°	845.8	968.7	1154.7	1340.8	1438.7	1536.6	1452.7	1368.7	1188.0	1007.3	882.9
35°	752.0	862.1	1035.6	1209.2	1318.8	1428.5	1359.7	1290.8	1114.3	937.7	820.1
37.5°	671.5	763.8	926.7	1089.7	1206.1	1322.6	1265.1	1207.7	1041.7	875.7	764.5
40°	605.0	679.1	830.7	982.3	1096.5	1210.7	1161.5	1112.4	963.8	815.2	711.2
42.5°	547.9	611.8	747.9	884.0	988.7	1093.5	1061.0	1028.4	893.8	759.2	662.8
45°	497.6	551.3	671.1	791.0	887.4	983.8	958.1	932.4	816.3	700.2	611.8
47.5°	453.0	499.1	606.1	713.1	799.7	886.3	862.5	838.6	742.6	646.6	566.0
50°	412.1	451.5	540.7	629.9	707.8	785.7	766.0	746.4	667.0	587.6	518.0
52.5°	373.6	406.1	486.2	566.4	629.2	691.9	676.8	661.7	600.4	539.2	476.0
55°	336.9	366.8	434.4	502.1	555.8	609.5	594.4	579.3	531.6	484.0	428.4
57.5°	303.6	329.7	384.5	439.4	482.1	524.8	517.6	510.4	470.7	431.0	385.3
60°	268.5	291.9	339.2	386.4	420.8	455.2	446.9	438.6	410.2	381.9	342.6
62.5°	237.1	257.9	295.7	333.5	361.5	389.4	383.4	377.3	355.8	334.2	301.7
65°	204.2	224.6	255.2	285.8	307.8	329.7	324.4	319.1	302.9	286.6	260.5
67.5°	174.3	191.3	217.8	244.3	259.0	273.7	270.7	267.7	255.2	242.7	222.3
70°	144.1	158.8	180.7	202.7	212.9	223.1	224.2	225.3	214.0	202.7	187.5
72.5°	113.8	125.5	145.9	166.4	174.3	182.2	181.9	181.5	174.7	167.9	154.3
75°	87.3	96.0	111.9	127.8	134.6	141.4	142.9	144.4	138.0	131.6	124.0
77.5°	62.8	68.8	80.9	93.0	100.6	108.1	108.9	109.6	106.6	103.6	96.4
80°	44.2	46.1	53.7	61.3	69.2	77.1	78.3	79.4	76.4	73.4	68.8
82.5°	30.6	31.8	34.4	37.1	43.5	49.9	51.4	52.9	51.4	49.9	45.0
85°	18.5	18.9	20.0	21.2	24.2	27.2	28.7	30.2	29.5	28.7	26.1
87.5°	8.3	8.3	8.7	9.1	9.8	10.6	12.5	14.4	13.2	12.1	11.0
90°	19.2	16.1	13.1	11.1	9.1	6.0	4.0	2.0	4.0	6.0	9.1
92.5°	155.2	101.8	69.6	51.4	41.3	32.3	22.2	15.1	22.2	32.3	41.3
95°	366.9	216.7	131.0	91.7	65.5	48.4	37.3	34.3	37.3	48.4	65.5
97.5°	408.3	233.9	149.2	105.8	79.6	64.5	55.4	54.4	55.4	64.5	79.6
100°	380.0	230.8	160.3	121.0	96.8	82.7	75.6	74.6	75.6	82.7	96.8
102.5°	355.8	234.9	173.4	138.1	116.9	103.8	97.8	95.8	97.8	103.8	116.9
105°	346.8	242.9	188.5	157.3	138.1	126.0	120.0	116.9	120.0	126.0	138.1
107.5°	344.7	256.0	207.7	178.4	160.3	148.2	142.1	139.1	142.1	148.2	160.3
110°	349.8	273.2	227.8	199.6	182.5	171.4	166.3	163.3	166.3	171.4	182.5





TEST NUMBER: P832178

CATALOG NUMBER: S123RDIP-S560D1025U840-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	359.9	290.3	249.0	221.8	204.6	193.5	188.5	185.5	188.5	193.5	204.6
115°	371.0	309.5	271.2	243.9	226.8	216.7	210.7	206.6	210.7	216.7	226.8
117.5°	385.1	329.6	291.3	266.1	247.0	237.9	232.9	227.8	232.9	237.9	247.0
120°	401.2	348.8	312.5	287.3	268.1	258.1	253.0	250.0	253.0	258.1	268.1
122.5°	416.3	368.9	333.7	306.4	288.3	277.2	272.2	269.1	272.2	277.2	288.3
125°	432.4	388.1	352.8	325.6	306.4	295.4	289.3	287.3	289.3	295.4	306.4
127.5°	445.5	405.2	371.0	343.7	322.6	311.5	304.4	301.4	304.4	311.5	322.6
130°	458.7	420.3	387.1	359.9	338.7	326.6	317.5	314.5	317.5	326.6	338.7
132.5°	470.7	433.5	401.2	375.0	353.8	338.7	328.6	324.6	328.6	338.7	353.8
135°	480.8	446.6	415.3	388.1	366.9	351.8	340.7	336.7	340.7	351.8	366.9
137.5°	488.9	455.6	425.4	400.2	379.0	362.9	351.8	347.8	351.8	362.9	379.0
140°	494.9	464.7	435.5	410.3	390.1	374.0	363.9	358.9	363.9	374.0	390.1
142.5°	501.0	471.8	443.5	420.3	400.2	386.1	375.0	371.0	375.0	386.1	400.2
145°	505.0	477.8	451.6	428.4	411.3	396.2	387.1	384.1	387.1	396.2	411.3
147.5°	508.0	482.8	458.7	438.5	421.4	408.3	399.2	397.2	399.2	408.3	421.4
150°	509.1	487.9	464.7	446.6	432.4	419.3	411.3	410.3	411.3	419.3	432.4
152.5°	511.1	490.9	471.8	454.6	442.5	431.4	423.4	423.4	423.4	431.4	442.5
155°	511.1	494.9	477.8	463.7	452.6	442.5	436.5	436.5	436.5	442.5	452.6
157.5°	512.1	497.0	482.8	471.8	461.7	452.6	447.6	446.6	447.6	452.6	461.7
160°	512.1	500.0	487.9	477.8	470.7	462.7	458.7	458.7	458.7	462.7	470.7
162.5°	511.1	501.0	490.9	482.8	476.8	470.7	467.7	467.7	467.7	470.7	476.8
165°	509.1	502.0	493.9	486.9	482.8	477.8	475.8	476.8	475.8	477.8	482.8
167.5°	508.0	502.0	495.9	490.9	487.9	483.9	482.8	483.9	482.8	483.9	487.9
170°	505.0	501.0	495.9	493.9	491.9	488.9	487.9	489.9	487.9	488.9	491.9
172.5°	504.0	501.0	497.0	495.9	494.9	492.9	492.9	493.9	492.9	492.9	494.9
175°	502.0	500.0	498.0	497.0	497.0	494.9	495.9	497.0	495.9	494.9	497.0
177.5°	501.0	499.0	498.0	498.0	498.0	497.0	498.0	499.0	498.0	497.0	498.0
180°	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0



TEST NUMBER: P832178

CATALOG NUMBER: S123RDIP-S560D1025U840-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4	1844.4
2.5°	1785.4	1763.8	1742.3	1726.8	1711.3	1692.0	1672.7	1672.0	1671.2	1656.8	1642.5
5°	1679.5	1642.1	1604.7	1568.0	1531.3	1494.6	1458.0	1449.6	1441.3	1428.8	1416.4
7.5°	1585.8	1526.0	1466.3	1419.4	1372.5	1335.8	1299.2	1274.2	1249.3	1230.0	1210.7
10°	1485.2	1411.1	1337.0	1280.3	1223.5	1183.8	1144.1	1115.4	1086.7	1073.1	1059.4
12.5°	1380.8	1300.3	1219.8	1164.2	1108.6	1061.0	1013.3	987.2	961.1	942.2	923.3
15°	1284.8	1198.2	1111.6	1052.6	993.7	949.0	904.4	878.3	852.2	833.3	814.4
17.5°	1191.8	1104.4	1017.1	957.4	897.6	857.2	816.7	791.4	766.0	754.3	742.6
20°	1107.1	1019.0	930.9	874.6	818.2	778.5	738.8	725.2	711.6	700.6	689.7
22.5°	1023.1	938.5	853.8	799.7	745.6	716.9	688.1	677.2	666.2	657.9	649.6
25°	952.8	868.5	784.2	736.9	689.7	667.4	645.0	637.9	630.7	622.4	614.0
27.5°	881.7	801.6	721.4	683.6	645.8	627.7	609.5	600.4	591.4	584.5	577.7
30°	819.0	744.9	670.8	639.4	608.0	592.1	576.2	566.4	556.6	550.1	543.7
32.5°	758.5	692.7	626.9	600.0	573.2	557.7	542.2	532.7	523.3	515.7	508.2
35°	702.5	645.4	588.3	563.8	539.2	523.7	508.2	498.7	489.3	481.7	474.1
37.5°	653.4	601.6	549.8	526.7	503.6	490.0	476.4	466.6	456.7	448.8	440.9
40°	607.2	561.5	515.7	493.4	471.1	456.4	441.6	432.9	424.2	417.0	409.9
42.5°	566.4	524.4	482.5	460.5	438.6	424.6	410.6	400.4	390.2	386.0	381.9
45°	523.3	486.2	449.2	428.0	406.8	392.1	377.3	368.6	360.0	356.2	352.4
47.5°	485.5	451.1	416.7	395.9	375.1	361.8	348.6	341.8	335.0	329.7	324.4
50°	448.4	415.2	381.9	361.8	341.8	330.5	319.1	310.8	302.5	298.7	294.9
52.5°	412.9	382.6	352.4	332.0	311.6	300.6	289.6	282.4	275.3	267.3	259.4
55°	372.8	346.3	319.9	301.7	283.6	272.2	260.9	252.6	244.3	235.9	227.6
57.5°	339.5	313.4	287.4	271.1	254.8	243.9	232.9	223.8	214.8	208.0	201.2
60°	303.2	280.6	257.9	242.0	226.1	215.5	204.9	196.2	187.5	184.1	180.7
62.5°	269.2	248.0	226.9	212.9	198.9	188.7	178.5	172.8	167.1	164.9	162.6
65°	234.4	216.3	198.1	185.3	172.4	163.7	155.0	152.4	149.7	147.8	145.9
67.5°	201.9	186.4	170.9	159.6	148.2	142.2	136.1	133.1	130.1	127.8	125.5
70°	172.4	158.8	145.2	135.4	125.5	119.9	114.2	111.5	108.9	104.7	100.6
72.5°	140.7	130.1	119.5	111.9	104.4	99.4	94.5	89.2	83.9	80.2	76.4
75°	116.5	105.9	95.3	88.1	80.9	75.2	69.6	67.7	65.8	64.7	63.5
77.5°	89.2	80.2	71.1	65.4	59.7	57.1	54.4	53.3	52.2	51.8	51.4
80°	64.3	56.7	49.2	46.1	43.1	42.3	41.6	40.8	40.1	39.7	39.3
82.5°	40.1	36.3	32.5	31.8	31.0	30.6	30.2	29.9	29.5	29.1	28.7
85°	23.4	21.9	20.4	20.0	19.7	19.3	18.9	18.9	18.9	18.9	18.9
87.5°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.5	9.1
90°	11.1	13.1	16.1	19.2	22.2	25.2	24.2	25.2	26.2	27.2	29.2
92.5°	51.4	69.6	101.8	155.2	207.7	187.5	140.1	99.8	77.6	67.5	60.5
95°	91.7	131.0	216.7	366.9	532.2	597.8	484.9	362.9	246.0	192.5	156.2
97.5°	105.8	149.2	233.9	408.3	686.5	919.3	950.6	833.6	629.0	495.9	381.0
100°	121.0	160.3	230.8	380.0	645.1	954.6	1153.2	1188.5	1106.8	988.9	845.7
102.5°	138.1	173.4	234.9	355.8	584.7	889.1	1163.3	1306.4	1323.5	1267.1	1189.5
105°	157.3	188.5	242.9	346.8	537.3	810.5	1099.8	1310.4	1411.2	1430.4	1404.2
107.5°	178.4	207.7	256.0	344.7	503.0	740.9	1009.0	1250.0	1408.2	1486.8	1514.1
110°	199.6	227.8	273.2	349.8	484.9	683.4	924.4	1155.2	1340.7	1467.7	1538.2



TEST NUMBER: P832178

CATALOG NUMBER: S123RDIP-S560D1025U840-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	221.8	249.0	290.3	359.9	474.8	645.1	850.8	1061.5	1252.0	1398.1	1493.9
115°	243.9	271.2	309.5	371.0	473.8	619.9	794.3	980.8	1156.2	1304.4	1414.3
117.5°	266.1	291.3	329.6	385.1	474.8	602.8	757.0	918.3	1073.5	1209.6	1323.5
120°	287.3	312.5	348.8	401.2	478.8	591.7	728.8	870.9	1007.0	1128.0	1229.8
122.5°	306.4	333.7	368.9	416.3	485.9	584.7	705.6	833.6	953.6	1063.5	1156.2
125°	325.6	352.8	388.1	432.4	492.9	578.6	686.5	801.4	911.3	1008.0	1088.7
127.5°	343.7	371.0	405.2	445.5	501.0	575.6	668.3	772.1	871.9	960.6	1035.2
130°	359.9	387.1	420.3	458.7	509.1	572.6	654.2	744.9	835.7	917.3	985.9
132.5°	375.0	401.2	433.5	470.7	515.1	571.6	641.1	719.7	801.4	876.0	940.5
135°	388.1	415.3	446.6	480.8	521.1	570.5	630.0	697.6	769.1	834.6	892.1
137.5°	400.2	425.4	455.6	488.9	525.2	568.5	619.9	676.4	736.9	795.3	846.7
140°	410.3	435.5	464.7	494.9	529.2	567.5	610.9	658.2	709.7	758.0	801.4
142.5°	420.3	443.5	471.8	501.0	532.2	565.5	602.8	641.1	683.4	723.8	760.1
145°	428.4	451.6	477.8	505.0	533.2	563.5	595.7	628.0	661.3	693.5	722.8
147.5°	438.5	458.7	482.8	508.0	533.2	560.5	588.7	616.9	644.1	671.3	692.5
150°	446.6	464.7	487.9	509.1	533.2	556.4	581.6	604.8	628.0	649.2	668.3
152.5°	454.6	471.8	490.9	511.1	530.2	551.4	573.6	593.7	612.9	631.0	646.1
155°	463.7	477.8	494.9	511.1	528.2	545.3	565.5	582.6	598.8	613.9	626.0
157.5°	471.8	482.8	497.0	512.1	525.2	540.3	556.4	570.5	584.7	596.8	606.8
160°	477.8	487.9	500.0	512.1	523.2	534.3	547.4	560.5	571.6	581.6	588.7
162.5°	482.8	490.9	501.0	511.1	519.1	528.2	538.3	548.4	557.4	566.5	572.6
165°	486.9	493.9	502.0	509.1	515.1	522.2	530.2	538.3	544.3	551.4	556.4
167.5°	490.9	495.9	502.0	508.0	511.1	516.1	522.2	529.2	534.3	538.3	542.3
170°	493.9	495.9	501.0	505.0	507.0	510.1	515.1	520.1	523.2	527.2	529.2
172.5°	495.9	497.0	501.0	504.0	504.0	505.0	508.0	512.1	514.1	517.1	518.1
175°	497.0	498.0	500.0	502.0	501.0	501.0	503.0	505.0	506.0	508.0	508.0
177.5°	498.0	498.0	499.0	501.0	499.0	498.0	499.0	500.0	501.0	502.0	502.0
180°	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0	498.0



TEST NUMBER: P832178

CATALOG NUMBER: S123RDIP-S560D1025U840-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1844.4	1844.4	1844.4	1844.4
2.5°	1638.7	1634.9	1633.4	1631.9
5°	1404.7	1392.9	1390.3	1387.6
7.5°	1205.8	1200.9	1184.6	1168.3
10°	1044.3	1029.2	1022.4	1015.6
12.5°	909.3	895.3	893.1	890.8
15°	804.6	794.8	791.4	788.0
17.5°	735.8	729.0	724.8	720.7
20°	684.7	679.8	676.8	673.8
22.5°	645.8	642.0	639.7	637.5
25°	608.4	602.7	600.8	598.9
27.5°	572.8	567.9	566.0	564.1
30°	539.6	535.4	532.7	530.1
32.5°	503.3	498.3	496.8	495.3
35°	471.1	468.1	466.6	465.1
37.5°	437.1	433.3	431.0	428.8
40°	408.0	406.1	404.9	403.8
42.5°	378.5	375.1	374.7	374.3
45°	349.0	345.6	344.8	344.1
47.5°	321.4	318.4	318.0	317.6
50°	290.8	286.6	283.6	280.6
52.5°	255.6	251.8	249.2	246.5
55°	223.5	219.3	217.0	214.8
57.5°	199.3	197.4	196.2	195.1
60°	179.6	178.5	177.7	177.0
62.5°	161.4	160.3	160.3	160.3
65°	144.8	143.7	142.5	141.4
67.5°	123.3	121.0	120.6	120.2
70°	97.2	93.8	93.4	93.0
72.5°	76.0	75.6	74.9	74.1
75°	62.8	62.0	62.0	62.0
77.5°	50.7	49.9	49.9	49.9
80°	38.9	38.6	38.9	39.3
82.5°	28.7	28.7	28.4	28.0
85°	18.5	18.1	18.1	18.1
87.5°	9.1	9.1	9.1	9.1
90°	28.2	29.2	30.2	29.2
92.5°	58.5	54.4	55.4	53.4
95°	137.1	128.0	121.0	116.9
97.5°	313.5	275.2	251.0	239.9
100°	743.9	670.3	631.0	632.0
102.5°	1115.9	1061.5	1030.2	1001.0
105°	1357.8	1319.5	1287.3	1282.2
107.5°	1508.0	1489.9	1476.8	1465.7
110°	1566.5	1574.5	1572.5	1570.5



TEST NUMBER: P832178

CATALOG NUMBER: S123RDIP-S560D1025U840-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	1551.4	1580.6	1590.7	1591.7
115°	1489.9	1534.2	1554.4	1559.4
117.5°	1402.2	1451.6	1481.8	1488.9
120°	1309.4	1365.9	1390.1	1396.1
122.5°	1224.8	1274.1	1301.4	1309.4
125°	1153.2	1197.5	1222.7	1229.8
127.5°	1093.7	1132.0	1155.2	1161.2
130°	1039.3	1075.6	1096.7	1104.8
132.5°	989.9	1026.2	1044.3	1049.4
135°	941.5	971.7	989.9	996.9
137.5°	889.1	920.3	935.4	941.5
140°	839.7	867.9	884.0	883.0
142.5°	791.3	815.5	829.6	828.6
145°	748.0	769.1	777.2	779.2
147.5°	712.7	727.8	735.9	736.9
150°	683.4	694.5	700.6	700.6
152.5°	657.2	667.3	670.3	670.3
155°	635.1	643.1	645.1	646.1
157.5°	614.9	620.9	623.0	623.0
160°	595.7	601.8	601.8	600.8
162.5°	576.6	581.6	581.6	580.6
165°	560.5	564.5	563.5	563.5
167.5°	544.3	547.4	546.4	546.4
170°	530.2	532.2	531.2	531.2
172.5°	518.1	520.1	518.1	517.1
175°	508.0	509.1	508.0	507.0
177.5°	501.0	502.0	500.0	500.0
180°	498.0	498.0	498.0	498.0



TEST NUMBER: P832178

CATALOG NUMBER: S123RDIP-S560D1025U840-4F0-1E-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	10.06	10.79	11.11	11.84	13.26	14.72	15.46	15.77	16.51	17.92
	3H	11.27	11.93	12.33	12.99	14.42	16.21	16.87	17.28	17.93	19.37
	4H	11.65	12.27	12.72	13.33	14.78	16.70	17.32	17.77	18.38	19.82
	6H	11.93	12.50	13.01	13.56	15.02	17.01	17.58	18.09	18.64	20.10
	8H	12.01	12.55	13.10	13.63	15.08	17.08	17.63	18.17	18.71	20.15
	12H	12.06	12.57	13.15	13.65	15.12	17.11	17.63	18.20	18.70	20.17
4H	2H	10.77	11.39	11.85	12.45	13.89	14.70	15.33	15.79	16.39	17.83
	3H	12.13	12.65	13.22	13.73	15.19	16.35	16.87	17.44	17.96	19.42
	4H	12.58	13.06	13.67	14.13	15.61	16.96	17.43	18.05	18.51	19.99
	6H	12.94	13.35	14.04	14.45	15.92	17.39	17.80	18.49	18.90	20.37
	8H	13.07	13.45	14.17	14.54	16.03	17.52	17.90	18.62	18.99	20.48
	12H	13.14	13.48	14.26	14.59	16.08	17.58	17.92	18.69	19.03	20.52
8H	4H	12.89	13.27	13.99	14.36	15.85	16.92	17.30	18.02	18.39	19.88
	6H	13.35	13.66	14.47	14.80	16.28	17.41	17.72	18.53	18.86	20.34
	8H	13.54	13.82	14.67	14.93	16.44	17.60	17.87	18.72	18.99	20.49
	12H	13.68	13.92	14.81	15.03	16.57	17.71	17.95	18.84	19.06	20.60
12H	4H	12.90	13.24	14.01	14.35	15.84	16.86	17.21	17.98	18.31	19.80
	6H	13.41	13.68	14.54	14.80	16.30	17.39	17.66	18.51	18.78	20.28
	8H	13.62	13.86	14.75	14.98	16.52	17.57	17.81	18.70	18.93	20.47