

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: P832190

Luminaire Tested: S123RDIP-S560D1025U935-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832190  
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-S560D1025U935-4F0-1E-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: -

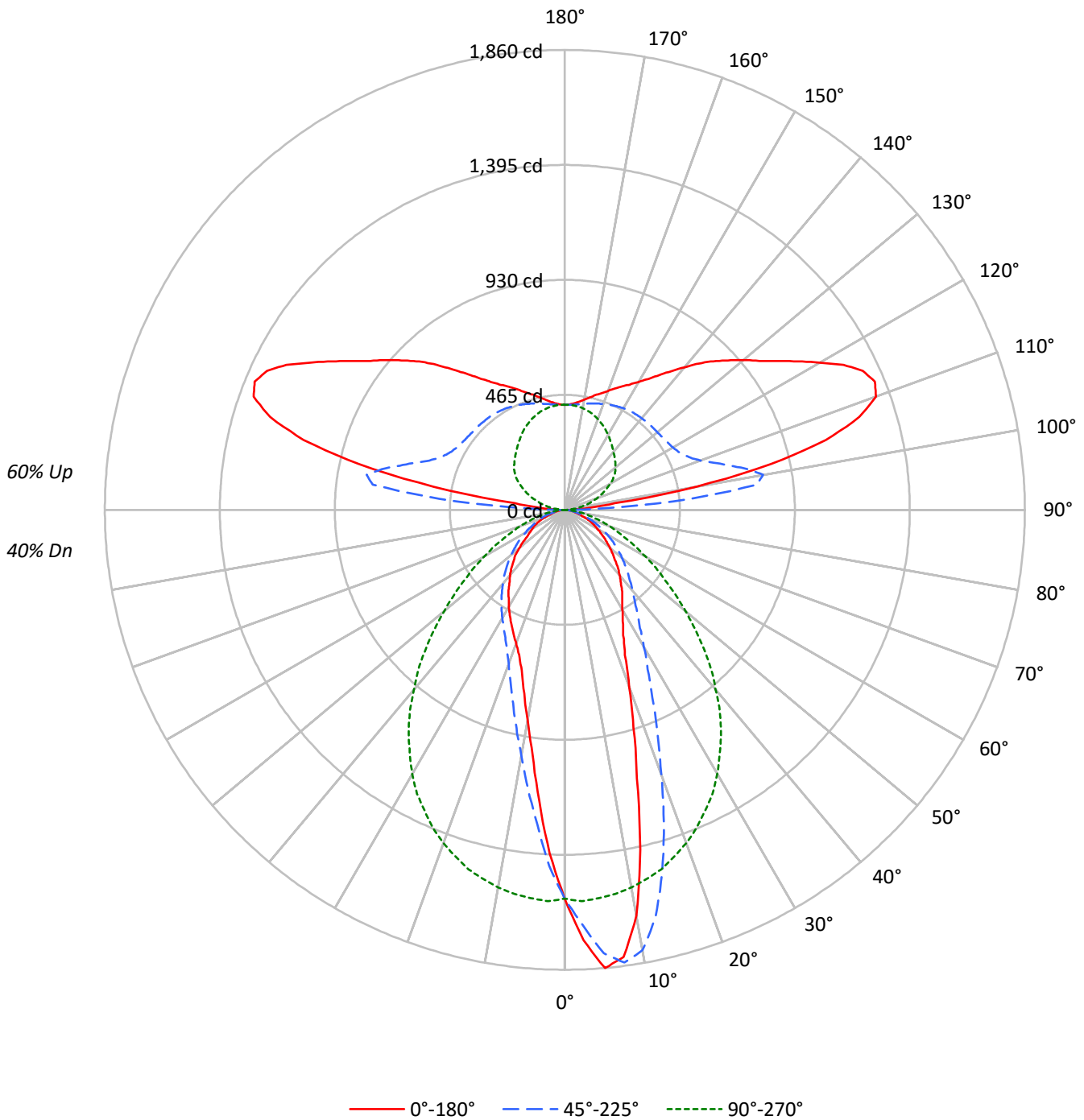
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5280.8 lumens  
Efficiency: N/A  
Efficacy: 116.1 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°	16926	16926	16926	16926	16926
5°	20097	19457	17033	13769	12783
10°	18209	19762	16948	11032	9464
15°	12538	16945	16769	9016	7486
20°	8722	13046	16432	7602	6581
25°	6646	9943	15942	6758	6064
30°	5786	7950	15330	6274	5618
35°	5311	6706	14462	5867	5210
40°	4846	5989	13326	5467	4838
45°	4376	5477	12102	5089	4466
50°	3974	5052	10655	4717	4006
55°	3594	4641	9269	4356	3436
60°	3221	4219	8049	3955	3249
65°	2972	3744	6930	3556	3072
70°	2414	3235	6046	3216	2496
75°	2117	2574	5120	2670	2200
80°	1915	2176	4197	2238	2077
85°	1754	1914	3186	2025	1914

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 12769 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.3	2.7
10°-20°	331.7	6.3
20°-30°	380.5	7.2
30°-40°	375.1	7.1
40°-50°	330.8	6.3
50°-60°	254.5	4.8
60°-70°	167.3	3.2
70°-80°	81.3	1.5
80°-90°	22.8	0.4
90°-100°	230.4	4.4
100°-110°	674.5	12.8
110°-120°	658.7	12.5
120°-130°	524.6	9.9
130°-140°	413.9	7.8
140°-150°	308.7	5.8
150°-160°	215.3	4.1
160°-170°	126.5	2.4
170°-180°	41.1	0.8
0°-30°	855.5	16.2
0°-40°	1230.6	23.3
0°-60°	1815.9	34.4
0°-90°	2087.2	39.5
90°-120°	1563.5	29.6
90°-150°	2810.7	53.2
90°-180°	3194.0	60.5
0°-180°	5280.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1572	1572	1572	1572	1572	
5°	1860	1801	1576	1274	1183	170
15°	1125	1521	1505	809	672	318
25°	560	837	1342	569	511	264
35°	404	510	1101	446	396	252
45°	288	360	795	334	293	223
55°	192	247	494	232	183	172
65°	117	147	272	140	121	114
75°	51	62	123	64	53	55
85°	14	16	26	16	16	15
90°	25	22	2	22	25	14
95°	100	510	29	510	100	162
105°	1093	691	100	691	1093	1091
115°	1330	528	176	528	1330	1297
125°	1048	493	245	493	1048	949
135°	850	486	287	486	850	659
145°	664	480	327	480	664	422
155°	551	465	372	465	551	257
165°	480	445	406	445	480	137
175°	432	427	424	427	432	42
180°	425	425	425	425	425	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5
2.5°	1742.7	1737.2	1731.7	1730.1	1728.5	1723.4	1718.2	1706.6	1695.0	1683.1	1671.1
5°	1860.0	1860.7	1861.3	1859.7	1858.1	1851.3	1844.6	1830.4	1816.2	1800.7	1785.3
7.5°	1823.9	1834.3	1844.6	1846.5	1848.4	1853.6	1858.8	1855.5	1852.3	1846.5	1840.7
10°	1666.0	1665.3	1664.7	1676.3	1687.9	1722.4	1756.9	1774.6	1792.3	1808.1	1823.9
12.5°	1408.1	1409.1	1410.0	1448.1	1486.1	1518.7	1551.2	1596.4	1641.5	1690.2	1738.8
15°	1125.1	1140.9	1156.6	1190.5	1224.3	1273.3	1322.3	1382.9	1443.6	1520.6	1597.6
17.5°	923.9	930.7	937.4	970.0	1002.6	1049.0	1095.4	1164.1	1232.7	1332.0	1431.3
20°	761.4	767.6	773.7	797.2	820.7	865.2	909.7	975.2	1040.6	1138.9	1237.2
22.5°	635.7	647.6	659.6	675.4	691.2	723.4	755.6	822.4	889.1	978.7	1068.3
25°	559.6	565.1	570.6	584.1	597.7	628.6	659.6	703.7	747.9	837.2	926.5
27.5°	508.0	509.7	511.3	521.3	531.3	551.2	571.2	612.2	653.1	726.6	800.1
30°	465.5	468.4	471.3	479.0	486.8	501.3	515.8	544.8	573.8	639.6	705.3
32.5°	432.6	434.2	435.8	442.3	448.7	459.4	470.0	492.9	515.8	566.1	616.4
35°	404.2	404.6	404.9	409.7	414.6	424.9	435.2	454.2	473.2	510.3	547.4
37.5°	372.0	374.3	376.5	380.1	383.6	392.6	401.7	417.1	432.6	463.2	493.9
40°	344.9	346.9	348.8	353.0	357.2	364.3	371.4	385.5	399.7	426.2	452.6
42.5°	317.9	319.1	320.4	324.6	328.8	337.5	346.2	357.5	368.8	390.7	412.6
45°	287.5	290.8	294.0	298.5	303.0	310.4	317.9	329.5	341.1	359.8	378.5
47.5°	262.4	264.0	265.6	269.5	273.4	282.4	291.4	301.7	312.0	329.5	346.9
50°	237.3	237.9	238.6	242.1	245.6	253.7	261.8	273.7	285.6	301.7	317.9
52.5°	213.4	215.0	216.6	220.2	223.7	229.2	234.7	246.9	259.2	275.0	290.8
55°	191.5	192.5	193.4	196.0	198.6	205.0	211.5	222.1	232.7	247.3	261.8
57.5°	170.9	172.1	173.4	175.4	177.3	183.1	188.9	198.3	207.6	222.1	236.6
60°	149.6	151.2	152.8	155.1	157.3	161.8	166.3	174.7	183.1	196.0	208.9
62.5°	134.1	134.4	134.7	136.7	138.6	141.8	145.1	151.8	158.6	171.5	184.4
65°	116.7	117.7	118.6	119.6	120.6	123.1	125.7	131.5	137.3	147.0	156.7
67.5°	98.6	99.6	100.6	102.2	103.8	106.1	108.3	112.2	116.1	125.1	134.1
70°	76.7	76.7	76.7	79.3	81.9	85.7	89.6	92.5	95.4	102.8	110.2
72.5°	62.5	62.9	63.2	63.5	63.8	66.1	68.3	73.2	78.0	82.5	87.0
75°	50.9	51.3	51.6	51.9	52.2	52.9	53.5	55.1	56.7	61.9	67.1
77.5°	40.6	40.9	41.3	41.6	41.9	42.6	43.2	43.8	44.5	46.4	48.4
80°	30.9	31.3	31.6	31.9	32.2	32.6	32.9	33.5	34.2	35.1	36.1
82.5°	22.6	22.6	22.6	22.6	22.6	23.2	23.9	23.9	23.9	24.5	25.1
85°	14.2	14.2	14.2	14.5	14.8	14.8	14.8	15.2	15.5	15.5	15.5
87.5°	6.4	6.1	5.8	6.1	6.4	6.4	6.4	6.8	7.1	7.1	7.1
90°	24.9	25.8	24.9	24.1	24.9	23.2	22.3	21.5	20.6	21.5	18.9
92.5°	45.5	47.3	46.4	49.8	51.6	57.6	66.2	85.1	119.5	159.9	177.0
95°	99.7	103.1	109.1	116.9	133.2	164.2	209.7	309.4	413.4	509.6	453.8
97.5°	204.5	214.0	234.6	267.3	324.9	422.8	536.3	710.7	810.4	783.8	585.3
100°	538.9	538.0	571.5	634.3	721.1	843.1	943.7	1013.3	983.2	813.9	550.0
102.5°	853.4	878.3	905.0	951.4	1014.1	1080.3	1128.4	1113.8	991.8	758.0	498.5
105°	1093.2	1097.5	1125.0	1157.7	1197.2	1219.5	1203.2	1117.3	937.6	691.0	458.1
107.5°	1249.6	1259.1	1270.2	1285.7	1290.9	1267.7	1200.6	1065.7	860.3	631.7	428.9
110°	1339.0	1340.7	1342.4	1335.6	1311.5	1251.3	1143.0	984.9	788.1	582.7	413.4

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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1357.0	1356.2	1347.6	1322.7	1273.7	1192.0	1067.4	905.0	725.4	550.0	404.8
115°	1329.5	1325.2	1308.1	1270.2	1205.8	1112.1	985.8	836.2	677.2	528.5	403.9
117.5°	1269.4	1263.4	1237.6	1195.5	1128.4	1031.3	915.3	782.9	645.4	513.9	404.8
120°	1190.3	1185.2	1164.5	1116.4	1048.5	961.7	858.6	742.5	621.4	504.5	408.2
122.5°	1116.4	1109.5	1086.3	1044.2	985.8	906.7	813.0	710.7	601.6	498.5	414.2
125°	1048.5	1042.5	1021.0	983.2	928.2	859.4	776.9	683.2	585.3	493.3	420.3
127.5°	990.1	984.9	965.1	932.5	882.6	819.0	743.4	658.3	569.8	490.7	427.1
130°	941.9	935.1	917.0	886.1	840.5	782.1	712.5	635.1	557.8	488.2	434.0
132.5°	894.7	890.4	874.9	844.0	801.8	746.8	683.2	613.6	546.6	487.3	439.2
135°	850.0	844.0	828.5	802.7	760.6	711.6	655.7	594.7	537.1	486.4	444.3
137.5°	802.7	797.6	784.7	758.0	721.9	678.1	628.2	576.7	528.5	484.7	447.8
140°	752.9	753.7	740.0	715.9	683.2	646.3	605.0	561.2	520.8	483.9	451.2
142.5°	706.5	707.3	695.3	674.7	648.0	617.1	582.7	546.6	513.9	482.1	453.8
145°	664.3	662.6	655.7	637.7	616.2	591.3	563.8	535.4	507.9	480.4	454.6
147.5°	628.2	627.4	620.5	607.6	590.4	572.4	549.2	526.0	501.9	477.8	454.6
150°	597.3	597.3	592.1	582.7	569.8	553.5	535.4	515.7	495.9	474.4	454.6
152.5°	571.5	571.5	568.9	560.3	550.9	538.0	522.5	506.2	489.0	470.1	452.1
155°	550.9	550.0	548.3	541.4	533.7	523.4	510.5	496.8	482.1	465.0	450.3
157.5°	531.1	531.1	529.4	524.3	517.4	508.8	498.5	486.4	474.4	460.7	447.8
160°	512.2	513.1	513.1	507.9	501.9	495.9	487.3	477.8	466.7	455.5	446.0
162.5°	495.0	495.9	495.9	491.6	488.2	483.0	475.3	467.5	458.9	450.3	442.6
165°	480.4	480.4	481.3	477.8	474.4	470.1	464.1	458.9	452.1	445.2	439.2
167.5°	465.8	465.8	466.7	464.1	462.4	458.9	455.5	451.2	445.2	440.0	435.7
170°	452.9	452.9	453.8	452.1	451.2	449.5	446.0	443.5	439.2	434.9	432.3
172.5°	440.9	441.7	443.5	441.7	441.7	440.9	438.3	436.6	433.2	430.6	429.7
175°	432.3	433.2	434.0	433.2	433.2	433.2	431.4	430.6	428.9	427.1	427.1
177.5°	426.3	426.3	428.0	427.1	428.0	428.0	427.1	426.3	425.4	424.6	425.4
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5
2.5°	1669.5	1667.9	1652.4	1637.0	1621.8	1606.7	1595.4	1584.1	1565.1	1546.1	1534.1
5°	1773.0	1760.8	1736.3	1711.8	1675.0	1638.3	1607.3	1576.4	1537.0	1497.7	1464.8
7.5°	1830.7	1820.7	1791.1	1761.4	1712.7	1664.0	1615.7	1567.3	1509.3	1451.3	1401.6
10°	1832.3	1840.7	1816.2	1791.7	1736.9	1682.1	1616.3	1550.6	1472.6	1394.6	1330.4
12.5°	1774.9	1811.0	1805.9	1800.7	1745.0	1689.2	1609.2	1529.3	1433.6	1337.8	1257.5
15°	1667.6	1737.5	1758.2	1778.8	1732.7	1686.6	1595.7	1504.8	1392.3	1279.8	1187.6
17.5°	1529.3	1627.3	1681.8	1736.3	1702.7	1669.2	1569.6	1470.0	1343.3	1216.6	1116.4
20°	1365.5	1493.8	1579.3	1664.7	1652.4	1640.2	1537.4	1434.5	1297.8	1161.2	1052.5
22.5°	1203.7	1339.1	1457.1	1575.1	1587.6	1600.2	1496.4	1392.6	1243.0	1093.5	982.9
25°	1064.1	1201.8	1342.3	1482.9	1511.2	1539.6	1441.0	1342.3	1187.3	1032.2	922.3
27.5°	931.0	1061.9	1216.6	1371.3	1422.9	1474.5	1384.2	1294.0	1132.5	971.0	861.4
30°	822.4	939.4	1097.3	1255.3	1327.2	1399.1	1316.2	1233.4	1073.2	912.9	805.6
32.5°	721.1	825.9	984.5	1143.1	1226.6	1310.1	1238.5	1167.0	1012.9	858.8	752.7
35°	641.2	735.0	883.0	1030.9	1124.4	1217.9	1159.2	1100.6	950.0	799.5	699.2
37.5°	572.5	651.2	790.1	929.1	1028.3	1127.6	1078.6	1029.6	888.1	746.6	651.8
40°	515.8	579.0	708.2	837.5	934.9	1032.2	990.3	948.4	821.7	695.0	606.4
42.5°	467.1	521.6	637.6	753.7	843.0	932.3	904.6	876.8	762.1	647.3	565.1
45°	424.2	470.0	572.2	674.4	756.6	838.8	816.9	795.0	696.0	597.0	521.6
47.5°	386.2	425.5	516.8	608.0	681.8	755.6	735.3	715.0	633.1	551.2	482.6
50°	351.4	384.9	461.0	537.1	603.5	669.9	653.1	636.3	568.7	501.0	441.6
52.5°	318.5	346.2	414.6	482.9	536.4	589.9	577.0	564.1	511.9	459.7	405.9
55°	287.2	312.7	370.4	428.1	473.9	519.7	506.8	493.9	453.2	412.6	365.2
57.5°	258.9	281.1	327.8	374.6	411.0	447.4	441.3	435.2	401.3	367.5	328.5
60°	228.9	248.9	289.2	329.5	358.8	388.1	381.0	373.9	349.8	325.6	292.1
62.5°	202.1	219.9	252.1	284.3	308.2	332.0	326.9	321.7	303.3	285.0	257.2
65°	174.1	191.5	217.6	243.7	262.4	281.1	276.6	272.1	258.2	244.4	222.1
67.5°	148.6	163.1	185.7	208.2	220.8	233.4	230.8	228.2	217.6	207.0	189.6
70°	122.8	135.4	154.1	172.8	181.5	190.2	191.2	192.1	182.5	172.8	159.9
72.5°	97.0	107.0	124.4	141.8	148.6	155.4	155.1	154.7	148.9	143.1	131.5
75°	74.5	81.9	95.4	109.0	114.8	120.6	121.9	123.1	117.7	112.2	105.7
77.5°	53.5	58.7	69.0	79.3	85.7	92.2	92.8	93.5	90.9	88.3	82.2
80°	37.7	39.3	45.8	52.2	59.0	65.8	66.7	67.7	65.1	62.5	58.7
82.5°	26.1	27.1	29.3	31.6	37.1	42.6	43.8	45.1	43.8	42.6	38.4
85°	15.8	16.1	17.1	18.1	20.6	23.2	24.5	25.8	25.1	24.5	22.2
87.5°	7.1	7.1	7.4	7.7	8.4	9.0	10.6	12.2	11.3	10.3	9.3
90°	16.3	13.8	11.2	9.5	7.7	5.2	3.4	1.7	3.4	5.2	7.7
92.5°	132.4	86.8	59.3	43.8	35.2	27.5	18.9	12.9	18.9	27.5	35.2
95°	312.8	184.8	111.7	78.2	55.9	41.3	31.8	29.2	31.8	41.3	55.9
97.5°	348.1	199.4	127.2	90.2	67.9	55.0	47.3	46.4	47.3	55.0	67.9
100°	324.0	196.8	136.6	103.1	82.5	70.5	64.5	63.6	64.5	70.5	82.5
102.5°	303.4	200.2	147.8	117.7	99.7	88.5	83.4	81.6	83.4	88.5	99.7
105°	295.6	207.1	160.7	134.1	117.7	107.4	102.3	99.7	102.3	107.4	117.7
107.5°	293.9	218.3	177.0	152.1	136.6	126.3	121.2	118.6	121.2	126.3	136.6
110°	298.2	232.9	194.2	170.2	155.6	146.1	141.8	139.2	141.8	146.1	155.6





TEST NUMBER: P832190

CATALOG NUMBER: S123RDIP-S560D1025U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	306.8	247.5	212.3	189.1	174.5	165.0	160.7	158.1	160.7	165.0	174.5
115°	316.3	263.8	231.2	208.0	193.4	184.8	179.6	176.2	179.6	184.8	193.4
117.5°	328.3	281.0	248.4	226.9	210.6	202.8	198.5	194.2	198.5	202.8	210.6
120°	342.1	297.4	266.4	244.9	228.6	220.0	215.7	213.1	215.7	220.0	228.6
122.5°	354.9	314.6	284.5	261.3	245.8	236.3	232.0	229.5	232.0	236.3	245.8
125°	368.7	330.9	300.8	277.6	261.3	251.8	246.7	244.9	246.7	251.8	261.3
127.5°	379.9	345.5	316.3	293.1	275.0	265.6	259.5	257.0	259.5	265.6	275.0
130°	391.0	358.4	330.0	306.8	288.8	278.5	270.7	268.1	270.7	278.5	288.8
132.5°	401.4	369.6	342.1	319.7	301.7	288.8	280.2	276.7	280.2	288.8	301.7
135°	409.9	380.7	354.1	330.9	312.8	299.9	290.5	287.0	290.5	299.9	312.8
137.5°	416.8	388.5	362.7	341.2	323.1	309.4	299.9	296.5	299.9	309.4	323.1
140°	422.0	396.2	371.3	349.8	332.6	318.8	310.3	306.0	310.3	318.8	332.6
142.5°	427.1	402.2	378.1	358.4	341.2	329.2	319.7	316.3	319.7	329.2	341.2
145°	430.6	407.4	385.0	365.3	350.6	337.8	330.0	327.4	330.0	337.8	350.6
147.5°	433.2	411.7	391.0	373.9	359.2	348.1	340.3	338.6	340.3	348.1	359.2
150°	434.0	416.0	396.2	380.7	368.7	357.5	350.6	349.8	350.6	357.5	368.7
152.5°	435.7	418.5	402.2	387.6	377.3	367.8	361.0	361.0	361.0	367.8	377.3
155°	435.7	422.0	407.4	395.3	385.9	377.3	372.1	372.1	372.1	377.3	385.9
157.5°	436.6	423.7	411.7	402.2	393.6	385.9	381.6	380.7	381.6	385.9	393.6
160°	436.6	426.3	416.0	407.4	401.4	394.5	391.0	391.0	391.0	394.5	401.4
162.5°	435.7	427.1	418.5	411.7	406.5	401.4	398.8	398.8	398.8	401.4	406.5
165°	434.0	428.0	421.1	415.1	411.7	407.4	405.7	406.5	405.7	407.4	411.7
167.5°	433.2	428.0	422.8	418.5	416.0	412.5	411.7	412.5	411.7	412.5	416.0
170°	430.6	427.1	422.8	421.1	419.4	416.8	416.0	417.7	416.0	416.8	419.4
172.5°	429.7	427.1	423.7	422.8	422.0	420.3	420.3	421.1	420.3	420.3	422.0
175°	428.0	426.3	424.6	423.7	423.7	422.0	422.8	423.7	422.8	422.0	423.7
177.5°	427.1	425.4	424.6	424.6	424.6	423.7	424.6	425.4	424.6	423.7	424.6
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6



TEST NUMBER: P832190

CATALOG NUMBER: S123RDIP-S560D1025U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5	1572.5
2.5°	1522.2	1503.8	1485.5	1472.2	1459.0	1442.6	1426.1	1425.5	1424.9	1412.6	1400.4
5°	1431.9	1400.0	1368.1	1336.8	1305.6	1274.3	1243.0	1235.9	1228.9	1218.2	1207.6
7.5°	1352.0	1301.1	1250.1	1210.2	1170.2	1138.9	1107.6	1086.4	1065.1	1048.7	1032.2
10°	1266.3	1203.1	1139.9	1091.5	1043.2	1009.3	975.5	951.0	926.5	914.9	903.3
12.5°	1177.3	1108.6	1039.9	992.6	945.2	904.6	863.9	841.7	819.5	803.3	787.2
15°	1095.4	1021.6	947.8	897.5	847.2	809.1	771.1	748.9	726.6	710.5	694.4
17.5°	1016.1	941.6	867.2	816.2	765.3	730.8	696.3	674.7	653.1	643.1	633.1
20°	943.9	868.8	793.7	745.6	697.6	663.7	629.9	618.3	606.7	597.3	588.0
22.5°	872.3	800.1	727.9	681.8	635.7	611.2	586.7	577.4	568.0	560.9	553.8
25°	812.4	740.5	668.6	628.3	588.0	569.0	550.0	543.8	537.7	530.6	523.5
27.5°	751.8	683.4	615.1	582.8	550.6	535.1	519.7	511.9	504.2	498.4	492.6
30°	698.2	635.1	571.9	545.1	518.4	504.8	491.3	482.9	474.5	469.0	463.6
32.5°	646.7	590.6	534.5	511.6	488.7	475.5	462.3	454.2	446.2	439.7	433.3
35°	599.0	550.3	501.6	480.6	459.7	446.5	433.3	425.2	417.1	410.7	404.2
37.5°	557.0	512.9	468.7	449.1	429.4	417.8	406.2	397.8	389.4	382.6	375.9
40°	517.7	478.7	439.7	420.7	401.7	389.1	376.5	369.1	361.7	355.6	349.4
42.5°	482.9	447.1	411.3	392.6	373.9	362.0	350.1	341.4	332.7	329.1	325.6
45°	446.2	414.6	383.0	364.9	346.9	334.3	321.7	314.3	306.9	303.7	300.4
47.5°	413.9	384.6	355.2	337.5	319.8	308.5	297.2	291.4	285.6	281.1	276.6
50°	382.3	354.0	325.6	308.5	291.4	281.7	272.1	265.0	257.9	254.7	251.4
52.5°	352.0	326.2	300.4	283.0	265.6	256.3	246.9	240.8	234.7	227.9	221.1
55°	317.9	295.3	272.7	257.2	241.8	232.1	222.4	215.3	208.2	201.2	194.1
57.5°	289.5	267.2	245.0	231.1	217.3	207.9	198.6	190.8	183.1	177.3	171.5
60°	258.5	239.2	219.9	206.3	192.8	183.7	174.7	167.3	159.9	157.0	154.1
62.5°	229.5	211.5	193.4	181.5	169.6	160.9	152.2	147.3	142.5	140.6	138.6
65°	199.9	184.4	168.9	158.0	147.0	139.6	132.2	129.9	127.7	126.0	124.4
67.5°	172.1	158.9	145.7	136.0	126.4	121.2	116.1	113.5	110.9	109.0	107.0
70°	147.0	135.4	123.8	115.4	107.0	102.2	97.4	95.1	92.8	89.3	85.7
72.5°	119.9	110.9	101.9	95.4	89.0	84.8	80.6	76.1	71.6	68.3	65.1
75°	99.3	90.3	81.2	75.1	69.0	64.2	59.3	57.7	56.1	55.1	54.2
77.5°	76.1	68.3	60.6	55.8	50.9	48.7	46.4	45.5	44.5	44.2	43.8
80°	54.8	48.4	41.9	39.3	36.7	36.1	35.5	34.8	34.2	33.8	33.5
82.5°	34.2	30.9	27.7	27.1	26.4	26.1	25.8	25.5	25.1	24.8	24.5
85°	20.0	18.7	17.4	17.1	16.8	16.4	16.1	16.1	16.1	16.1	16.1
87.5°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.1	7.7
90°	9.5	11.2	13.8	16.3	18.9	21.5	20.6	21.5	22.3	23.2	24.9
92.5°	43.8	59.3	86.8	132.4	177.0	159.9	119.5	85.1	66.2	57.6	51.6
95°	78.2	111.7	184.8	312.8	453.8	509.6	413.4	309.4	209.7	164.2	133.2
97.5°	90.2	127.2	199.4	348.1	585.3	783.8	810.4	710.7	536.3	422.8	324.9
100°	103.1	136.6	196.8	324.0	550.0	813.9	983.2	1013.3	943.7	843.1	721.1
102.5°	117.7	147.8	200.2	303.4	498.5	758.0	991.8	1113.8	1128.4	1080.3	1014.1
105°	134.1	160.7	207.1	295.6	458.1	691.0	937.6	1117.3	1203.2	1219.5	1197.2
107.5°	152.1	177.0	218.3	293.9	428.9	631.7	860.3	1065.7	1200.6	1267.7	1290.9
110°	170.2	194.2	232.9	298.2	413.4	582.7	788.1	984.9	1143.0	1251.3	1311.5



TEST NUMBER: P832190

CATALOG NUMBER: S123RDIP-S560D1025U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	189.1	212.3	247.5	306.8	404.8	550.0	725.4	905.0	1067.4	1192.0	1273.7
115°	208.0	231.2	263.8	316.3	403.9	528.5	677.2	836.2	985.8	1112.1	1205.8
117.5°	226.9	248.4	281.0	328.3	404.8	513.9	645.4	782.9	915.3	1031.3	1128.4
120°	244.9	266.4	297.4	342.1	408.2	504.5	621.4	742.5	858.6	961.7	1048.5
122.5°	261.3	284.5	314.6	354.9	414.2	498.5	601.6	710.7	813.0	906.7	985.8
125°	277.6	300.8	330.9	368.7	420.3	493.3	585.3	683.2	776.9	859.4	928.2
127.5°	293.1	316.3	345.5	379.9	427.1	490.7	569.8	658.3	743.4	819.0	882.6
130°	306.8	330.0	358.4	391.0	434.0	488.2	557.8	635.1	712.5	782.1	840.5
132.5°	319.7	342.1	369.6	401.4	439.2	487.3	546.6	613.6	683.2	746.8	801.8
135°	330.9	354.1	380.7	409.9	444.3	486.4	537.1	594.7	655.7	711.6	760.6
137.5°	341.2	362.7	388.5	416.8	447.8	484.7	528.5	576.7	628.2	678.1	721.9
140°	349.8	371.3	396.2	422.0	451.2	483.9	520.8	561.2	605.0	646.3	683.2
142.5°	358.4	378.1	402.2	427.1	453.8	482.1	513.9	546.6	582.7	617.1	648.0
145°	365.3	385.0	407.4	430.6	454.6	480.4	507.9	535.4	563.8	591.3	616.2
147.5°	373.9	391.0	411.7	433.2	454.6	477.8	501.9	526.0	549.2	572.4	590.4
150°	380.7	396.2	416.0	434.0	454.6	474.4	495.9	515.7	535.4	553.5	569.8
152.5°	387.6	402.2	418.5	435.7	452.1	470.1	489.0	506.2	522.5	538.0	550.9
155°	395.3	407.4	422.0	435.7	450.3	465.0	482.1	496.8	510.5	523.4	533.7
157.5°	402.2	411.7	423.7	436.6	447.8	460.7	474.4	486.4	498.5	508.8	517.4
160°	407.4	416.0	426.3	436.6	446.0	455.5	466.7	477.8	487.3	495.9	501.9
162.5°	411.7	418.5	427.1	435.7	442.6	450.3	458.9	467.5	475.3	483.0	488.2
165°	415.1	421.1	428.0	434.0	439.2	445.2	452.1	458.9	464.1	470.1	474.4
167.5°	418.5	422.8	428.0	433.2	435.7	440.0	445.2	451.2	455.5	458.9	462.4
170°	421.1	422.8	427.1	430.6	432.3	434.9	439.2	443.5	446.0	449.5	451.2
172.5°	422.8	423.7	427.1	429.7	429.7	430.6	433.2	436.6	438.3	440.9	441.7
175°	423.7	424.6	426.3	428.0	427.1	427.1	428.9	430.6	431.4	433.2	433.2
177.5°	424.6	424.6	425.4	427.1	425.4	424.6	425.4	426.3	427.1	428.0	428.0
180°	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6	424.6



TEST NUMBER: P832190

CATALOG NUMBER: S123RDIP-S560D1025U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1572.5	1572.5	1572.5	1572.5
2.5°	1397.1	1393.9	1392.6	1391.3
5°	1197.6	1187.6	1185.3	1183.1
7.5°	1028.0	1023.8	1010.0	996.1
10°	890.4	877.5	871.7	865.9
12.5°	775.3	763.4	761.4	759.5
15°	686.0	677.6	674.7	671.8
17.5°	627.3	621.5	618.0	614.4
20°	583.8	579.6	577.0	574.5
22.5°	550.6	547.4	545.4	543.5
25°	518.7	513.8	512.2	510.6
27.5°	488.4	484.2	482.6	481.0
30°	460.0	456.5	454.2	452.0
32.5°	429.1	424.9	423.6	422.3
35°	401.7	399.1	397.8	396.5
37.5°	372.7	369.4	367.5	365.6
40°	347.8	346.2	345.3	344.3
42.5°	322.7	319.8	319.5	319.1
45°	297.5	294.6	294.0	293.4
47.5°	274.0	271.4	271.1	270.8
50°	247.9	244.4	241.8	239.2
52.5°	217.9	214.7	212.4	210.2
55°	190.5	187.0	185.0	183.1
57.5°	169.9	168.3	167.3	166.3
60°	153.1	152.2	151.5	150.9
62.5°	137.6	136.7	136.7	136.7
65°	123.5	122.5	121.5	120.6
67.5°	105.1	103.2	102.8	102.5
70°	82.8	79.9	79.6	79.3
72.5°	64.8	64.5	63.8	63.2
75°	53.5	52.9	52.9	52.9
77.5°	43.2	42.6	42.6	42.6
80°	33.2	32.9	33.2	33.5
82.5°	24.5	24.5	24.2	23.9
85°	15.8	15.5	15.5	15.5
87.5°	7.7	7.7	7.7	7.7
90°	24.1	24.9	25.8	24.9
92.5°	49.8	46.4	47.3	45.5
95°	116.9	109.1	103.1	99.7
97.5°	267.3	234.6	214.0	204.5
100°	634.3	571.5	538.0	538.9
102.5°	951.4	905.0	878.3	853.4
105°	1157.7	1125.0	1097.5	1093.2
107.5°	1285.7	1270.2	1259.1	1249.6
110°	1335.6	1342.4	1340.7	1339.0



TEST NUMBER: P832190

CATALOG NUMBER: S123RDIP-S560D1025U935-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	1322.7	1347.6	1356.2	1357.0
115°	1270.2	1308.1	1325.2	1329.5
117.5°	1195.5	1237.6	1263.4	1269.4
120°	1116.4	1164.5	1185.2	1190.3
122.5°	1044.2	1086.3	1109.5	1116.4
125°	983.2	1021.0	1042.5	1048.5
127.5°	932.5	965.1	984.9	990.1
130°	886.1	917.0	935.1	941.9
132.5°	844.0	874.9	890.4	894.7
135°	802.7	828.5	844.0	850.0
137.5°	758.0	784.7	797.6	802.7
140°	715.9	740.0	753.7	752.9
142.5°	674.7	695.3	707.3	706.5
145°	637.7	655.7	662.6	664.3
147.5°	607.6	620.5	627.4	628.2
150°	582.7	592.1	597.3	597.3
152.5°	560.3	568.9	571.5	571.5
155°	541.4	548.3	550.0	550.9
157.5°	524.3	529.4	531.1	531.1
160°	507.9	513.1	513.1	512.2
162.5°	491.6	495.9	495.9	495.0
165°	477.8	481.3	480.4	480.4
167.5°	464.1	466.7	465.8	465.8
170°	452.1	453.8	452.9	452.9
172.5°	441.7	443.5	441.7	440.9
175°	433.2	434.0	433.2	432.3
177.5°	427.1	428.0	426.3	426.3
180°	424.6	424.6	424.6	424.6

TEST NUMBER: P832190

CATALOG NUMBER: S123RDIP-S560D1025U935-4F0-1E-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	9.50	10.24	10.56	11.29	12.71	14.17	14.90	15.22	15.95	17.37
	3H	10.72	11.37	11.78	12.43	13.87	15.66	16.32	16.72	17.37	18.81
	4H	11.10	11.72	12.17	12.78	14.22	16.14	16.77	17.22	17.83	19.27
	6H	11.37	11.94	12.45	13.01	14.46	16.45	17.02	17.53	18.09	19.54
	8H	11.46	12.00	12.54	13.08	14.53	16.53	17.07	17.61	18.15	19.60
	12H	11.50	12.02	12.59	13.09	14.57	16.56	17.07	17.65	18.15	19.62
4H	2H	10.22	10.84	11.30	11.90	13.34	14.15	14.77	15.23	15.83	17.28
	3H	11.58	12.09	12.66	13.18	14.64	15.80	16.32	16.89	17.41	18.86
	4H	12.03	12.50	13.12	13.58	15.06	16.40	16.88	17.50	17.96	19.43
	6H	12.39	12.80	13.49	13.90	15.37	16.84	17.24	17.94	18.34	19.81
	8H	12.51	12.89	13.61	13.99	15.47	16.97	17.34	18.07	18.44	19.92
	12H	12.59	12.93	13.70	14.03	15.52	17.02	17.37	18.14	18.47	19.96
8H	4H	12.34	12.71	13.43	13.81	15.29	16.36	16.74	17.46	17.84	19.32
	6H	12.80	13.11	13.92	14.24	15.73	16.86	17.17	17.98	18.31	19.79
	8H	12.99	13.26	14.12	14.38	15.88	17.04	17.32	18.17	18.43	19.94
	12H	13.13	13.36	14.26	14.48	16.02	17.16	17.39	18.29	18.51	20.05
12H	4H	12.34	12.68	13.46	13.79	15.28	16.31	16.65	17.43	17.76	19.25
	6H	12.85	13.13	13.98	14.24	15.75	16.83	17.10	17.96	18.22	19.73
	8H	13.07	13.31	14.20	14.42	15.96	17.02	17.26	18.15	18.37	19.91