

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: P832188

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

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832188
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-S560D1025U935-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1025 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

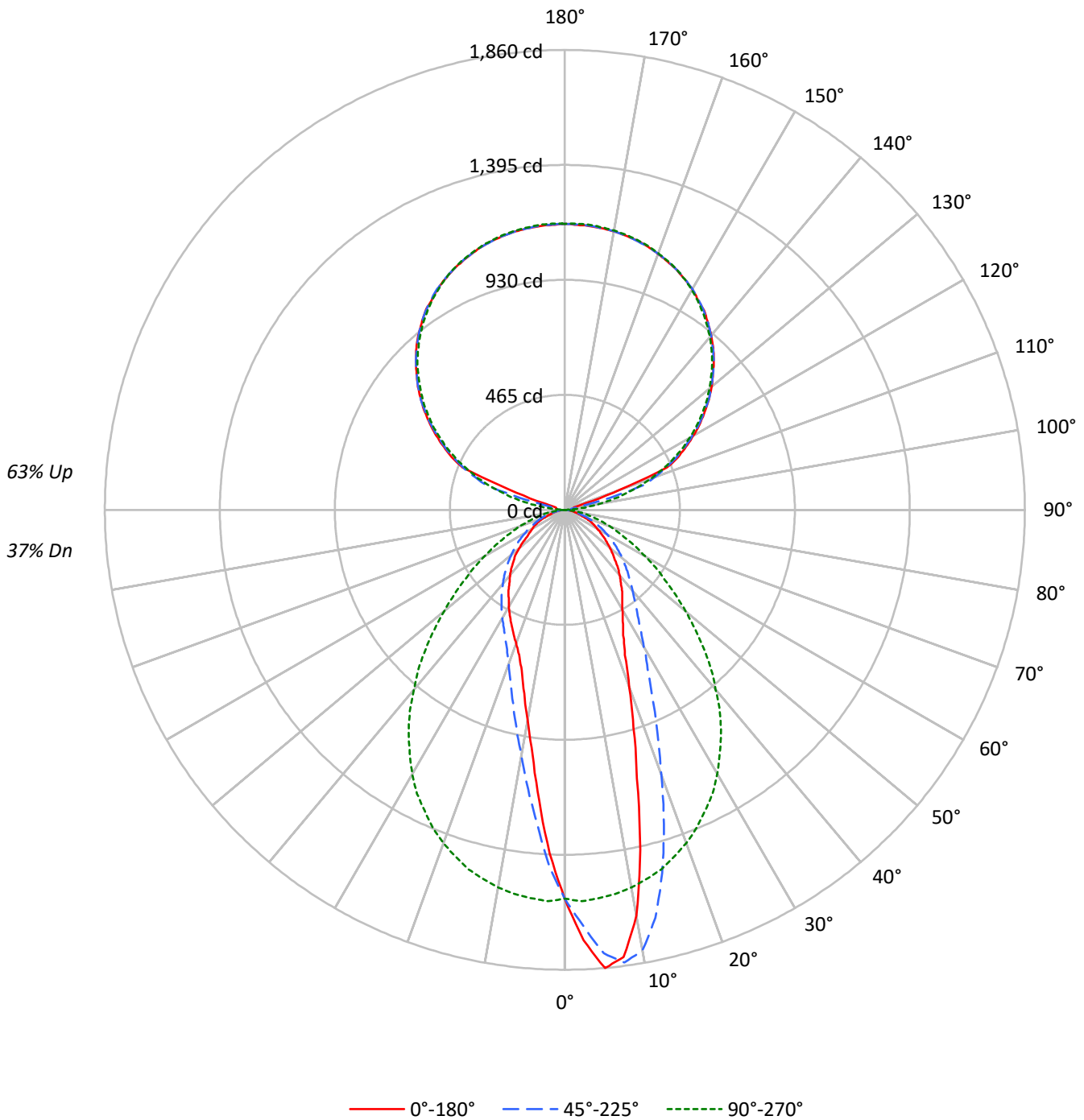
Lumens per Lamp: N/A
Luminaire Lumens: 5613.5 lumens
Efficiency: N/A
Efficacy: 123.4 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Indirect

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	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37				
1	95	91	88	85	86	83	80	77	68	66	64	53	52	51	40	39	39	32				
2	87	81	75	70	79	73	69	64	60	57	54	48	45	43	36	35	33	28				
3	80	71	65	59	73	65	59	55	53	49	46	43	40	37	33	31	29	25				
4	74	64	56	51	67	58	52	47	48	43	40	38	35	33	30	27	26	22				
5	68	57	49	44	61	52	46	41	43	38	35	35	31	29	27	25	23	20				
6	63	51	44	38	57	47	41	36	39	34	31	32	28	26	25	22	21	18				
7	58	47	39	34	53	43	36	32	36	31	27	29	26	23	23	21	19	16				
8	54	42	35	30	49	39	33	28	33	28	24	27	23	21	21	19	17	15				
9	50	39	32	27	46	36	30	25	30	25	22	25	21	19	20	17	16	13				
10	47	36	29	24	43	33	27	23	28	23	20	23	20	17	19	16	14	12				

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	2.6
10°-20°	331.7	5.9
20°-30°	380.5	6.8
30°-40°	375.1	6.7
40°-50°	330.8	5.9
50°-60°	254.5	4.5
60°-70°	167.3	3.0
70°-80°	81.3	1.4
80°-90°	22.8	0.4
90°-100°	40.8	0.7
100°-110°	197.2	3.5
110°-120°	483.3	8.6
120°-130°	613.5	10.9
130°-140°	655.4	11.7
140°-150°	612.9	10.9
150°-160°	494.3	8.8
160°-170°	319.0	5.7
170°-180°	109.9	2.0
0°-30°	855.5	15.2
0°-40°	1230.6	21.9
0°-60°	1815.9	32.3
0°-90°	2087.2	37.2
90°-120°	721.2	12.8
90°-150°	2603.0	46.4
90°-180°	3526.0	62.8
0°-180°	5613.5	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°	26	21	1	21	26	12
95°	33	27	52	27	33	27
105°	38	188	256	188	38	79
115°	505	493	480	493	505	475
125°	691	688	677	688	691	617
135°	852	852	843	852	852	657
145°	982	981	973	981	982	613
155°	1070	1071	1072	1071	1070	494
165°	1128	1127	1130	1127	1128	319
175°	1152	1153	1157	1153	1152	110
180°	1157	1157	1157	1157	1157	



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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°	25.8	25.4	25.0	24.6	24.3	23.7	22.9	22.2	21.4	20.6	18.1
92.5°	29.2	29.0	28.8	28.6	28.5	27.7	26.4	25.0	23.7	22.3	20.6
95°	32.7	32.7	32.7	32.7	32.7	32.0	30.7	29.3	28.0	26.6	24.5
97.5°	35.2	35.0	34.9	34.7	34.5	33.6	32.1	30.6	29.0	27.5	37.2
100°	36.1	35.9	35.7	35.5	35.3	34.5	32.9	31.4	29.9	28.4	58.2
102.5°	37.0	36.6	36.2	35.8	35.4	38.4	44.7	51.0	57.3	63.6	96.8
105°	37.8	37.4	37.0	36.7	36.3	53.0	86.8	120.6	154.4	188.2	205.4
107.5°	89.4	114.4	139.4	164.4	189.5	216.7	246.1	275.5	304.9	334.3	331.4
110°	236.3	263.6	291.0	318.3	345.6	362.4	368.7	375.0	381.3	387.6	385.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	447.7	448.1	448.5	448.9	449.3	448.6	446.9	445.2	443.5	441.7	439.6
115°	505.3	504.6	503.8	503.0	502.3	500.9	499.0	497.1	495.2	493.3	491.6
117.5°	551.7	551.5	551.4	551.2	551.0	550.1	548.6	547.1	545.5	544.0	543.0
120°	599.9	599.9	599.9	599.9	599.9	599.1	597.6	596.0	594.5	593.0	592.4
122.5°	647.1	646.9	646.7	646.6	646.4	645.8	644.8	643.9	642.9	642.0	641.2
125°	691.0	690.6	690.2	689.8	689.4	689.0	688.7	688.3	687.9	687.5	686.8
127.5°	733.9	734.3	734.7	735.1	735.5	735.4	734.8	734.2	733.6	733.1	732.1
130°	775.2	775.6	775.9	776.3	776.7	776.5	775.8	775.0	774.2	773.5	772.7
132.5°	813.0	813.6	814.1	814.7	815.3	815.2	814.4	813.7	812.9	812.1	811.6
135°	851.7	852.2	852.8	853.4	854.0	854.0	853.4	852.8	852.2	851.7	850.9
137.5°	888.6	889.0	889.4	889.8	890.1	889.9	888.9	888.0	887.0	886.0	885.7
140°	921.3	921.7	922.0	922.4	922.8	922.6	921.9	921.1	920.3	919.6	919.0
142.5°	951.4	951.9	952.5	953.1	953.6	953.6	953.1	952.5	951.9	951.4	950.8
145°	982.3	982.3	982.3	982.3	982.3	982.1	981.7	981.3	981.0	980.6	980.2
147.5°	1004.6	1005.6	1006.6	1007.5	1008.5	1008.7	1008.4	1008.0	1007.6	1007.2	1006.8
150°	1030.4	1031.0	1031.6	1032.1	1032.7	1032.8	1032.4	1032.0	1031.7	1031.3	1030.9
152.5°	1051.0	1052.0	1053.0	1053.9	1054.9	1055.0	1054.2	1053.4	1052.7	1051.9	1051.7
155°	1070.0	1071.1	1072.2	1073.4	1074.5	1074.6	1073.7	1072.7	1071.8	1070.8	1070.6
157.5°	1086.3	1087.8	1089.3	1090.9	1092.4	1092.6	1091.4	1090.3	1089.1	1088.0	1088.2
160°	1101.8	1103.1	1104.4	1105.8	1107.1	1107.2	1106.1	1104.9	1103.8	1102.6	1102.8
162.5°	1116.4	1117.5	1118.7	1119.8	1120.9	1120.9	1119.5	1118.2	1116.8	1115.5	1115.7
165°	1127.5	1128.9	1130.2	1131.5	1132.9	1132.8	1131.3	1129.7	1128.2	1126.7	1126.9
167.5°	1136.1	1137.7	1139.2	1140.7	1142.2	1142.2	1140.7	1139.2	1137.7	1136.1	1136.1
170°	1143.9	1145.4	1146.9	1148.4	1150.0	1150.0	1148.4	1146.9	1145.4	1143.9	1143.9
172.5°	1148.2	1149.9	1151.6	1153.3	1155.0	1155.1	1153.6	1152.1	1150.5	1149.0	1148.8
175°	1152.5	1154.0	1155.5	1157.0	1158.6	1158.7	1157.3	1156.0	1154.7	1153.3	1153.1
177.5°	1153.3	1155.2	1157.1	1159.0	1161.0	1161.1	1159.6	1158.1	1156.6	1155.0	1154.8
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8



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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°	15.7	13.2	10.7	8.5	6.6	4.7	2.8	0.9	2.8	4.7	6.6
92.5°	18.9	17.2	15.5	15.2	16.3	17.5	18.6	19.8	18.6	17.5	16.3
95°	22.4	20.3	18.2	21.1	28.9	36.8	44.6	52.4	44.6	36.8	28.9
97.5°	47.0	56.7	66.5	74.0	79.4	84.7	90.0	95.4	90.0	84.7	79.4
100°	87.9	117.7	147.5	160.5	156.7	152.9	149.1	145.2	149.1	152.9	156.7
102.5°	130.1	163.3	196.5	211.9	209.4	206.9	204.4	202.0	204.4	206.9	209.4
105°	222.6	239.8	257.0	264.5	262.4	260.3	258.2	256.1	258.2	260.3	262.4
107.5°	328.6	325.7	322.8	320.6	318.8	317.1	315.4	313.7	315.4	317.1	318.8
110°	383.4	381.3	379.2	377.4	375.8	374.3	372.8	371.3	372.8	374.3	375.8



TEST NUMBER: P832188

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	437.5	435.4	433.3	431.6	430.3	428.9	427.6	426.3	427.6	428.9	430.3
115°	489.9	488.1	486.4	485.0	483.8	482.7	481.6	480.4	481.6	482.7	483.8
117.5°	542.1	541.1	540.2	539.0	537.7	536.4	535.0	533.7	535.0	536.4	537.7
120°	591.8	591.3	590.7	589.5	587.8	586.1	584.4	582.7	584.4	586.1	587.8
122.5°	640.4	639.7	638.9	637.9	636.5	635.2	633.9	632.5	633.9	635.2	636.5
125°	686.0	685.2	684.5	683.3	681.8	680.3	678.7	677.2	678.7	680.3	681.8
127.5°	731.2	730.2	729.3	728.0	726.5	725.0	723.4	721.9	723.4	725.0	726.5
130°	771.9	771.2	770.4	769.3	767.7	766.2	764.7	763.1	764.7	766.2	767.7
132.5°	811.0	810.4	809.8	808.8	807.3	805.7	804.2	802.7	804.2	805.7	807.3
135°	850.1	849.4	848.6	847.7	846.5	845.4	844.2	843.1	844.2	845.4	846.5
137.5°	885.3	884.9	884.5	883.6	882.0	880.5	879.0	877.4	879.0	880.5	882.0
140°	918.4	917.8	917.3	916.4	915.3	914.1	913.0	911.8	913.0	914.1	915.3
142.5°	950.2	949.6	949.1	948.2	947.1	945.9	944.8	943.6	944.8	945.9	947.1
145°	979.8	979.4	979.1	978.2	976.9	975.5	974.2	972.8	974.2	975.5	976.9
147.5°	1006.5	1006.1	1005.7	1005.0	1004.1	1003.1	1002.2	1001.2	1002.2	1003.1	1004.1
150°	1030.5	1030.1	1029.8	1029.3	1028.7	1028.1	1027.6	1027.0	1027.6	1028.1	1028.7
152.5°	1051.5	1051.3	1051.1	1051.0	1050.8	1050.6	1050.4	1050.2	1050.4	1050.6	1050.8
155°	1070.4	1070.2	1070.1	1070.1	1070.5	1070.9	1071.3	1071.7	1071.3	1070.9	1070.5
157.5°	1088.4	1088.6	1088.8	1088.9	1088.9	1088.9	1088.9	1088.9	1088.9	1088.9	1088.9
160°	1103.0	1103.2	1103.4	1103.6	1103.8	1103.9	1104.1	1104.3	1104.1	1103.9	1103.8
162.5°	1115.9	1116.1	1116.3	1116.6	1117.2	1117.8	1118.4	1118.9	1118.4	1117.8	1117.2
165°	1127.1	1127.2	1127.4	1127.8	1128.4	1129.0	1129.5	1130.1	1129.5	1129.0	1128.4
167.5°	1136.1	1136.1	1136.1	1136.5	1137.3	1138.0	1138.8	1139.6	1138.8	1138.0	1137.3
170°	1143.9	1143.9	1143.9	1144.2	1145.0	1145.8	1146.5	1147.3	1146.5	1145.8	1145.0
172.5°	1148.6	1148.4	1148.3	1148.6	1149.6	1150.5	1151.5	1152.5	1151.5	1150.5	1149.6
175°	1152.9	1152.7	1152.6	1152.9	1153.9	1154.8	1155.8	1156.8	1155.8	1154.8	1153.9
177.5°	1154.7	1154.5	1154.3	1154.7	1155.6	1156.6	1157.5	1158.5	1157.5	1156.6	1155.6
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8



TEST NUMBER: P832188

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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°	8.5	10.7	13.2	15.7	18.1	20.6	21.4	22.2	22.9	23.7	24.3
92.5°	15.2	15.5	17.2	18.9	20.6	22.3	23.7	25.0	26.4	27.7	28.5
95°	21.1	18.2	20.3	22.4	24.5	26.6	28.0	29.3	30.7	32.0	32.7
97.5°	74.0	66.5	56.7	47.0	37.2	27.5	29.0	30.6	32.1	33.6	34.5
100°	160.5	147.5	117.7	87.9	58.2	28.4	29.9	31.4	32.9	34.5	35.3
102.5°	211.9	196.5	163.3	130.1	96.8	63.6	57.3	51.0	44.7	38.4	35.4
105°	264.5	257.0	239.8	222.6	205.4	188.2	154.4	120.6	86.8	53.0	36.3
107.5°	320.6	322.8	325.7	328.6	331.4	334.3	304.9	275.5	246.1	216.7	189.5
110°	377.4	379.2	381.3	383.4	385.5	387.6	381.3	375.0	368.7	362.4	345.6



TEST NUMBER: P832188

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

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	431.6	433.3	435.4	437.5	439.6	441.7	443.5	445.2	446.9	448.6	449.3
115°	485.0	486.4	488.1	489.9	491.6	493.3	495.2	497.1	499.0	500.9	502.3
117.5°	539.0	540.2	541.1	542.1	543.0	544.0	545.5	547.1	548.6	550.1	551.0
120°	589.5	590.7	591.3	591.8	592.4	593.0	594.5	596.0	597.6	599.1	599.9
122.5°	637.9	638.9	639.7	640.4	641.2	642.0	642.9	643.9	644.8	645.8	646.4
125°	683.3	684.5	685.2	686.0	686.8	687.5	687.9	688.3	688.7	689.0	689.4
127.5°	728.0	729.3	730.2	731.2	732.1	733.1	733.6	734.2	734.8	735.4	735.5
130°	769.3	770.4	771.2	771.9	772.7	773.5	774.2	775.0	775.8	776.5	776.7
132.5°	808.8	809.8	810.4	811.0	811.6	812.1	812.9	813.7	814.4	815.2	815.3
135°	847.7	848.6	849.4	850.1	850.9	851.7	852.2	852.8	853.4	854.0	854.0
137.5°	883.6	884.5	884.9	885.3	885.7	886.0	887.0	888.0	888.9	889.9	890.1
140°	916.4	917.3	917.8	918.4	919.0	919.6	920.3	921.1	921.9	922.6	922.8
142.5°	948.2	949.1	949.6	950.2	950.8	951.4	951.9	952.5	953.1	953.6	953.6
145°	978.2	979.1	979.4	979.8	980.2	980.6	981.0	981.3	981.7	982.1	982.3
147.5°	1005.0	1005.7	1006.1	1006.5	1006.8	1007.2	1007.6	1008.0	1008.4	1008.7	1008.5
150°	1029.3	1029.8	1030.1	1030.5	1030.9	1031.3	1031.7	1032.0	1032.4	1032.8	1032.7
152.5°	1051.0	1051.1	1051.3	1051.5	1051.7	1051.9	1052.7	1053.4	1054.2	1055.0	1054.9
155°	1070.1	1070.1	1070.2	1070.4	1070.6	1070.8	1071.8	1072.7	1073.7	1074.6	1074.5
157.5°	1088.9	1088.8	1088.6	1088.4	1088.2	1088.0	1089.1	1090.3	1091.4	1092.6	1092.4
160°	1103.6	1103.4	1103.2	1103.0	1102.8	1102.6	1103.8	1104.9	1106.1	1107.2	1107.1
162.5°	1116.6	1116.3	1116.1	1115.9	1115.7	1115.5	1116.8	1118.2	1119.5	1120.9	1120.9
165°	1127.8	1127.4	1127.2	1127.1	1126.9	1126.7	1128.2	1129.7	1131.3	1132.8	1132.9
167.5°	1136.5	1136.1	1136.1	1136.1	1136.1	1136.1	1137.7	1139.2	1140.7	1142.2	1142.2
170°	1144.2	1143.9	1143.9	1143.9	1143.9	1143.9	1145.4	1146.9	1148.4	1150.0	1150.0
172.5°	1148.6	1148.3	1148.4	1148.6	1148.8	1149.0	1150.5	1152.1	1153.6	1155.1	1155.0
175°	1152.9	1152.6	1152.7	1152.9	1153.1	1153.3	1154.7	1156.0	1157.3	1158.7	1158.6
177.5°	1154.7	1154.3	1154.5	1154.7	1154.8	1155.0	1156.6	1158.1	1159.6	1161.1	1161.0
180°	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8	1156.8



TEST NUMBER: P832188

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

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°	24.6	25.0	25.4	25.8
92.5°	28.6	28.8	29.0	29.2
95°	32.7	32.7	32.7	32.7
97.5°	34.7	34.9	35.0	35.2
100°	35.5	35.7	35.9	36.1
102.5°	35.8	36.2	36.6	37.0
105°	36.7	37.0	37.4	37.8
107.5°	164.4	139.4	114.4	89.4
110°	318.3	291.0	263.6	236.3



TEST NUMBER: P832188

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

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	448.9	448.5	448.1	447.7
115°	503.0	503.8	504.6	505.3
117.5°	551.2	551.4	551.5	551.7
120°	599.9	599.9	599.9	599.9
122.5°	646.6	646.7	646.9	647.1
125°	689.8	690.2	690.6	691.0
127.5°	735.1	734.7	734.3	733.9
130°	776.3	775.9	775.6	775.2
132.5°	814.7	814.1	813.6	813.0
135°	853.4	852.8	852.2	851.7
137.5°	889.8	889.4	889.0	888.6
140°	922.4	922.0	921.7	921.3
142.5°	953.1	952.5	951.9	951.4
145°	982.3	982.3	982.3	982.3
147.5°	1007.5	1006.6	1005.6	1004.6
150°	1032.1	1031.6	1031.0	1030.4
152.5°	1053.9	1053.0	1052.0	1051.0
155°	1073.4	1072.2	1071.1	1070.0
157.5°	1090.9	1089.3	1087.8	1086.3
160°	1105.8	1104.4	1103.1	1101.8
162.5°	1119.8	1118.7	1117.5	1116.4
165°	1131.5	1130.2	1128.9	1127.5
167.5°	1140.7	1139.2	1137.7	1136.1
170°	1148.4	1146.9	1145.4	1143.9
172.5°	1153.3	1151.6	1149.9	1148.2
175°	1157.0	1155.5	1154.0	1152.5
177.5°	1159.0	1157.1	1155.2	1153.3
180°	1156.8	1156.8	1156.8	1156.8



TEST NUMBER: P832188

CATALOG NUMBER: S123RDIP-S560D1025U935-4F0-1E-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	9.24	9.96	10.31	11.02	12.47	13.90	14.62	14.97	15.69	17.13
	3H	10.45	11.09	11.53	12.17	13.63	15.39	16.04	16.47	17.11	18.57
	4H	10.83	11.44	11.92	12.51	13.98	15.88	16.49	16.97	17.56	19.03
	6H	11.10	11.66	12.20	12.74	14.22	16.18	16.74	17.28	17.82	19.31
	8H	11.19	11.72	12.29	12.81	14.29	16.26	16.79	17.36	17.89	19.36
	12H	11.23	11.74	12.34	12.83	14.33	16.29	16.79	17.39	17.88	19.38
4H	2H	9.95	10.56	11.04	11.63	13.10	13.88	14.49	14.98	15.57	17.04
	3H	11.31	11.81	12.41	12.92	14.40	15.53	16.04	16.63	17.14	18.62
	4H	11.76	12.22	12.86	13.31	14.82	16.13	16.60	17.24	17.69	19.20
	6H	12.12	12.52	13.23	13.63	15.13	16.57	16.96	17.68	18.08	19.58
	8H	12.24	12.61	13.36	13.72	15.23	16.70	17.07	17.81	18.17	19.69
	12H	12.31	12.65	13.44	13.77	15.29	16.75	17.09	17.88	18.21	19.73
8H	4H	12.06	12.44	13.18	13.54	15.06	16.09	16.46	17.21	17.57	19.09
	6H	12.52	12.83	13.66	13.98	15.49	16.59	16.89	17.72	18.04	19.55
	8H	12.72	12.98	13.86	14.11	15.64	16.77	17.04	17.91	18.17	19.70
	12H	12.85	13.09	14.00	14.21	15.78	16.88	17.12	18.03	18.24	19.81
12H	4H	12.07	12.41	13.20	13.53	15.04	16.04	16.37	17.17	17.49	19.01
	6H	12.58	12.85	13.72	13.98	15.51	16.56	16.83	17.70	17.96	19.49
	8H	12.80	13.03	13.94	14.16	15.72	16.75	16.98	17.89	18.11	19.68