

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: P832227

Luminaire Tested: S123RDIP-S560D365U835-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832227  
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-S560D365U835-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

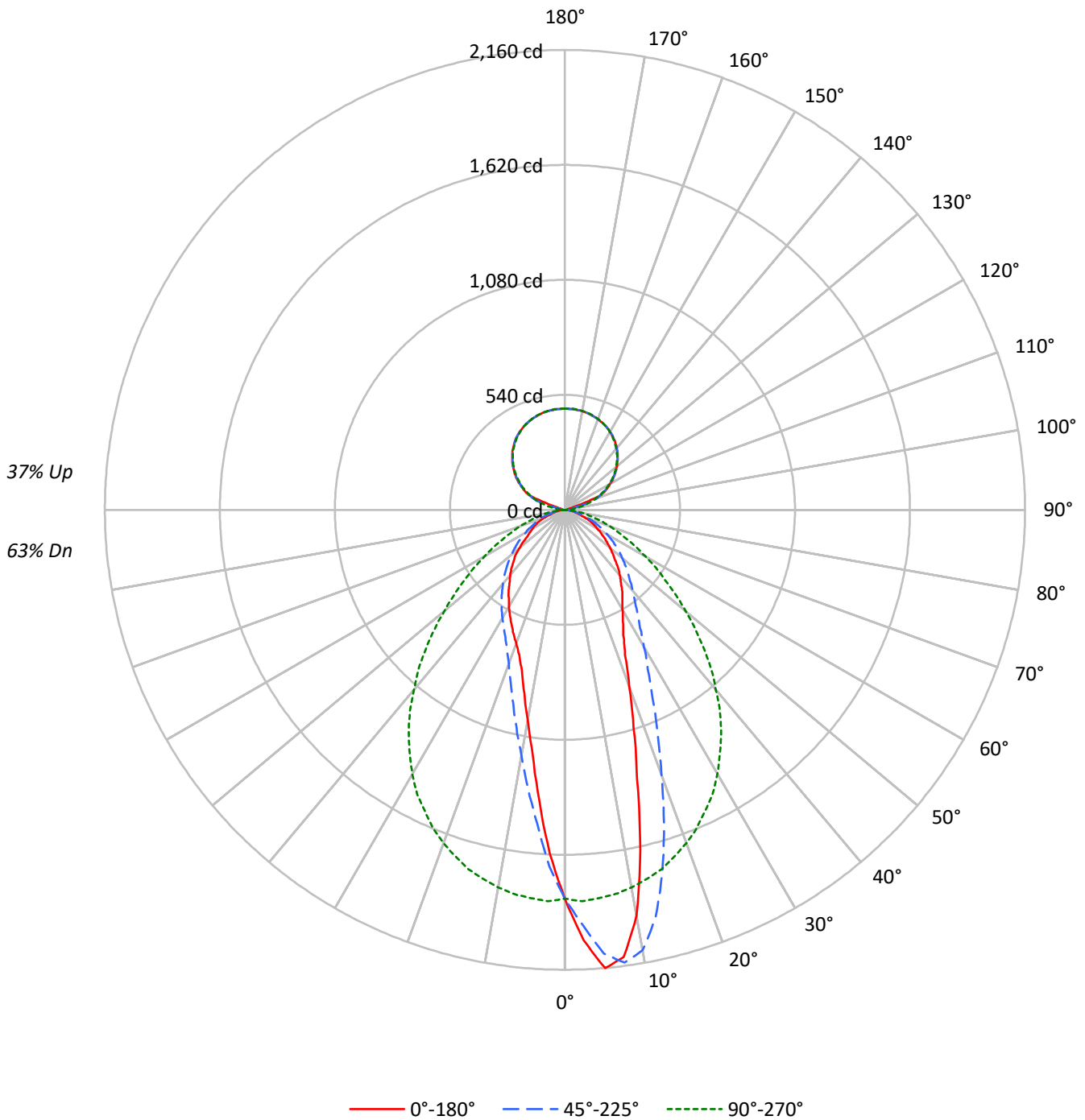
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3872.4 lumens  
Efficiency: N/A  
Efficacy: 130.8 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-Direct  
  
Input Watts (W): 29.6  
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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	68	68	68	63		
1	102	98	94	91	95	92	89	86	81	78	76	71	69	67	61	60	59	55		
2	93	86	81	76	87	81	76	72	72	68	65	63	60	58	55	53	51	47		
3	86	77	70	65	80	73	67	62	65	60	56	57	53	50	50	47	45	42		
4	79	69	62	56	74	65	59	53	58	53	49	52	48	44	46	42	40	37		
5	73	62	55	49	69	59	52	47	53	47	43	47	43	39	42	38	36	33		
6	68	57	49	43	64	54	47	42	48	43	38	43	39	35	38	35	32	30		
7	63	52	44	39	60	49	42	37	44	39	35	40	35	32	36	32	29	27		
8	59	47	40	35	56	45	38	34	41	35	31	37	32	29	33	29	27	25		
9	56	44	37	32	52	42	35	31	38	32	29	34	30	27	31	27	25	23		
10	52	41	34	29	49	39	32	28	35	30	26	32	28	24	29	25	23	21		

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°	135°	180°
0°	19659	19659	19659	19659	19659
5°	23342	22598	19783	15991	14847
10°	21148	22954	19684	12813	10992
15°	14561	19681	19476	10473	8695
20°	10131	15152	19085	8830	7643
25°	7720	11548	18516	7848	7044
30°	6719	9232	17805	7287	6524
35°	6169	7788	16796	6815	6051
40°	5629	6955	15477	6350	5619
45°	5084	6360	14055	5911	5186
50°	4615	5868	12377	5479	4652
55°	4174	5390	10764	5059	3992
60°	3739	4900	9350	4594	3772
65°	3451	4348	8048	4129	3566
70°	2804	3758	7021	3736	2899
75°	2462	2990	5947	3098	2554
80°	2225	2529	4872	2597	2411
85°	2038	2223	3705	2359	2223

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 14830 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	166.5	4.3
10°-20°	385.2	9.9
20°-30°	442.0	11.4
30°-40°	435.6	11.2
40°-50°	384.2	9.9
50°-60°	295.6	7.6
60°-70°	194.3	5.0
70°-80°	94.4	2.4
80°-90°	24.7	0.6
90°-100°	16.8	0.4
100°-110°	81.1	2.1
110°-120°	198.7	5.1
120°-130°	252.3	6.5
130°-140°	269.5	7.0
140°-150°	252.0	6.5
150°-160°	203.3	5.2
160°-170°	131.2	3.4
170°-180°	45.2	1.2
0°-30°	993.7	25.7
0°-40°	1429.3	36.9
0°-60°	2109.0	54.5
0°-90°	2422.4	62.6
90°-120°	296.5	7.7
90°-150°	1070.3	27.6
90°-180°	1450.0	37.4
0°-180°	3872.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1826	1826	1826	1826	1826	
5°	2160	2091	1831	1480	1374	197
15°	1307	1766	1748	940	780	369
25°	650	972	1559	661	593	307
35°	470	593	1278	519	460	293
45°	334	418	923	388	341	259
55°	222	287	574	270	213	200
65°	136	171	316	162	140	133
75°	59	72	143	74	61	64
85°	16	18	30	19	18	18
90°	11	8	0	8	11	6
95°	13	11	22	11	13	11
105°	16	77	105	77	16	32
115°	208	203	198	203	208	195
125°	284	283	278	283	284	254
135°	350	350	347	350	350	270
145°	404	403	400	403	404	252
155°	440	440	441	440	440	203
165°	464	463	465	463	464	131
175°	474	474	476	474	474	45
180°	476	476	476	476	476	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4
2.5°	2024.1	2017.7	2011.3	2009.5	2007.6	2001.6	1995.6	1982.1	1968.6	1954.8	1940.9
5°	2160.3	2161.1	2161.8	2160.0	2158.1	2150.2	2142.4	2125.9	2109.4	2091.4	2073.5
7.5°	2118.4	2130.4	2142.4	2144.6	2146.9	2152.8	2158.8	2155.1	2151.4	2144.6	2137.9
10°	1934.9	1934.2	1933.4	1946.9	1960.4	2000.5	2040.5	2061.1	2081.7	2100.1	2118.4
12.5°	1635.4	1636.5	1637.7	1681.8	1726.0	1763.8	1801.7	1854.1	1906.5	1963.0	2019.6
15°	1306.7	1325.0	1343.4	1382.7	1422.0	1478.9	1535.8	1606.2	1676.6	1766.1	1855.6
17.5°	1073.1	1080.9	1088.8	1126.6	1164.4	1218.3	1272.2	1352.0	1431.7	1547.1	1662.4
20°	884.4	891.5	898.6	925.9	953.2	1004.9	1056.6	1132.6	1208.6	1322.8	1437.0
22.5°	738.3	752.2	766.0	784.4	802.7	840.2	877.6	955.1	1032.6	1136.7	1240.8
25°	650.0	656.3	662.7	678.4	694.2	730.1	766.0	817.3	868.6	972.3	1076.1
27.5°	590.1	591.9	593.8	605.4	617.0	640.2	663.5	711.0	758.6	843.9	929.3
30°	540.6	544.0	547.4	556.4	565.4	582.2	599.1	632.8	666.4	742.8	819.2
32.5°	502.5	504.3	506.2	513.7	521.2	533.5	545.9	572.5	599.1	657.5	715.9
35°	469.5	469.9	470.3	475.9	481.5	493.5	505.5	527.5	549.6	592.7	635.7
37.5°	432.1	434.7	437.3	441.4	445.5	456.0	466.5	484.5	502.5	538.0	573.6
40°	400.6	402.9	405.1	410.0	414.8	423.1	431.3	447.8	464.3	495.0	525.7
42.5°	369.2	370.7	372.2	377.0	381.9	392.0	402.1	415.2	428.3	453.8	479.2
45°	334.0	337.7	341.5	346.7	351.9	360.6	369.2	382.6	396.1	417.8	439.6
47.5°	304.8	306.6	308.5	313.0	317.5	328.0	338.5	350.4	362.4	382.6	402.9
50°	275.6	276.3	277.1	281.2	285.3	294.7	304.0	317.9	331.7	350.4	369.2
52.5°	247.9	249.7	251.6	255.7	259.8	266.2	272.6	286.8	301.0	319.4	337.7
55°	222.4	223.5	224.6	227.6	230.6	238.1	245.6	258.0	270.3	287.2	304.0
57.5°	198.4	199.9	201.4	203.7	205.9	212.7	219.4	230.3	241.1	258.0	274.8
60°	173.7	175.6	177.5	180.1	182.7	188.0	193.2	202.9	212.7	227.6	242.6
62.5°	155.8	156.1	156.5	158.7	161.0	164.7	168.5	176.3	184.2	199.2	214.2
65°	135.5	136.7	137.8	138.9	140.0	143.0	146.0	152.8	159.5	170.7	182.0
67.5°	114.6	115.7	116.8	118.7	120.6	123.2	125.8	130.3	134.8	145.3	155.8
70°	89.1	89.1	89.1	92.1	95.1	99.6	104.1	107.5	110.8	119.4	128.0
72.5°	72.6	73.0	73.4	73.8	74.1	76.8	79.4	85.0	90.6	95.8	101.1
75°	59.2	59.5	59.9	60.3	60.7	61.4	62.2	64.0	65.9	71.9	77.9
77.5°	47.2	47.5	47.9	48.3	48.7	49.4	50.2	50.9	51.7	53.9	56.2
80°	35.9	36.3	36.7	37.1	37.4	37.8	38.2	38.9	39.7	40.8	41.9
82.5°	26.2	26.2	26.2	26.2	26.2	27.0	27.7	27.7	27.7	28.5	29.2
85°	16.5	16.5	16.5	16.8	17.2	17.2	17.2	17.6	18.0	18.0	18.0
87.5°	7.5	7.1	6.7	7.1	7.5	7.5	7.5	7.9	8.2	8.2	8.2
90°	10.6	10.4	10.3	10.1	10.0	9.7	9.4	9.1	8.8	8.5	7.5
92.5°	12.0	11.9	11.9	11.8	11.7	11.4	10.8	10.3	9.7	9.2	8.5
95°	13.4	13.4	13.4	13.4	13.4	13.2	12.6	12.1	11.5	11.0	10.1
97.5°	14.5	14.4	14.3	14.3	14.2	13.8	13.2	12.6	11.9	11.3	15.3
100°	14.8	14.8	14.7	14.6	14.5	14.2	13.5	12.9	12.3	11.7	23.9
102.5°	15.2	15.0	14.9	14.7	14.6	15.8	18.4	21.0	23.6	26.1	39.8
105°	15.5	15.4	15.2	15.1	14.9	21.8	35.7	49.6	63.5	77.4	84.5
107.5°	36.8	47.0	57.3	67.6	77.9	89.1	101.2	113.3	125.4	137.5	136.3
110°	97.2	108.4	119.6	130.9	142.1	149.0	151.6	154.2	156.8	159.4	158.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	184.1	184.3	184.4	184.6	184.7	184.5	183.8	183.0	182.3	181.6	180.8
115°	207.8	207.5	207.2	206.8	206.5	206.0	205.2	204.4	203.6	202.8	202.1
117.5°	226.9	226.8	226.7	226.6	226.5	226.2	225.6	224.9	224.3	223.7	223.3
120°	246.7	246.7	246.7	246.7	246.7	246.3	245.7	245.1	244.5	243.8	243.6
122.5°	266.1	266.0	265.9	265.9	265.8	265.5	265.1	264.8	264.4	264.0	263.7
125°	284.1	284.0	283.8	283.6	283.5	283.3	283.2	283.0	282.9	282.7	282.4
127.5°	301.8	301.9	302.1	302.2	302.4	302.4	302.1	301.9	301.7	301.4	301.0
130°	318.7	318.9	319.1	319.2	319.4	319.3	319.0	318.7	318.3	318.0	317.7
132.5°	334.3	334.5	334.8	335.0	335.2	335.2	334.9	334.6	334.2	333.9	333.7
135°	350.2	350.4	350.7	350.9	351.1	351.1	350.9	350.7	350.4	350.2	349.9
137.5°	365.4	365.5	365.7	365.9	366.0	365.9	365.5	365.1	364.7	364.3	364.2
140°	378.8	379.0	379.1	379.3	379.4	379.4	379.0	378.7	378.4	378.1	377.9
142.5°	391.2	391.4	391.7	391.9	392.1	392.1	391.9	391.7	391.4	391.2	390.9
145°	403.9	403.9	403.9	403.9	403.9	403.8	403.7	403.5	403.4	403.2	403.0
147.5°	413.1	413.5	413.9	414.3	414.7	414.8	414.6	414.5	414.3	414.1	414.0
150°	423.7	423.9	424.2	424.4	424.6	424.7	424.5	424.4	424.2	424.0	423.9
152.5°	432.2	432.6	433.0	433.3	433.7	433.8	433.5	433.2	432.8	432.5	432.4
155°	439.9	440.4	440.9	441.4	441.8	441.9	441.5	441.1	440.7	440.3	440.2
157.5°	446.7	447.3	447.9	448.5	449.2	449.3	448.8	448.3	447.8	447.4	447.4
160°	453.0	453.6	454.1	454.7	455.2	455.3	454.8	454.3	453.8	453.4	453.5
162.5°	459.0	459.5	460.0	460.4	460.9	460.9	460.3	459.8	459.2	458.7	458.8
165°	463.6	464.2	464.7	465.3	465.8	465.8	465.2	464.5	463.9	463.3	463.3
167.5°	467.2	467.8	468.4	469.0	469.7	469.7	469.0	468.4	467.8	467.2	467.2
170°	470.3	471.0	471.6	472.2	472.8	472.8	472.2	471.6	471.0	470.3	470.3
172.5°	472.1	472.8	473.5	474.2	474.9	475.0	474.3	473.7	473.1	472.5	472.4
175°	473.9	474.5	475.1	475.8	476.4	476.4	475.9	475.3	474.8	474.2	474.1
177.5°	474.2	475.0	475.8	476.6	477.4	477.4	476.8	476.2	475.6	474.9	474.8
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4
2.5°	1939.1	1937.2	1919.2	1901.2	1883.7	1866.1	1852.9	1839.8	1817.8	1795.7	1781.8
5°	2059.2	2045.0	2016.6	1988.1	1945.4	1902.7	1866.8	1830.9	1785.2	1739.5	1701.3
7.5°	2126.3	2114.7	2080.2	2045.8	1989.2	1932.7	1876.5	1820.4	1753.0	1685.6	1627.9
10°	2128.1	2137.9	2109.4	2081.0	2017.3	1953.7	1877.3	1800.9	1710.3	1619.7	1545.2
12.5°	2061.5	2103.4	2097.4	2091.4	2026.7	1961.9	1869.0	1776.2	1665.0	1553.8	1460.6
15°	1936.8	2018.1	2042.0	2066.0	2012.4	1958.9	1853.3	1747.7	1617.1	1486.4	1379.3
17.5°	1776.2	1890.0	1953.3	2016.6	1977.6	1938.7	1823.0	1707.3	1560.2	1413.0	1296.6
20°	1586.0	1735.0	1834.2	1933.4	1919.2	1905.0	1785.6	1666.1	1507.4	1348.6	1222.4
22.5°	1398.0	1555.3	1692.3	1829.4	1844.0	1858.6	1738.0	1617.4	1443.7	1270.0	1141.6
25°	1235.9	1395.8	1559.0	1722.3	1755.2	1788.2	1673.6	1559.0	1378.9	1198.9	1071.2
27.5°	1081.3	1233.3	1413.0	1592.7	1652.6	1712.5	1607.7	1502.9	1315.3	1127.7	1000.4
30°	955.1	1091.0	1274.5	1457.9	1541.4	1624.9	1528.7	1432.5	1246.4	1060.3	935.6
32.5°	837.6	959.2	1143.4	1327.7	1424.6	1521.6	1438.5	1355.4	1176.4	997.4	874.2
35°	744.7	853.7	1025.5	1197.4	1305.9	1414.5	1346.4	1278.2	1103.4	928.5	812.1
37.5°	664.9	756.3	917.7	1079.0	1194.4	1309.7	1252.8	1195.9	1031.5	867.1	757.1
40°	599.1	672.4	822.6	972.7	1085.8	1198.9	1150.2	1101.5	954.4	807.2	704.3
42.5°	542.5	605.8	740.6	875.4	979.1	1082.8	1050.6	1018.4	885.1	751.8	656.3
45°	492.7	545.9	664.6	783.3	878.7	974.2	948.8	923.3	808.3	693.4	605.8
47.5°	448.5	494.2	600.2	706.1	791.9	877.6	854.0	830.4	735.3	640.2	560.5
50°	408.1	447.0	535.4	623.8	700.9	778.0	758.6	739.1	660.5	581.8	512.9
52.5°	369.9	402.1	481.5	560.9	623.0	685.2	670.2	655.2	594.6	533.9	471.4
55°	333.6	363.2	430.2	497.2	550.4	603.5	588.6	573.6	526.4	479.2	424.2
57.5°	300.7	326.5	380.8	435.1	477.4	519.7	512.6	505.5	466.1	426.8	381.5
60°	265.8	289.0	335.8	382.6	416.7	450.8	442.6	434.3	406.2	378.2	339.2
62.5°	234.8	255.3	292.8	330.2	357.9	385.6	379.7	373.7	352.3	331.0	298.8
65°	202.2	222.4	252.7	283.1	304.8	326.5	321.2	316.0	299.9	283.8	258.0
67.5°	172.6	189.5	215.7	241.9	256.5	271.1	268.1	265.1	252.7	240.4	220.2
70°	142.6	157.3	179.0	200.7	210.8	220.9	222.0	223.1	211.9	200.7	185.7
72.5°	112.7	124.3	144.5	164.7	172.6	180.5	180.1	179.7	173.0	166.2	152.8
75°	86.5	95.1	110.8	126.6	133.3	140.0	141.5	143.0	136.7	130.3	122.8
77.5°	62.2	68.1	80.1	92.1	99.6	107.1	107.8	108.6	105.6	102.6	95.5
80°	43.8	45.7	53.2	60.7	68.5	76.4	77.5	78.6	75.6	72.6	68.1
82.5°	30.3	31.5	34.1	36.7	43.1	49.4	50.9	52.4	50.9	49.4	44.6
85°	18.3	18.7	19.8	21.0	24.0	27.0	28.5	30.0	29.2	28.5	25.8
87.5°	8.2	8.2	8.6	9.0	9.7	10.5	12.4	14.2	13.1	12.0	10.9
90°	6.4	5.4	4.4	3.5	2.7	1.9	1.1	0.4	1.1	1.9	2.7
92.5°	7.8	7.1	6.4	6.2	6.7	7.2	7.7	8.1	7.7	7.2	6.7
95°	9.2	8.4	7.5	8.7	11.9	15.1	18.3	21.6	18.3	15.1	11.9
97.5°	19.3	23.3	27.3	30.4	32.6	34.8	37.0	39.2	37.0	34.8	32.6
100°	36.2	48.4	60.7	66.0	64.4	62.9	61.3	59.7	61.3	62.9	64.4
102.5°	53.5	67.1	80.8	87.1	86.1	85.1	84.1	83.0	84.1	85.1	86.1
105°	91.5	98.6	105.7	108.8	107.9	107.0	106.2	105.3	106.2	107.0	107.9
107.5°	135.1	133.9	132.7	131.8	131.1	130.4	129.7	129.0	129.7	130.4	131.1
110°	157.6	156.8	155.9	155.2	154.5	153.9	153.3	152.7	153.3	153.9	154.5





TEST NUMBER: P832227

CATALOG NUMBER: S123RDIP-S560D365U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	179.9	179.0	178.2	177.5	176.9	176.4	175.8	175.3	175.8	176.4	176.9
115°	201.4	200.7	200.0	199.4	198.9	198.5	198.0	197.5	198.0	198.5	198.9
117.5°	222.9	222.5	222.1	221.6	221.1	220.5	220.0	219.4	220.0	220.5	221.1
120°	243.4	243.1	242.9	242.4	241.7	241.0	240.3	239.6	240.3	241.0	241.7
122.5°	263.3	263.0	262.7	262.3	261.7	261.2	260.6	260.1	260.6	261.2	261.7
125°	282.1	281.8	281.4	281.0	280.3	279.7	279.1	278.5	279.1	279.7	280.3
127.5°	300.6	300.2	299.9	299.3	298.7	298.1	297.5	296.8	297.5	298.1	298.7
130°	317.4	317.1	316.8	316.3	315.7	315.0	314.4	313.8	314.4	315.0	315.7
132.5°	333.5	333.2	333.0	332.6	331.9	331.3	330.7	330.0	330.7	331.3	331.9
135°	349.6	349.2	348.9	348.5	348.1	347.6	347.1	346.7	347.1	347.6	348.1
137.5°	364.0	363.9	363.7	363.3	362.7	362.0	361.4	360.8	361.4	362.0	362.7
140°	377.6	377.4	377.2	376.8	376.3	375.9	375.4	374.9	375.4	375.9	376.3
142.5°	390.7	390.5	390.2	389.9	389.4	388.9	388.5	388.0	388.5	388.9	389.4
145°	402.9	402.7	402.6	402.2	401.7	401.1	400.6	400.0	400.6	401.1	401.7
147.5°	413.8	413.7	413.5	413.2	412.9	412.5	412.1	411.7	412.1	412.5	412.9
150°	423.7	423.6	423.4	423.2	423.0	422.7	422.5	422.3	422.5	422.7	423.0
152.5°	432.4	432.3	432.2	432.1	432.1	432.0	431.9	431.8	431.9	432.0	432.1
155°	440.1	440.1	440.0	440.0	440.2	440.3	440.5	440.7	440.5	440.3	440.2
157.5°	447.5	447.6	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7	447.7
160°	453.5	453.6	453.7	453.8	453.8	453.9	454.0	454.1	454.0	453.9	453.8
162.5°	458.8	458.9	459.0	459.1	459.4	459.6	459.9	460.1	459.9	459.6	459.4
165°	463.4	463.5	463.6	463.7	464.0	464.2	464.4	464.7	464.4	464.2	464.0
167.5°	467.2	467.2	467.2	467.3	467.6	467.9	468.3	468.6	468.3	467.9	467.6
170°	470.3	470.3	470.3	470.5	470.8	471.1	471.4	471.7	471.4	471.1	470.8
172.5°	472.3	472.2	472.1	472.3	472.7	473.1	473.5	473.9	473.5	473.1	472.7
175°	474.1	474.0	473.9	474.1	474.5	474.8	475.2	475.6	475.2	474.8	474.5
177.5°	474.8	474.7	474.6	474.8	475.2	475.6	475.9	476.3	475.9	475.6	475.2
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6



TEST NUMBER: P832227

CATALOG NUMBER: S123RDIP-S560D365U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4	1826.4
2.5°	1768.0	1746.6	1725.3	1709.9	1694.6	1675.5	1656.4	1655.6	1654.9	1640.7	1626.4
5°	1663.1	1626.1	1589.0	1552.7	1516.4	1480.0	1443.7	1435.5	1427.2	1414.9	1402.5
7.5°	1570.3	1511.1	1452.0	1405.5	1359.1	1322.8	1286.5	1261.8	1237.0	1218.0	1198.9
10°	1470.7	1397.3	1323.9	1267.7	1211.6	1172.3	1133.0	1104.5	1076.1	1062.6	1049.1
12.5°	1367.3	1287.6	1207.8	1152.8	1097.8	1050.6	1003.4	977.6	951.7	933.0	914.3
15°	1272.2	1186.5	1100.8	1042.4	983.9	939.8	895.6	869.8	843.9	825.2	806.5
17.5°	1180.1	1093.6	1007.2	948.0	888.8	848.8	808.7	783.6	758.6	746.9	735.3
20°	1096.3	1009.0	921.8	866.0	810.2	770.9	731.6	718.1	704.6	693.8	682.9
22.5°	1013.1	929.3	845.4	791.9	738.3	709.9	681.4	670.6	659.7	651.5	643.2
25°	943.5	860.0	776.5	729.7	682.9	660.8	638.7	631.6	624.5	616.3	608.0
27.5°	873.1	793.7	714.4	676.9	639.5	621.5	603.5	594.6	585.6	578.8	572.1
30°	811.0	737.6	664.2	633.1	602.0	586.3	570.6	560.9	551.1	544.8	538.4
32.5°	751.1	685.9	620.8	594.2	567.6	552.3	536.9	527.5	518.2	510.7	503.2
35°	695.7	639.1	582.6	558.2	533.9	518.6	503.2	493.8	484.5	477.0	469.5
37.5°	647.0	595.7	544.4	521.6	498.7	485.2	471.8	462.0	452.3	444.4	436.6
40°	601.3	556.0	510.7	488.6	466.5	451.9	437.3	428.7	420.1	413.0	405.9
42.5°	560.9	519.3	477.7	456.0	434.3	420.5	406.6	396.5	386.4	382.3	378.2
45°	518.2	481.5	444.8	423.8	402.9	388.3	373.7	365.0	356.4	352.7	348.9
47.5°	480.7	446.7	412.6	392.0	371.4	358.3	345.2	338.5	331.7	326.5	321.2
50°	444.0	411.1	378.2	358.3	338.5	327.2	316.0	307.8	299.5	295.8	292.0
52.5°	408.9	378.9	348.9	328.7	308.5	297.7	286.8	279.7	272.6	264.7	256.8
55°	369.2	343.0	316.7	298.8	280.8	269.6	258.3	250.1	241.9	233.6	225.4
57.5°	336.2	310.4	284.6	268.5	252.4	241.5	230.6	221.6	212.7	205.9	199.2
60°	300.3	277.8	255.3	239.6	223.9	213.4	202.9	194.3	185.7	182.3	179.0
62.5°	266.6	245.6	224.6	210.8	196.9	186.8	176.7	171.1	165.5	163.2	161.0
65°	232.1	214.2	196.2	183.5	170.7	162.1	153.5	150.9	148.3	146.4	144.5
67.5°	199.9	184.6	169.2	158.0	146.8	140.8	134.8	131.8	128.8	126.6	124.3
70°	170.7	157.3	143.8	134.0	124.3	118.7	113.1	110.5	107.8	103.7	99.6
72.5°	139.3	128.8	118.3	110.8	103.3	98.5	93.6	88.4	83.1	79.4	75.6
75°	115.3	104.8	94.4	87.2	80.1	74.5	68.9	67.0	65.1	64.0	62.9
77.5°	88.4	79.4	70.4	64.8	59.2	56.5	53.9	52.8	51.7	51.3	50.9
80°	63.6	56.2	48.7	45.7	42.7	41.9	41.2	40.4	39.7	39.3	38.9
82.5°	39.7	35.9	32.2	31.5	30.7	30.3	30.0	29.6	29.2	28.8	28.5
85°	23.2	21.7	20.2	19.8	19.5	19.1	18.7	18.7	18.7	18.7	18.7
87.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.4	9.0
90°	3.5	4.4	5.4	6.4	7.5	8.5	8.8	9.1	9.4	9.7	10.0
92.5°	6.2	6.4	7.1	7.8	8.5	9.2	9.7	10.3	10.8	11.4	11.7
95°	8.7	7.5	8.4	9.2	10.1	11.0	11.5	12.1	12.6	13.2	13.4
97.5°	30.4	27.3	23.3	19.3	15.3	11.3	11.9	12.6	13.2	13.8	14.2
100°	66.0	60.7	48.4	36.2	23.9	11.7	12.3	12.9	13.5	14.2	14.5
102.5°	87.1	80.8	67.1	53.5	39.8	26.1	23.6	21.0	18.4	15.8	14.6
105°	108.8	105.7	98.6	91.5	84.5	77.4	63.5	49.6	35.7	21.8	14.9
107.5°	131.8	132.7	133.9	135.1	136.3	137.5	125.4	113.3	101.2	89.1	77.9
110°	155.2	155.9	156.8	157.6	158.5	159.4	156.8	154.2	151.6	149.0	142.1



TEST NUMBER: P832227

CATALOG NUMBER: S123RDIP-S560D365U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	177.5	178.2	179.0	179.9	180.8	181.6	182.3	183.0	183.8	184.5	184.7
115°	199.4	200.0	200.7	201.4	202.1	202.8	203.6	204.4	205.2	206.0	206.5
117.5°	221.6	222.1	222.5	222.9	223.3	223.7	224.3	224.9	225.6	226.2	226.5
120°	242.4	242.9	243.1	243.4	243.6	243.8	244.5	245.1	245.7	246.3	246.7
122.5°	262.3	262.7	263.0	263.3	263.7	264.0	264.4	264.8	265.1	265.5	265.8
125°	281.0	281.4	281.8	282.1	282.4	282.7	282.9	283.0	283.2	283.3	283.5
127.5°	299.3	299.9	300.2	300.6	301.0	301.4	301.7	301.9	302.1	302.4	302.4
130°	316.3	316.8	317.1	317.4	317.7	318.0	318.3	318.7	319.0	319.3	319.4
132.5°	332.6	333.0	333.2	333.5	333.7	333.9	334.2	334.6	334.9	335.2	335.2
135°	348.5	348.9	349.2	349.6	349.9	350.2	350.4	350.7	350.9	351.1	351.1
137.5°	363.3	363.7	363.9	364.0	364.2	364.3	364.7	365.1	365.5	365.9	366.0
140°	376.8	377.2	377.4	377.6	377.9	378.1	378.4	378.7	379.0	379.4	379.4
142.5°	389.9	390.2	390.5	390.7	390.9	391.2	391.4	391.7	391.9	392.1	392.1
145°	402.2	402.6	402.7	402.9	403.0	403.2	403.4	403.5	403.7	403.8	403.9
147.5°	413.2	413.5	413.7	413.8	414.0	414.1	414.3	414.5	414.6	414.8	414.7
150°	423.2	423.4	423.6	423.7	423.9	424.0	424.2	424.4	424.5	424.7	424.6
152.5°	432.1	432.2	432.3	432.4	432.4	432.5	432.8	433.2	433.5	433.8	433.7
155°	440.0	440.0	440.1	440.1	440.2	440.3	440.7	441.1	441.5	441.9	441.8
157.5°	447.7	447.7	447.6	447.5	447.4	447.4	447.8	448.3	448.8	449.3	449.2
160°	453.8	453.7	453.6	453.5	453.5	453.4	453.8	454.3	454.8	455.3	455.2
162.5°	459.1	459.0	458.9	458.8	458.8	458.7	459.2	459.8	460.3	460.9	460.9
165°	463.7	463.6	463.5	463.4	463.3	463.3	463.9	464.5	465.2	465.8	465.8
167.5°	467.3	467.2	467.2	467.2	467.2	467.2	467.8	468.4	469.0	469.7	469.7
170°	470.5	470.3	470.3	470.3	470.3	470.3	471.0	471.6	472.2	472.8	472.8
172.5°	472.3	472.1	472.2	472.3	472.4	472.5	473.1	473.7	474.3	475.0	474.9
175°	474.1	473.9	474.0	474.1	474.1	474.2	474.8	475.3	475.9	476.4	476.4
177.5°	474.8	474.6	474.7	474.8	474.8	474.9	475.6	476.2	476.8	477.4	477.4
180°	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6	475.6

TEST NUMBER: P832227

CATALOG NUMBER: S123RDIP-S560D365U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1826.4	1826.4	1826.4	1826.4
2.5°	1622.7	1618.9	1617.4	1615.9
5°	1390.9	1379.3	1376.7	1374.1
7.5°	1194.0	1189.1	1173.0	1156.9
10°	1034.1	1019.1	1012.4	1005.7
12.5°	900.5	886.6	884.4	882.1
15°	796.7	787.0	783.6	780.3
17.5°	728.6	721.9	717.7	713.6
20°	678.1	673.2	670.2	667.2
22.5°	639.5	635.7	633.5	631.3
25°	602.4	596.8	594.9	593.1
27.5°	567.2	562.4	560.5	558.6
30°	534.3	530.2	527.5	524.9
32.5°	498.3	493.5	492.0	490.5
35°	466.5	463.5	462.0	460.5
37.5°	432.8	429.1	426.8	424.6
40°	404.0	402.1	401.0	399.9
42.5°	374.8	371.4	371.0	370.7
45°	345.6	342.2	341.5	340.7
47.5°	318.2	315.3	314.9	314.5
50°	287.9	283.8	280.8	277.8
52.5°	253.1	249.4	246.7	244.1
55°	221.3	217.2	214.9	212.7
57.5°	197.3	195.4	194.3	193.2
60°	177.8	176.7	176.0	175.2
62.5°	159.9	158.7	158.7	158.7
65°	143.4	142.3	141.2	140.0
67.5°	122.1	119.8	119.4	119.1
70°	96.2	92.9	92.5	92.1
72.5°	75.3	74.9	74.1	73.4
75°	62.2	61.4	61.4	61.4
77.5°	50.2	49.4	49.4	49.4
80°	38.6	38.2	38.6	38.9
82.5°	28.5	28.5	28.1	27.7
85°	18.3	18.0	18.0	18.0
87.5°	9.0	9.0	9.0	9.0
90°	10.1	10.3	10.4	10.6
92.5°	11.8	11.9	11.9	12.0
95°	13.4	13.4	13.4	13.4
97.5°	14.3	14.3	14.4	14.5
100°	14.6	14.7	14.8	14.8
102.5°	14.7	14.9	15.0	15.2
105°	15.1	15.2	15.4	15.5
107.5°	67.6	57.3	47.0	36.8
110°	130.9	119.6	108.4	97.2



TEST NUMBER: P832227

CATALOG NUMBER: S123RDIP-S560D365U835-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	184.6	184.4	184.3	184.1
115°	206.8	207.2	207.5	207.8
117.5°	226.6	226.7	226.8	226.9
120°	246.7	246.7	246.7	246.7
122.5°	265.9	265.9	266.0	266.1
125°	283.6	283.8	284.0	284.1
127.5°	302.2	302.1	301.9	301.8
130°	319.2	319.1	318.9	318.7
132.5°	335.0	334.8	334.5	334.3
135°	350.9	350.7	350.4	350.2
137.5°	365.9	365.7	365.5	365.4
140°	379.3	379.1	379.0	378.8
142.5°	391.9	391.7	391.4	391.2
145°	403.9	403.9	403.9	403.9
147.5°	414.3	413.9	413.5	413.1
150°	424.4	424.2	423.9	423.7
152.5°	433.3	433.0	432.6	432.2
155°	441.4	440.9	440.4	439.9
157.5°	448.5	447.9	447.3	446.7
160°	454.7	454.1	453.6	453.0
162.5°	460.4	460.0	459.5	459.0
165°	465.3	464.7	464.2	463.6
167.5°	469.0	468.4	467.8	467.2
170°	472.2	471.6	471.0	470.3
172.5°	474.2	473.5	472.8	472.1
175°	475.8	475.1	474.5	473.9
177.5°	476.6	475.8	475.0	474.2
180°	475.6	475.6	475.6	475.6



TEST NUMBER: P832227

CATALOG NUMBER: S123RDIP-S560D365U835-4F0-1E-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	12.20	13.12	13.06	13.98	15.07	16.87	17.78	17.72	18.65	19.73
	3H	13.43	14.25	14.30	15.12	16.23	18.37	19.19	19.24	20.06	21.18
	4H	13.82	14.59	14.70	15.47	16.59	18.87	19.63	19.75	20.52	21.64
	6H	14.10	14.81	15.00	15.70	16.83	19.18	19.89	20.08	20.78	21.91
	8H	14.19	14.86	15.09	15.77	16.90	19.26	19.94	20.16	20.84	21.98
	12H	14.24	14.89	15.15	15.79	16.94	19.30	19.94	20.20	20.84	22.00
4H	2H	12.93	13.70	13.82	14.59	15.71	16.87	17.64	17.76	18.52	19.65
	3H	14.31	14.95	15.21	15.86	17.00	18.54	19.18	19.43	20.09	21.23
	4H	14.77	15.35	15.68	16.26	17.43	19.15	19.73	20.05	20.64	21.80
	6H	15.14	15.64	16.07	16.58	17.74	19.59	20.09	20.51	21.02	22.19
	8H	15.27	15.74	16.19	16.66	17.84	19.72	20.19	20.65	21.12	22.29
	12H	15.35	15.77	16.29	16.71	17.90	19.79	20.21	20.73	21.15	22.34
8H	4H	15.09	15.56	16.02	16.49	17.66	19.12	19.59	20.04	20.51	21.69
	6H	15.56	15.94	16.51	16.91	18.09	19.62	20.00	20.57	20.97	22.15
	8H	15.75	16.09	16.71	17.05	18.25	19.80	20.14	20.76	21.10	22.30
	12H	15.89	16.19	16.86	17.14	18.39	19.92	20.22	20.89	21.18	22.42
12H	4H	15.11	15.52	16.05	16.47	17.65	19.07	19.49	20.02	20.44	21.62
	6H	15.62	15.96	16.58	16.92	18.11	19.59	19.93	20.55	20.89	22.09
	8H	15.84	16.14	16.80	17.09	18.33	19.79	20.09	20.75	21.04	22.29