

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: P832230

Luminaire Tested: S123RDIP-S560D365U840-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832230  
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-S560D365U840-4F0-1E-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: -

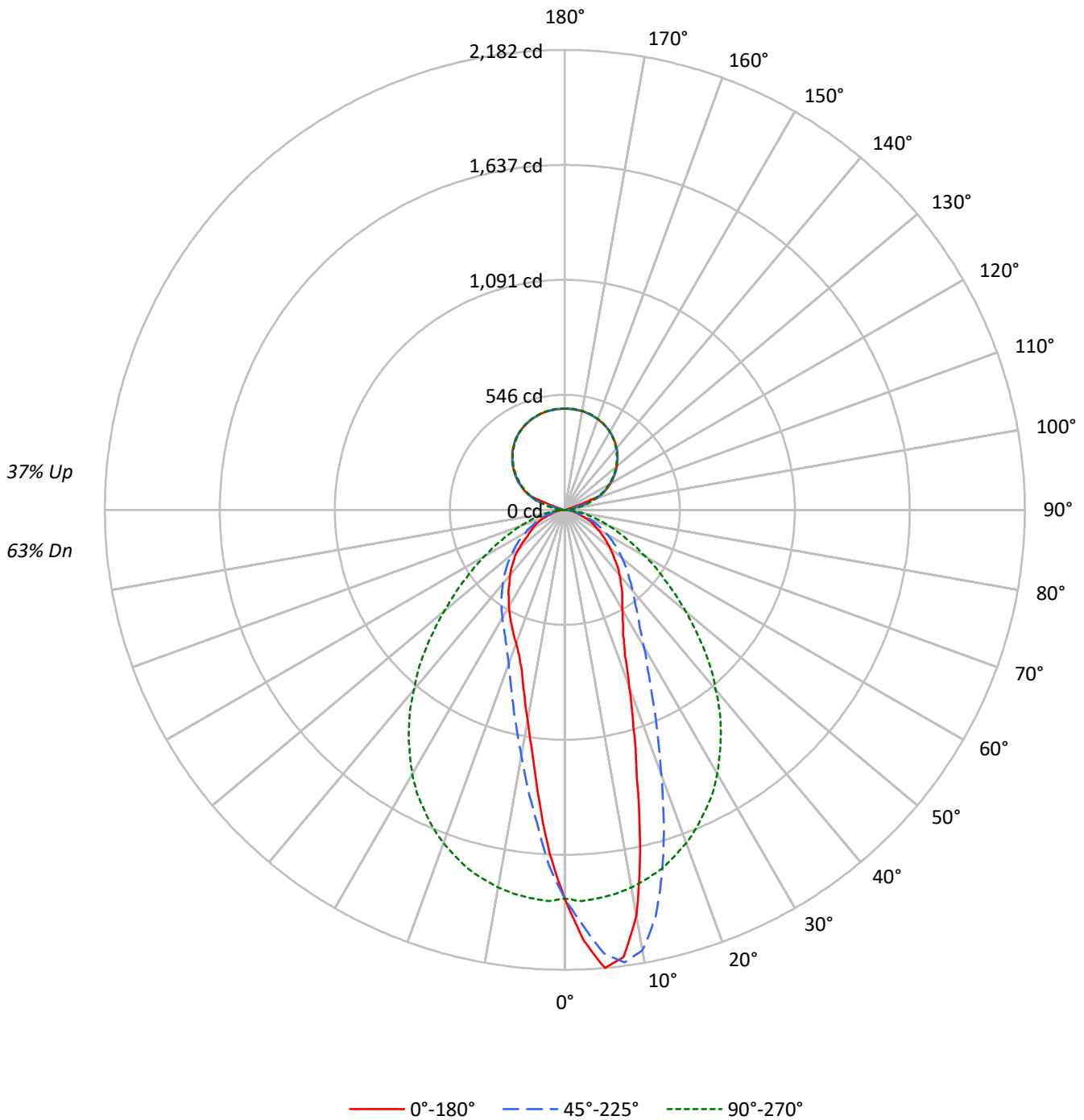
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3910.6 lumens  
Efficiency: N/A  
Efficacy: 132.1 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-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°	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	4.3
10°-20°	389.0	9.9
20°-30°	446.3	11.4
30°-40°	439.9	11.2
40°-50°	388.0	9.9
50°-60°	298.5	7.6
60°-70°	196.2	5.0
70°-80°	95.3	2.4
80°-90°	25.0	0.6
90°-100°	16.9	0.4
100°-110°	81.9	2.1
110°-120°	200.7	5.1
120°-130°	254.8	6.5
130°-140°	272.2	7.0
140°-150°	254.5	6.5
150°-160°	205.3	5.2
160°-170°	132.5	3.4
170°-180°	45.7	1.2
0°-30°	1003.5	25.7
0°-40°	1443.4	36.9
0°-60°	2129.8	54.5
0°-90°	2446.3	62.6
90°-120°	299.5	7.7
90°-150°	1080.9	27.6
90°-180°	1464.0	37.4
0°-180°	3910.6	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°	11	9	0	9	11	6
95°	14	11	22	11	14	11
105°	16	78	106	78	16	33
115°	210	205	200	205	210	197
125°	287	286	281	286	287	256
135°	354	354	350	354	354	273
145°	408	407	404	407	408	255
155°	444	445	445	445	444	205
165°	468	468	469	468	468	132
175°	478	479	480	479	478	46
180°	480	480	480	480	480	



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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°	10.7	10.5	10.4	10.2	10.1	9.8	9.5	9.2	8.9	8.6	7.5
92.5°	12.1	12.1	12.0	11.9	11.8	11.5	10.9	10.4	9.8	9.3	8.6
95°	13.6	13.6	13.6	13.6	13.6	13.3	12.7	12.2	11.6	11.1	10.2
97.5°	14.6	14.6	14.5	14.4	14.3	14.0	13.3	12.7	12.1	11.4	15.5
100°	15.0	14.9	14.8	14.8	14.7	14.3	13.7	13.0	12.4	11.8	24.1
102.5°	15.3	15.2	15.0	14.9	14.7	15.9	18.6	21.2	23.8	26.4	40.2
105°	15.7	15.5	15.4	15.2	15.1	22.0	36.0	50.1	64.1	78.2	85.3
107.5°	37.1	47.5	57.9	68.3	78.7	90.0	102.2	114.4	126.6	138.8	137.6
110°	98.1	109.5	120.8	132.2	143.5	150.5	153.1	155.7	158.3	160.9	160.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	185.9	186.1	186.2	186.4	186.6	186.3	185.6	184.9	184.1	183.4	182.6
115°	209.8	209.5	209.2	208.9	208.6	208.0	207.2	206.4	205.6	204.8	204.1
117.5°	229.1	229.0	228.9	228.9	228.8	228.4	227.8	227.2	226.5	225.9	225.5
120°	249.1	249.1	249.1	249.1	249.1	248.8	248.1	247.5	246.9	246.2	246.0
122.5°	268.7	268.6	268.6	268.5	268.4	268.2	267.8	267.4	267.0	266.6	266.3
125°	286.9	286.8	286.6	286.4	286.3	286.1	286.0	285.8	285.6	285.5	285.2
127.5°	304.8	304.9	305.1	305.2	305.4	305.3	305.1	304.9	304.6	304.4	304.0
130°	321.9	322.0	322.2	322.4	322.5	322.4	322.1	321.8	321.5	321.2	320.9
132.5°	337.6	337.8	338.1	338.3	338.5	338.5	338.2	337.9	337.5	337.2	337.0
135°	353.6	353.9	354.1	354.4	354.6	354.6	354.4	354.1	353.9	353.6	353.3
137.5°	369.0	369.1	369.3	369.5	369.6	369.5	369.1	368.7	368.3	367.9	367.8
140°	382.5	382.7	382.9	383.0	383.2	383.1	382.8	382.5	382.2	381.8	381.6
142.5°	395.0	395.3	395.5	395.8	396.0	396.0	395.8	395.5	395.3	395.0	394.8
145°	407.9	407.9	407.9	407.9	407.9	407.8	407.6	407.5	407.3	407.2	407.0
147.5°	417.2	417.6	418.0	418.4	418.8	418.9	418.7	418.6	418.4	418.2	418.1
150°	427.9	428.1	428.3	428.6	428.8	428.9	428.7	428.5	428.4	428.2	428.1
152.5°	436.4	436.8	437.2	437.6	438.0	438.1	437.7	437.4	437.1	436.8	436.7
155°	444.3	444.8	445.2	445.7	446.2	446.2	445.8	445.4	445.0	444.6	444.6
157.5°	451.1	451.7	452.3	453.0	453.6	453.7	453.2	452.7	452.3	451.8	451.9
160°	457.5	458.0	458.6	459.2	459.7	459.7	459.3	458.8	458.3	457.8	457.9
162.5°	463.6	464.0	464.5	465.0	465.5	465.4	464.9	464.3	463.8	463.2	463.3
165°	468.2	468.7	469.3	469.9	470.4	470.4	469.7	469.1	468.5	467.8	467.9
167.5°	471.8	472.4	473.0	473.7	474.3	474.3	473.7	473.0	472.4	471.8	471.8
170°	475.0	475.6	476.2	476.9	477.5	477.5	476.9	476.2	475.6	475.0	475.0
172.5°	476.8	477.5	478.2	478.9	479.6	479.7	479.0	478.4	477.8	477.1	477.0
175°	478.5	479.2	479.8	480.4	481.1	481.1	480.6	480.0	479.5	478.9	478.8
177.5°	478.9	479.7	480.5	481.3	482.1	482.2	481.5	480.9	480.2	479.6	479.5
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



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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°	6.5	5.5	4.4	3.5	2.7	1.9	1.1	0.4	1.1	1.9	2.7
92.5°	7.9	7.1	6.4	6.3	6.8	7.3	7.7	8.2	7.7	7.3	6.8
95°	9.3	8.4	7.6	8.8	12.0	15.3	18.5	21.8	18.5	15.3	12.0
97.5°	19.5	23.6	27.6	30.7	32.9	35.2	37.4	39.6	37.4	35.2	32.9
100°	36.5	48.9	61.3	66.7	65.1	63.5	61.9	60.3	61.9	63.5	65.1
102.5°	54.0	67.8	81.6	88.0	87.0	85.9	84.9	83.9	84.9	85.9	87.0
105°	92.4	99.6	106.7	109.8	109.0	108.1	107.2	106.3	107.2	108.1	109.0
107.5°	136.4	135.2	134.1	133.1	132.4	131.7	131.0	130.3	131.0	131.7	132.4
110°	159.2	158.3	157.5	156.7	156.1	155.4	154.8	154.2	154.8	155.4	156.1





TEST NUMBER: P832230

CATALOG NUMBER: S123RDIP-S560D365U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	181.7	180.8	179.9	179.2	178.7	178.1	177.6	177.0	177.6	178.1	178.7
115°	203.4	202.7	202.0	201.4	200.9	200.4	200.0	199.5	200.0	200.4	200.9
117.5°	225.1	224.7	224.3	223.8	223.3	222.7	222.2	221.6	222.2	222.7	223.3
120°	245.8	245.5	245.3	244.8	244.1	243.4	242.7	241.9	242.7	243.4	244.1
122.5°	265.9	265.6	265.3	264.9	264.3	263.8	263.2	262.6	263.2	263.8	264.3
125°	284.9	284.5	284.2	283.7	283.1	282.5	281.8	281.2	281.8	282.5	283.1
127.5°	303.6	303.2	302.8	302.3	301.7	301.0	300.4	299.8	300.4	301.0	301.7
130°	320.5	320.2	319.9	319.4	318.8	318.2	317.5	316.9	317.5	318.2	318.8
132.5°	336.8	336.5	336.3	335.8	335.2	334.6	333.9	333.3	333.9	334.6	335.2
135°	353.0	352.7	352.4	352.0	351.5	351.0	350.6	350.1	350.6	351.0	351.5
137.5°	367.6	367.4	367.3	366.9	366.3	365.6	365.0	364.3	365.0	365.6	366.3
140°	381.4	381.1	380.9	380.5	380.1	379.6	379.1	378.6	379.1	379.6	380.1
142.5°	394.6	394.3	394.1	393.7	393.3	392.8	392.3	391.8	392.3	392.8	393.3
145°	406.9	406.7	406.5	406.2	405.6	405.1	404.5	404.0	404.5	405.1	405.6
147.5°	417.9	417.8	417.6	417.3	416.9	416.5	416.1	415.7	416.1	416.5	416.9
150°	427.9	427.8	427.6	427.4	427.2	426.9	426.7	426.4	426.7	426.9	427.2
152.5°	436.6	436.6	436.5	436.4	436.3	436.2	436.2	436.1	436.2	436.2	436.3
155°	444.5	444.4	444.3	444.4	444.5	444.7	444.8	445.0	444.8	444.7	444.5
157.5°	451.9	452.0	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1
160°	458.0	458.1	458.2	458.2	458.3	458.4	458.5	458.6	458.5	458.4	458.3
162.5°	463.4	463.4	463.5	463.7	463.9	464.2	464.4	464.6	464.4	464.2	463.9
165°	468.0	468.1	468.2	468.3	468.6	468.8	469.0	469.3	469.0	468.8	468.6
167.5°	471.8	471.8	471.8	471.9	472.2	472.6	472.9	473.2	472.9	472.6	472.2
170°	475.0	475.0	475.0	475.1	475.5	475.8	476.1	476.4	476.1	475.8	475.5
172.5°	477.0	476.9	476.8	477.0	477.4	477.8	478.1	478.5	478.1	477.8	477.4
175°	478.7	478.7	478.6	478.7	479.1	479.5	479.9	480.3	479.9	479.5	479.1
177.5°	479.5	479.4	479.3	479.5	479.9	480.2	480.6	481.0	480.6	480.2	479.9
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



TEST NUMBER: P832230

CATALOG NUMBER: S123RDIP-S560D365U840-4F0-1E-UDD-G

**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°	3.5	4.4	5.5	6.5	7.5	8.6	8.9	9.2	9.5	9.8	10.1
92.5°	6.3	6.4	7.1	7.9	8.6	9.3	9.8	10.4	10.9	11.5	11.8
95°	8.8	7.6	8.4	9.3	10.2	11.1	11.6	12.2	12.7	13.3	13.6
97.5°	30.7	27.6	23.6	19.5	15.5	11.4	12.1	12.7	13.3	14.0	14.3
100°	66.7	61.3	48.9	36.5	24.1	11.8	12.4	13.0	13.7	14.3	14.7
102.5°	88.0	81.6	67.8	54.0	40.2	26.4	23.8	21.2	18.6	15.9	14.7
105°	109.8	106.7	99.6	92.4	85.3	78.2	64.1	50.1	36.0	22.0	15.1
107.5°	133.1	134.1	135.2	136.4	137.6	138.8	126.6	114.4	102.2	90.0	78.7
110°	156.7	157.5	158.3	159.2	160.1	160.9	158.3	155.7	153.1	150.5	143.5



TEST NUMBER: P832230

CATALOG NUMBER: S123RDIP-S560D365U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	179.2	179.9	180.8	181.7	182.6	183.4	184.1	184.9	185.6	186.3	186.6
115°	201.4	202.0	202.7	203.4	204.1	204.8	205.6	206.4	207.2	208.0	208.6
117.5°	223.8	224.3	224.7	225.1	225.5	225.9	226.5	227.2	227.8	228.4	228.8
120°	244.8	245.3	245.5	245.8	246.0	246.2	246.9	247.5	248.1	248.8	249.1
122.5°	264.9	265.3	265.6	265.9	266.3	266.6	267.0	267.4	267.8	268.2	268.4
125°	283.7	284.2	284.5	284.9	285.2	285.5	285.6	285.8	286.0	286.1	286.3
127.5°	302.3	302.8	303.2	303.6	304.0	304.4	304.6	304.9	305.1	305.3	305.4
130°	319.4	319.9	320.2	320.5	320.9	321.2	321.5	321.8	322.1	322.4	322.5
132.5°	335.8	336.3	336.5	336.8	337.0	337.2	337.5	337.9	338.2	338.5	338.5
135°	352.0	352.4	352.7	353.0	353.3	353.6	353.9	354.1	354.4	354.6	354.6
137.5°	366.9	367.3	367.4	367.6	367.8	367.9	368.3	368.7	369.1	369.5	369.6
140°	380.5	380.9	381.1	381.4	381.6	381.8	382.2	382.5	382.8	383.1	383.2
142.5°	393.7	394.1	394.3	394.6	394.8	395.0	395.3	395.5	395.8	396.0	396.0
145°	406.2	406.5	406.7	406.9	407.0	407.2	407.3	407.5	407.6	407.8	407.9
147.5°	417.3	417.6	417.8	417.9	418.1	418.2	418.4	418.6	418.7	418.9	418.8
150°	427.4	427.6	427.8	427.9	428.1	428.2	428.4	428.5	428.7	428.9	428.8
152.5°	436.4	436.5	436.6	436.6	436.7	436.8	437.1	437.4	437.7	438.1	438.0
155°	444.4	444.3	444.4	444.5	444.6	444.6	445.0	445.4	445.8	446.2	446.2
157.5°	452.1	452.1	452.0	451.9	451.9	451.8	452.3	452.7	453.2	453.7	453.6
160°	458.2	458.2	458.1	458.0	457.9	457.8	458.3	458.8	459.3	459.7	459.7
162.5°	463.7	463.5	463.4	463.4	463.3	463.2	463.8	464.3	464.9	465.4	465.5
165°	468.3	468.2	468.1	468.0	467.9	467.8	468.5	469.1	469.7	470.4	470.4
167.5°	471.9	471.8	471.8	471.8	471.8	471.8	472.4	473.0	473.7	474.3	474.3
170°	475.1	475.0	475.0	475.0	475.0	475.0	475.6	476.2	476.9	477.5	477.5
172.5°	477.0	476.8	476.9	477.0	477.0	477.1	477.8	478.4	479.0	479.7	479.6
175°	478.7	478.6	478.7	478.7	478.8	478.9	479.5	480.0	480.6	481.1	481.1
177.5°	479.5	479.3	479.4	479.5	479.5	479.6	480.2	480.9	481.5	482.2	482.1
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



TEST NUMBER: P832230

CATALOG NUMBER: S123RDIP-S560D365U840-4F0-1E-UDD-G

**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°	10.2	10.4	10.5	10.7
92.5°	11.9	12.0	12.1	12.1
95°	13.6	13.6	13.6	13.6
97.5°	14.4	14.5	14.6	14.6
100°	14.8	14.8	14.9	15.0
102.5°	14.9	15.0	15.2	15.3
105°	15.2	15.4	15.5	15.7
107.5°	68.3	57.9	47.5	37.1
110°	132.2	120.8	109.5	98.1



TEST NUMBER: P832230

CATALOG NUMBER: S123RDIP-S560D365U840-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	186.4	186.2	186.1	185.9
115°	208.9	209.2	209.5	209.8
117.5°	228.9	228.9	229.0	229.1
120°	249.1	249.1	249.1	249.1
122.5°	268.5	268.6	268.6	268.7
125°	286.4	286.6	286.8	286.9
127.5°	305.2	305.1	304.9	304.8
130°	322.4	322.2	322.0	321.9
132.5°	338.3	338.1	337.8	337.6
135°	354.4	354.1	353.9	353.6
137.5°	369.5	369.3	369.1	369.0
140°	383.0	382.9	382.7	382.5
142.5°	395.8	395.5	395.3	395.0
145°	407.9	407.9	407.9	407.9
147.5°	418.4	418.0	417.6	417.2
150°	428.6	428.3	428.1	427.9
152.5°	437.6	437.2	436.8	436.4
155°	445.7	445.2	444.8	444.3
157.5°	453.0	452.3	451.7	451.1
160°	459.2	458.6	458.0	457.5
162.5°	465.0	464.5	464.0	463.6
165°	469.9	469.3	468.7	468.2
167.5°	473.7	473.0	472.4	471.8
170°	476.9	476.2	475.6	475.0
172.5°	478.9	478.2	477.5	476.8
175°	480.4	479.8	479.2	478.5
177.5°	481.3	480.5	479.7	478.9
180°	480.3	480.3	480.3	480.3



TEST NUMBER: P832230

CATALOG NUMBER: S123RDIP-S560D365U840-4F0-1E-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	12.24	13.15	13.09	14.02	15.10	16.90	17.81	17.75	18.68	19.77
	3H	13.46	14.28	14.33	15.16	16.27	18.41	19.22	19.27	20.10	21.21
	4H	13.85	14.62	14.73	15.50	16.63	18.90	19.67	19.78	20.55	21.67
	6H	14.13	14.84	15.03	15.73	16.87	19.22	19.92	20.11	20.81	21.95
	8H	14.22	14.90	15.13	15.80	16.94	19.30	19.97	20.20	20.88	22.01
	12H	14.28	14.92	15.19	15.82	16.98	19.33	19.97	20.24	20.87	22.03
4H	2H	12.97	13.74	13.86	14.62	15.74	16.91	17.68	17.79	18.56	19.68
	3H	14.35	14.98	15.24	15.90	17.04	18.57	19.21	19.47	20.12	21.26
	4H	14.80	15.39	15.71	16.30	17.46	19.18	19.76	20.09	20.67	21.84
	6H	15.18	15.68	16.10	16.61	17.78	19.62	20.12	20.55	21.06	22.22
	8H	15.30	15.77	16.23	16.70	17.88	19.75	20.22	20.68	21.15	22.33
	12H	15.38	15.80	16.33	16.75	17.93	19.82	20.24	20.76	21.19	22.37
8H	4H	15.12	15.59	16.05	16.52	17.70	19.15	19.62	20.08	20.55	21.73
	6H	15.59	15.97	16.54	16.95	18.12	19.65	20.04	20.60	21.01	22.18
	8H	15.78	16.12	16.75	17.08	18.28	19.84	20.18	20.80	21.14	22.33
	12H	15.93	16.23	16.89	17.18	18.42	19.96	20.26	20.92	21.21	22.45
12H	4H	15.14	15.56	16.08	16.51	17.69	19.11	19.53	20.05	20.47	21.66
	6H	15.65	15.99	16.61	16.95	18.15	19.63	19.97	20.59	20.93	22.12
	8H	15.87	16.17	16.83	17.12	18.37	19.82	20.12	20.79	21.08	22.32