

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: P831685

Luminaire Tested: S123DIP-S775D585U935-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831685  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D585U935-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

**Summary**

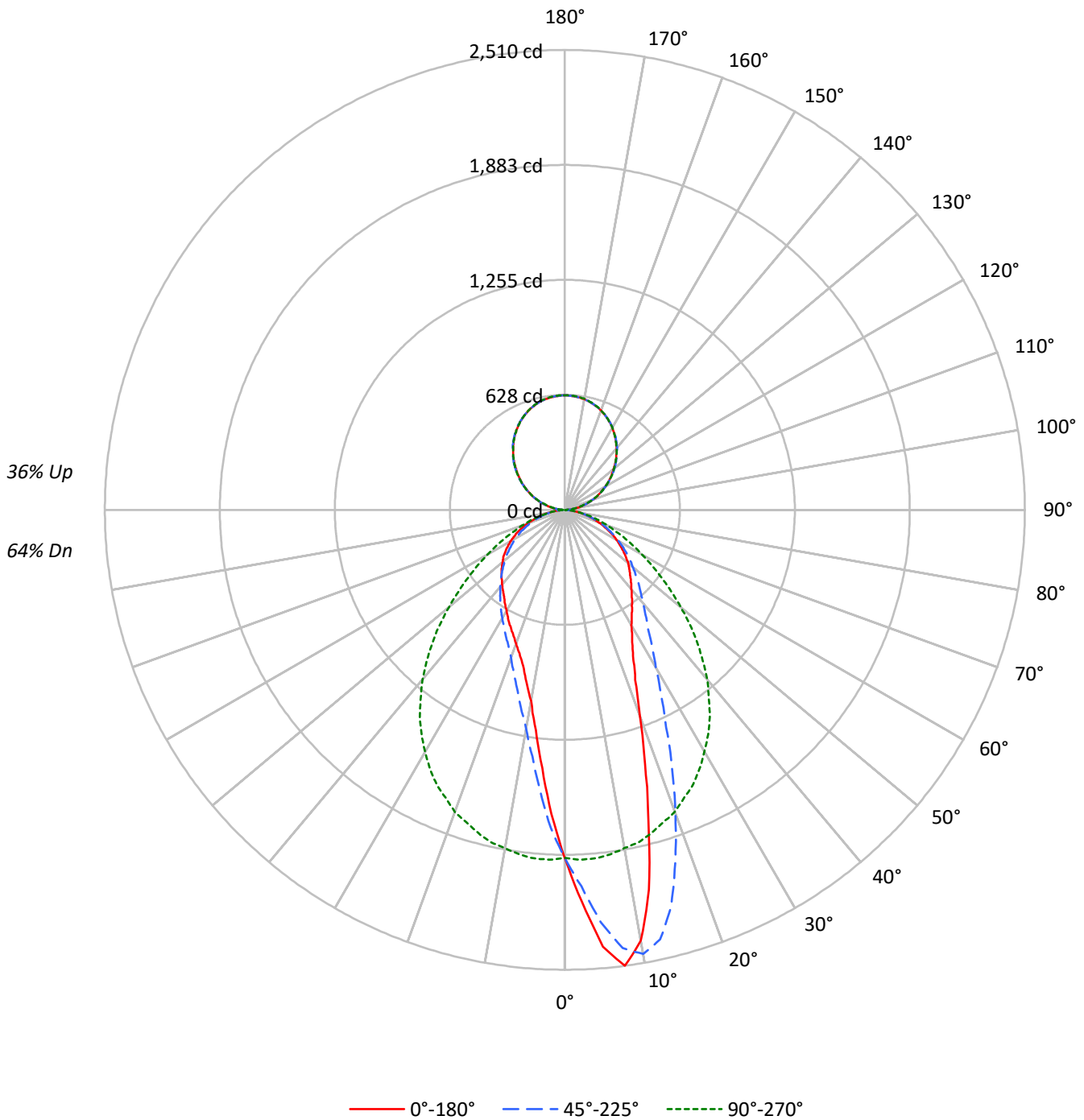
Lumens per Lamp: N/A  
Luminaire Lumens: 4787.3 lumens  
Efficiency: N/A  
Efficacy: 116.5 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 41.1  
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									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	110	110	110	110	104	104	104	104	91	91	91	79	79	79	69	69	69	64																			
1	102	97	94	90	95	92	88	85	81	78	76	71	69	68	62	61	59	55																			
2	93	86	80	75	87	81	76	71	72	68	64	63	60	58	55	53	51	47																			
3	85	76	69	63	80	72	66	61	64	59	55	57	53	50	50	47	44	41																			
4	79	68	60	55	74	64	58	52	58	52	48	51	47	43	45	42	39	36																			
5	73	61	53	48	68	58	51	46	52	46	42	46	42	38	41	38	35	32																			
6	67	56	48	42	63	53	46	40	47	42	37	42	38	34	38	34	31	29																			
7	63	51	43	37	59	48	41	36	43	38	33	39	34	31	35	31	28	26																			
8	58	46	39	34	55	44	37	32	40	34	30	36	31	28	32	28	26	23																			
9	55	43	35	30	52	41	34	29	37	31	27	33	29	25	30	26	23	21																			
10	51	39	32	28	48	38	31	27	34	29	25	31	27	23	28	24	22	20																			

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

	0°	45°	90°	135°	180°
0°	20448	20448	20448	20448	20448
5°	25860	24407	20631	16626	15278
10°	26111	26901	20494	13253	11581
15°	19666	24976	20354	11223	9794
20°	13702	20211	20094	9814	8896
25°	10449	15542	19651	9030	8345
30°	9040	12348	18943	8475	7900
35°	8386	10426	18128	8073	7587
40°	7940	9351	16982	7692	7481
45°	7675	8655	15525	7394	7435
50°	7544	8105	13802	7122	7395
55°	7263	7700	12110	6865	7428
60°	7003	7268	10437	6622	7307
65°	6579	6859	9004	6365	7162
70°	6077	6338	7657	5936	6741
75°	5498	5681	6563	5519	6159
80°	4537	4971	5188	4810	5188
85°	3594	4026	3816	4088	4137

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 17727 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.6	3.8
10°-20°	446.8	9.3
20°-30°	529.0	11.1
30°-40°	531.9	11.1
40°-50°	488.0	10.2
50°-60°	402.8	8.4
60°-70°	284.9	6.0
70°-80°	152.1	3.2
80°-90°	39.9	0.8
90°-100°	40.2	0.8
100°-110°	121.8	2.5
110°-120°	207.4	4.3
120°-130°	272.8	5.7
130°-140°	306.6	6.4
140°-150°	301.5	6.3
150°-160°	253.8	5.3
160°-170°	169.0	3.5
170°-180°	59.2	1.2
0°-30°	1155.4	24.1
0°-40°	1687.3	35.2
0°-60°	2578.1	53.9
0°-90°	3055.1	63.8
90°-120°	369.4	7.7
90°-150°	1250.3	26.1
90°-180°	1732.0	36.2
0°-180°	4787.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1900	1900	1900	1900	1900	
5°	2393	2259	1909	1539	1414	228
15°	1765	2241	1826	1007	879	488
25°	880	1309	1655	760	703	415
35°	638	793	1380	614	577	401
45°	504	569	1020	486	488	390
55°	387	410	645	366	396	346
65°	258	269	354	250	281	257
75°	132	137	158	133	148	139
85°	29	33	31	33	34	32
90°	15	12	0	12	15	9
95°	38	36	29	36	38	38
105°	117	116	110	116	117	124
115°	209	209	209	209	209	207
125°	302	306	306	306	302	270
135°	396	399	396	399	396	304
145°	481	483	481	483	481	300
155°	550	551	550	551	550	253
165°	598	598	600	598	598	169
175°	621	622	624	622	621	59
180°	625	625	625	625	625	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7
2.5°	2141.2	2139.0	2136.8	2125.8	2114.8	2109.5	2104.2	2088.3	2072.4	2054.8	2037.2
5°	2393.3	2399.5	2405.7	2398.6	2391.6	2370.0	2348.4	2319.7	2291.1	2258.9	2226.7
7.5°	2509.7	2513.2	2516.7	2512.3	2507.9	2502.2	2496.5	2470.9	2445.3	2412.3	2379.2
10°	2388.9	2396.8	2404.8	2422.0	2439.2	2458.5	2477.9	2474.4	2470.9	2461.2	2451.5
12.5°	2123.6	2133.3	2143.0	2177.3	2211.7	2255.8	2299.9	2337.8	2375.7	2402.1	2428.6
15°	1764.8	1791.7	1818.6	1849.9	1881.2	1945.9	2010.7	2090.5	2170.3	2241.3	2312.2
17.5°	1453.6	1463.8	1473.9	1507.4	1540.9	1622.4	1704.0	1796.1	1888.2	2005.9	2123.6
20°	1196.2	1205.5	1214.7	1258.8	1302.9	1366.8	1430.7	1534.3	1637.9	1764.4	1890.9
22.5°	1004.9	1019.5	1034.0	1058.7	1083.4	1144.6	1205.9	1298.0	1390.1	1529.9	1669.6
25°	879.8	890.3	900.9	915.9	930.9	979.8	1028.7	1104.5	1180.3	1308.6	1436.9
27.5°	794.2	798.7	803.1	818.0	833.0	864.8	896.5	961.7	1027.0	1135.8	1244.7
30°	727.3	730.3	733.4	746.6	759.9	781.5	803.1	850.2	897.4	993.5	1089.6
32.5°	680.5	682.7	684.9	695.1	705.2	720.6	736.1	770.4	804.8	884.2	963.5
35°	638.2	639.5	640.9	648.4	655.8	667.3	678.8	704.8	730.8	793.4	856.0
37.5°	601.2	603.0	604.7	609.1	613.5	623.7	633.8	654.5	675.2	723.3	771.3
40°	565.1	568.1	571.2	574.3	577.4	585.8	594.1	610.0	625.9	665.5	705.2
42.5°	534.2	537.3	540.4	541.7	543.0	547.9	552.7	567.3	581.8	611.3	640.9
45°	504.2	505.5	506.9	508.2	509.5	513.5	517.4	530.2	543.0	568.6	594.1
47.5°	476.9	476.9	476.9	477.8	478.7	482.2	485.7	495.0	504.2	524.1	543.9
50°	450.5	450.5	450.5	449.1	447.8	450.0	452.2	459.3	466.3	484.0	501.6
52.5°	418.7	418.7	418.7	419.2	419.6	419.6	419.6	425.8	431.9	447.8	463.7
55°	387.0	388.7	390.5	389.2	387.9	388.7	389.6	393.6	397.6	410.3	423.1
57.5°	355.3	356.1	357.0	356.6	356.1	356.6	357.0	360.5	364.1	373.8	383.5
60°	325.3	325.3	325.3	324.4	323.5	324.4	325.3	327.0	328.8	337.6	346.4
62.5°	291.8	292.2	292.7	293.1	293.5	292.7	291.8	294.0	296.2	302.8	309.4
65°	258.3	258.7	259.2	260.5	261.8	260.9	260.0	262.3	264.5	269.3	274.2
67.5°	228.3	227.4	226.5	227.0	227.4	228.8	230.1	230.5	231.0	236.2	241.5
70°	193.1	193.9	194.8	194.4	193.9	194.4	194.8	196.1	197.5	201.4	205.4
72.5°	161.3	161.8	162.2	162.2	162.2	163.1	164.0	165.3	166.6	168.8	171.0
75°	132.2	132.2	132.2	133.1	134.0	134.4	134.9	134.9	134.9	136.6	138.4
77.5°	100.5	102.7	104.9	104.5	104.0	104.9	105.8	107.1	108.4	109.3	110.2
80°	73.2	73.2	73.2	73.6	74.0	75.4	76.7	77.6	78.5	80.2	82.0
82.5°	46.7	47.2	47.6	48.9	50.2	51.1	52.0	53.3	54.7	54.7	54.7
85°	29.1	28.2	27.3	28.2	29.1	30.0	30.9	31.3	31.7	32.6	33.5
87.5°	14.1	14.1	14.1	14.1	14.1	14.5	15.0	15.0	15.0	15.0	15.0
90°	14.7	14.5	14.3	14.1	13.9	13.5	13.1	12.7	12.2	11.8	10.4
92.5°	21.1	21.3	21.6	21.8	22.0	21.9	21.6	21.3	21.0	20.6	20.0
95°	38.3	38.3	38.3	38.3	38.3	38.1	37.7	37.2	36.8	36.3	35.5
97.5°	55.0	55.1	55.2	55.3	55.4	55.2	54.7	54.1	53.6	53.0	52.4
100°	74.6	74.4	74.2	74.0	73.8	73.5	73.2	72.8	72.5	72.2	71.6
102.5°	94.8	94.9	95.0	95.1	95.2	95.1	94.8	94.5	94.1	93.8	93.0
105°	116.9	116.7	116.4	116.2	116.0	115.9	115.9	115.9	115.9	115.9	114.9
107.5°	139.5	139.6	139.7	139.8	139.9	139.8	139.5	139.1	138.8	138.5	138.1
110°	162.6	162.8	163.0	163.2	163.4	163.3	162.9	162.4	162.0	161.6	161.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.1	187.1	187.1	187.1	187.1	186.8	186.3	185.7	185.2	184.7	184.7
115°	209.2	209.3	209.4	209.5	209.6	209.6	209.5	209.4	209.3	209.2	209.4
117.5°	231.8	232.1	232.5	232.8	233.1	233.3	233.3	233.3	233.3	233.3	233.5
120°	255.9	256.1	256.3	256.5	256.7	256.9	257.0	257.1	257.2	257.3	257.9
122.5°	278.9	279.3	279.6	279.9	280.3	280.6	280.9	281.2	281.6	281.9	282.1
125°	302.0	302.5	302.9	303.3	303.8	304.2	304.6	305.1	305.5	306.0	306.2
127.5°	325.1	325.5	326.0	326.4	326.9	327.4	328.1	328.7	329.4	330.0	330.2
130°	347.7	348.5	349.2	350.0	350.8	351.4	351.8	352.2	352.7	353.1	353.4
132.5°	371.3	371.8	372.4	372.9	373.5	374.0	374.5	375.1	375.6	376.2	376.4
135°	395.8	396.0	396.3	396.5	396.7	397.0	397.5	397.9	398.3	398.8	398.9
137.5°	417.4	417.8	418.1	418.4	418.7	419.2	419.7	420.3	420.8	421.4	421.0
140°	438.6	439.3	440.1	440.8	441.6	442.0	442.2	442.3	442.4	442.5	442.4
142.5°	460.2	460.7	461.3	461.8	462.3	462.7	462.8	462.9	463.0	463.1	462.9
145°	480.8	481.2	481.7	482.1	482.5	482.8	482.9	483.0	483.1	483.2	482.9
147.5°	499.5	500.1	500.8	501.4	502.1	502.4	502.4	502.4	502.4	502.4	502.1
150°	517.1	517.8	518.4	519.1	519.8	520.1	520.1	520.1	520.1	520.1	519.9
152.5°	534.3	534.9	535.4	536.0	536.5	536.7	536.5	536.2	536.0	535.8	535.7
155°	549.5	550.3	551.1	551.8	552.6	552.8	552.3	551.9	551.5	551.0	550.9
157.5°	563.8	564.4	565.1	565.8	566.4	566.5	566.1	565.6	565.2	564.8	564.7
160°	577.5	578.0	578.4	578.8	579.3	579.2	578.7	578.1	577.6	577.0	577.0
162.5°	587.9	588.6	589.4	590.1	590.9	591.0	590.5	589.9	589.4	588.8	588.7
165°	597.7	598.4	599.2	600.0	600.7	600.8	600.1	599.5	598.8	598.2	598.2
167.5°	606.5	607.2	607.8	608.5	609.1	609.1	608.5	607.8	607.2	606.5	606.4
170°	612.9	613.7	614.4	615.2	616.0	616.0	615.2	614.4	613.7	612.9	612.9
172.5°	617.8	618.6	619.3	620.1	620.9	620.9	620.3	619.6	619.0	618.3	618.3
175°	621.2	622.0	622.8	623.5	624.3	624.4	623.7	623.0	622.4	621.7	621.7
177.5°	623.2	624.0	624.7	625.5	626.3	626.3	625.7	625.0	624.4	623.7	623.7
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7
2.5°	2031.9	2026.6	2007.2	1987.8	1965.8	1943.7	1927.4	1911.1	1886.9	1862.6	1842.8
5°	2202.0	2177.3	2136.4	2095.4	2039.8	1984.3	1946.8	1909.4	1859.1	1808.9	1768.8
7.5°	2336.9	2294.6	2237.3	2180.0	2107.3	2034.5	1965.8	1897.0	1820.3	1743.6	1681.0
10°	2422.8	2394.2	2328.1	2262.0	2164.6	2067.2	1971.1	1875.0	1776.3	1677.5	1594.7
12.5°	2431.2	2433.9	2373.0	2312.2	2202.0	2091.8	1975.0	1858.2	1733.9	1609.6	1513.1
15°	2357.6	2403.0	2369.5	2336.0	2224.9	2113.9	1970.2	1826.5	1683.3	1540.0	1428.5
17.5°	2221.0	2318.4	2323.2	2328.1	2217.0	2105.9	1946.8	1787.7	1625.5	1463.3	1346.1
20°	2034.5	2178.2	2227.6	2277.0	2186.6	2096.2	1925.2	1754.2	1572.6	1391.0	1268.1
22.5°	1844.1	2018.7	2109.0	2199.4	2132.4	2065.4	1883.4	1701.3	1509.6	1317.9	1193.1
25°	1627.3	1817.7	1956.5	2095.4	2054.4	2013.4	1834.0	1654.6	1450.5	1246.5	1119.1
27.5°	1438.2	1631.7	1799.2	1966.7	1957.8	1949.0	1771.0	1592.9	1384.0	1175.1	1052.1
30°	1269.8	1450.1	1637.4	1824.7	1846.3	1867.9	1696.0	1524.1	1314.8	1105.4	986.9
32.5°	1120.8	1278.2	1479.2	1680.2	1722.5	1764.8	1609.6	1454.5	1247.3	1040.2	926.0
35°	998.8	1141.6	1342.5	1543.5	1596.4	1649.3	1514.4	1379.6	1177.7	975.8	867.0
37.5°	890.8	1010.2	1206.4	1402.5	1467.3	1532.1	1411.3	1290.5	1101.5	912.4	812.3
40°	801.3	897.4	1077.7	1257.9	1332.9	1407.8	1308.2	1208.6	1029.2	849.8	757.7
42.5°	726.4	811.9	975.4	1138.9	1210.8	1282.6	1198.4	1114.2	954.7	795.1	710.9
45°	662.5	730.8	879.3	1027.8	1096.2	1164.5	1092.2	1019.9	879.3	738.7	660.3
47.5°	602.5	661.1	788.1	915.0	975.8	1036.7	980.2	923.8	804.8	685.8	614.9
50°	548.7	595.9	707.0	818.0	870.9	923.8	874.0	824.2	726.4	628.5	566.8
52.5°	502.0	540.4	633.4	726.4	771.8	817.2	774.4	731.7	654.1	576.5	522.7
55°	455.7	488.4	569.0	649.7	680.5	711.4	678.3	645.3	582.7	520.1	474.7
57.5°	412.5	441.6	507.8	573.9	597.7	621.5	591.5	561.5	514.4	467.2	429.3
60°	370.2	394.0	449.1	504.2	518.8	533.3	509.1	484.8	451.8	418.7	384.8
62.5°	331.0	352.6	393.6	434.6	444.3	454.0	435.5	417.0	391.8	366.7	340.3
65°	290.5	306.8	340.3	373.8	379.9	386.1	369.8	353.5	334.5	315.6	296.2
67.5°	253.0	264.5	291.8	319.1	319.5	320.0	306.8	293.5	283.0	272.4	257.0
70°	216.4	227.4	245.5	263.6	264.0	264.5	253.9	243.3	235.4	227.4	216.0
72.5°	178.9	186.9	200.5	214.2	213.3	212.4	205.8	199.2	193.1	186.9	178.5
75°	145.0	151.6	160.9	170.1	167.5	164.8	161.3	157.8	152.5	147.2	141.9
77.5°	114.2	118.1	123.4	128.7	126.9	125.2	122.1	119.0	115.0	111.1	108.9
80°	83.7	85.5	89.0	92.6	91.7	90.8	87.3	83.7	82.9	82.0	78.9
82.5°	56.9	59.1	59.9	60.8	60.4	59.9	57.3	54.7	53.8	52.9	52.5
85°	33.9	34.4	34.8	35.3	33.9	32.6	31.7	30.9	30.9	30.9	30.4
87.5°	15.4	15.9	15.9	15.9	15.4	15.0	14.1	13.2	13.7	14.1	14.1
90°	8.9	7.5	6.1	4.9	3.8	2.7	1.6	0.5	1.6	2.7	3.8
92.5°	19.3	18.7	18.0	17.4	16.7	16.0	15.4	14.7	15.4	16.0	16.7
95°	34.6	33.7	32.8	32.0	31.3	30.5	29.7	29.0	29.7	30.5	31.3
97.5°	51.7	51.1	50.4	49.8	49.3	48.7	48.2	47.6	48.2	48.7	49.3
100°	71.1	70.6	70.0	69.4	68.8	68.1	67.4	66.8	67.4	68.1	68.8
102.5°	92.3	91.5	90.7	90.2	89.9	89.5	89.2	88.9	89.2	89.5	89.9
105°	113.9	113.0	112.0	111.4	111.2	110.9	110.7	110.5	110.7	110.9	111.2
107.5°	137.6	137.2	136.7	136.5	136.4	136.3	136.1	136.0	136.1	136.3	136.4
110°	161.1	160.9	160.7	160.5	160.3	160.0	159.8	159.6	159.8	160.0	160.3





TEST NUMBER: P831685

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	184.7	184.7	184.7	184.6	184.5	184.4	184.3	184.2	184.3	184.4	184.5
115°	209.6	209.9	210.1	210.0	209.7	209.4	209.0	208.7	209.0	209.4	209.7
117.5°	233.7	233.9	234.1	234.2	234.1	234.0	233.9	233.8	233.9	234.0	234.1
120°	258.4	259.0	259.5	259.5	258.8	258.2	257.5	256.8	257.5	258.2	258.8
122.5°	282.3	282.5	282.8	282.7	282.2	281.8	281.3	280.9	281.3	281.8	282.2
125°	306.4	306.6	306.8	306.8	306.4	306.1	305.8	305.5	305.8	306.1	306.4
127.5°	330.5	330.7	330.9	330.7	330.0	329.4	328.7	328.1	328.7	329.4	330.0
130°	353.8	354.1	354.4	354.1	353.3	352.4	351.5	350.6	351.5	352.4	353.3
132.5°	376.6	376.8	377.1	376.7	375.9	375.0	374.1	373.2	374.1	375.0	375.9
135°	399.0	399.1	399.2	398.9	398.3	397.6	397.0	396.3	397.0	397.6	398.3
137.5°	420.7	420.4	420.1	419.6	419.1	418.5	418.0	417.4	418.0	418.5	419.1
140°	442.3	442.2	442.0	441.7	441.2	440.6	440.1	439.5	440.1	440.6	441.2
142.5°	462.7	462.5	462.2	461.9	461.3	460.8	460.2	459.7	460.2	460.8	461.3
145°	482.6	482.3	481.9	481.7	481.4	481.2	481.0	480.8	481.0	481.2	481.4
147.5°	501.7	501.4	501.1	500.7	500.3	499.8	499.4	499.0	499.4	499.8	500.3
150°	519.6	519.4	519.2	519.0	518.8	518.6	518.3	518.1	518.3	518.6	518.8
152.5°	535.6	535.5	535.4	535.1	534.8	534.5	534.2	533.8	534.2	534.5	534.8
155°	550.8	550.7	550.6	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
157.5°	564.6	564.4	564.3	564.3	564.4	564.6	564.7	564.8	564.7	564.6	564.4
160°	577.0	577.0	577.0	577.2	577.4	577.6	577.8	578.0	577.8	577.6	577.4
162.5°	588.6	588.5	588.4	588.5	588.8	589.2	589.5	589.8	589.5	589.2	588.8
165°	598.2	598.2	598.2	598.3	598.7	599.0	599.3	599.6	599.3	599.0	598.7
167.5°	606.3	606.2	606.1	606.2	606.7	607.1	607.6	608.0	607.6	607.1	606.7
170°	612.9	612.9	612.9	613.1	613.6	614.0	614.4	614.9	614.4	614.0	613.6
172.5°	618.3	618.3	618.3	618.5	619.0	619.4	619.8	620.3	619.8	619.4	619.0
175°	621.7	621.7	621.7	622.0	622.4	622.8	623.3	623.7	623.3	622.8	622.4
177.5°	623.7	623.7	623.7	623.9	624.4	624.8	625.2	625.7	625.2	624.8	624.4
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



TEST NUMBER: P831685

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7	1899.7
2.5°	1823.0	1805.8	1788.6	1775.4	1762.1	1739.7	1717.2	1711.9	1706.6	1699.1	1691.6
5°	1728.7	1686.3	1644.0	1606.1	1568.2	1538.7	1509.2	1489.8	1470.4	1456.3	1442.2
7.5°	1618.5	1555.0	1491.5	1446.6	1401.6	1358.9	1316.1	1302.4	1288.8	1270.3	1251.8
10°	1511.8	1441.7	1371.6	1313.0	1254.4	1212.5	1170.7	1153.9	1137.2	1113.8	1090.4
12.5°	1416.6	1339.9	1263.2	1204.1	1145.1	1104.5	1064.0	1039.7	1015.5	1002.3	989.1
15°	1317.0	1235.0	1153.0	1098.4	1043.7	1007.1	970.5	949.4	928.2	915.5	902.7
17.5°	1228.8	1147.7	1066.6	1014.2	961.7	928.2	894.7	876.2	857.7	848.0	838.3
20°	1145.1	1065.8	986.4	935.3	884.2	856.8	829.5	817.6	805.7	797.8	789.8
22.5°	1068.4	990.4	912.4	868.7	825.1	803.1	781.0	772.6	764.3	757.7	751.1
25°	991.7	922.1	852.4	815.4	778.4	760.3	742.2	733.9	725.5	718.9	712.3
27.5°	929.1	862.6	796.0	764.3	732.5	718.4	704.3	697.7	691.1	684.9	678.8
30°	868.3	808.8	749.3	722.0	694.6	681.9	669.1	662.5	655.8	650.1	644.4
32.5°	811.9	760.7	709.6	684.5	659.4	648.8	638.2	630.3	622.3	617.9	613.5
35°	758.1	712.3	666.4	645.7	625.0	614.4	603.8	597.2	590.6	587.1	583.6
37.5°	712.3	671.3	630.3	610.4	590.6	580.5	570.3	564.6	558.9	557.6	556.2
40°	665.5	630.3	595.0	575.6	556.2	547.4	538.6	535.1	531.6	530.7	529.8
42.5°	626.8	592.4	558.0	540.4	522.7	515.2	507.8	506.0	504.2	505.5	506.9
45°	581.8	553.2	524.5	508.2	491.9	485.7	479.5	478.2	476.9	479.5	482.2
47.5°	543.9	517.4	491.0	475.6	460.2	455.7	451.3	450.9	450.5	454.0	457.5
50°	505.1	479.5	454.0	441.6	429.3	425.3	421.4	422.7	424.0	429.7	435.5
52.5°	469.0	445.2	421.4	409.9	398.4	395.8	393.2	396.2	399.3	405.5	411.7
55°	429.3	407.7	386.1	377.3	368.5	365.8	363.2	369.4	375.5	381.3	387.0
57.5°	391.4	372.4	353.5	345.6	337.6	337.2	336.7	342.5	348.2	354.4	360.5
60°	350.8	335.0	319.1	312.9	306.8	307.6	308.5	315.1	321.8	326.6	331.4
62.5°	313.8	300.6	287.4	281.6	275.9	278.1	280.3	286.9	293.5	299.3	305.0
65°	276.8	265.8	254.8	250.8	246.8	249.9	253.0	258.7	264.5	268.4	272.4
67.5°	241.5	232.3	223.0	219.9	216.9	219.9	223.0	228.8	234.5	238.4	242.4
70°	204.5	197.0	189.5	187.3	185.1	188.6	192.2	197.0	201.9	205.8	209.8
72.5°	170.1	164.4	158.7	158.2	157.8	160.9	164.0	168.8	173.7	176.3	178.9
75°	136.6	133.5	130.5	130.0	129.6	132.7	135.8	138.4	141.0	143.2	145.5
77.5°	106.7	104.0	101.4	101.8	102.3	104.5	106.7	109.3	112.0	113.3	114.6
80°	75.8	74.9	74.0	74.9	75.8	77.6	79.3	81.1	82.9	83.7	84.6
82.5°	52.0	51.1	50.2	51.6	52.9	54.2	55.5	56.9	58.2	58.6	59.1
85°	30.0	31.3	32.6	32.6	32.6	33.1	33.5	33.9	34.4	33.9	33.5
87.5°	14.1	14.5	15.0	15.0	15.0	15.4	15.9	15.9	15.9	15.4	15.0
90°	4.9	6.1	7.5	8.9	10.4	11.8	12.2	12.7	13.1	13.5	13.9
92.5°	17.4	18.0	18.7	19.3	20.0	20.6	21.0	21.3	21.6	21.9	22.0
95°	32.0	32.8	33.7	34.6	35.5	36.3	36.8	37.2	37.7	38.1	38.3
97.5°	49.8	50.4	51.1	51.7	52.4	53.0	53.6	54.1	54.7	55.2	55.4
100°	69.4	70.0	70.6	71.1	71.6	72.2	72.5	72.8	73.2	73.5	73.8
102.5°	90.2	90.7	91.5	92.3	93.0	93.8	94.1	94.5	94.8	95.1	95.2
105°	111.4	112.0	113.0	113.9	114.9	115.9	115.9	115.9	115.9	115.9	116.0
107.5°	136.5	136.7	137.2	137.6	138.1	138.5	138.8	139.1	139.5	139.8	139.9
110°	160.5	160.7	160.9	161.1	161.4	161.6	162.0	162.4	162.9	163.3	163.4



TEST NUMBER: P831685

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	184.6	184.7	184.7	184.7	184.7	184.7	185.2	185.7	186.3	186.8	187.1
115°	210.0	210.1	209.9	209.6	209.4	209.2	209.3	209.4	209.5	209.6	209.6
117.5°	234.2	234.1	233.9	233.7	233.5	233.3	233.3	233.3	233.3	233.3	233.1
120°	259.5	259.5	259.0	258.4	257.9	257.3	257.2	257.1	257.0	256.9	256.7
122.5°	282.7	282.8	282.5	282.3	282.1	281.9	281.6	281.2	280.9	280.6	280.3
125°	306.8	306.8	306.6	306.4	306.2	306.0	305.5	305.1	304.6	304.2	303.8
127.5°	330.7	330.9	330.7	330.5	330.2	330.0	329.4	328.7	328.1	327.4	326.9
130°	354.1	354.4	354.1	353.8	353.4	353.1	352.7	352.2	351.8	351.4	350.8
132.5°	376.7	377.1	376.8	376.6	376.4	376.2	375.6	375.1	374.5	374.0	373.5
135°	398.9	399.2	399.1	399.0	398.9	398.8	398.3	397.9	397.5	397.0	396.7
137.5°	419.6	420.1	420.4	420.7	421.0	421.4	420.8	420.3	419.7	419.2	418.7
140°	441.7	442.0	442.2	442.3	442.4	442.5	442.4	442.3	442.2	442.0	441.6
142.5°	461.9	462.2	462.5	462.7	462.9	463.1	463.0	462.9	462.8	462.7	462.3
145°	481.7	481.9	482.3	482.6	482.9	483.2	483.1	483.0	482.9	482.8	482.5
147.5°	500.7	501.1	501.4	501.7	502.1	502.4	502.4	502.4	502.4	502.4	502.1
150°	519.0	519.2	519.4	519.6	519.9	520.1	520.1	520.1	520.1	520.1	519.8
152.5°	535.1	535.4	535.5	535.6	535.7	535.8	536.0	536.2	536.5	536.7	536.5
155°	550.5	550.6	550.7	550.8	550.9	551.0	551.5	551.9	552.3	552.8	552.6
157.5°	564.3	564.3	564.4	564.6	564.7	564.8	565.2	565.6	566.1	566.5	566.4
160°	577.2	577.0	577.0	577.0	577.0	577.0	577.6	578.1	578.7	579.2	579.3
162.5°	588.5	588.4	588.5	588.6	588.7	588.8	589.4	589.9	590.5	591.0	590.9
165°	598.3	598.2	598.2	598.2	598.2	598.2	598.8	599.5	600.1	600.8	600.7
167.5°	606.2	606.1	606.2	606.3	606.4	606.5	607.2	607.8	608.5	609.1	609.1
170°	613.1	612.9	612.9	612.9	612.9	612.9	613.7	614.4	615.2	616.0	616.0
172.5°	618.5	618.3	618.3	618.3	618.3	618.3	619.0	619.6	620.3	620.9	620.9
175°	622.0	621.7	621.7	621.7	621.7	621.7	622.4	623.0	623.7	624.4	624.3
177.5°	623.9	623.7	623.7	623.7	623.7	623.7	624.4	625.0	625.7	626.3	626.3
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



TEST NUMBER: P831685

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1899.7	1899.7	1899.7	1899.7
2.5°	1688.5	1685.5	1673.1	1660.8
5°	1431.6	1421.0	1417.5	1414.0
7.5°	1250.9	1250.0	1231.5	1213.0
10°	1091.8	1093.1	1076.3	1059.6
12.5°	978.0	967.0	965.7	964.4
15°	892.5	882.4	880.6	878.9
17.5°	832.2	826.0	824.2	822.5
20°	786.3	782.8	779.7	776.6
22.5°	746.6	742.2	739.6	736.9
25°	708.3	704.3	703.4	702.6
27.5°	673.9	669.1	669.1	669.1
30°	641.3	638.2	636.9	635.6
32.5°	610.9	608.2	608.2	608.2
35°	582.2	580.9	579.2	577.4
37.5°	556.2	556.2	555.4	554.5
40°	531.1	532.4	532.4	532.4
42.5°	508.2	509.5	509.5	509.5
45°	484.4	486.6	487.5	488.4
47.5°	461.0	464.6	465.4	466.3
50°	438.1	440.8	441.2	441.6
52.5°	414.8	417.8	420.0	422.2
55°	390.1	393.2	394.5	395.8
57.5°	363.6	366.7	367.2	367.6
60°	334.5	337.6	338.5	339.4
62.5°	306.8	308.5	309.4	310.3
65°	275.0	277.7	279.4	281.2
67.5°	244.6	246.8	246.8	246.8
70°	210.7	211.6	212.9	214.2
72.5°	179.4	179.8	179.8	179.8
75°	146.3	147.2	147.7	148.1
77.5°	115.0	115.5	115.5	115.5
80°	84.2	83.7	83.7	83.7
82.5°	57.7	56.4	56.4	56.4
85°	33.1	32.6	33.1	33.5
87.5°	15.0	15.0	15.0	15.0
90°	14.1	14.3	14.5	14.7
92.5°	21.8	21.6	21.3	21.1
95°	38.3	38.3	38.3	38.3
97.5°	55.3	55.2	55.1	55.0
100°	74.0	74.2	74.4	74.6
102.5°	95.1	95.0	94.9	94.8
105°	116.2	116.4	116.7	116.9
107.5°	139.8	139.7	139.6	139.5
110°	163.2	163.0	162.8	162.6



TEST NUMBER: P831685

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	187.1	187.1	187.1	187.1
115°	209.5	209.4	209.3	209.2
117.5°	232.8	232.5	232.1	231.8
120°	256.5	256.3	256.1	255.9
122.5°	279.9	279.6	279.3	278.9
125°	303.3	302.9	302.5	302.0
127.5°	326.4	326.0	325.5	325.1
130°	350.0	349.2	348.5	347.7
132.5°	372.9	372.4	371.8	371.3
135°	396.5	396.3	396.0	395.8
137.5°	418.4	418.1	417.8	417.4
140°	440.8	440.1	439.3	438.6
142.5°	461.8	461.3	460.7	460.2
145°	482.1	481.7	481.2	480.8
147.5°	501.4	500.8	500.1	499.5
150°	519.1	518.4	517.8	517.1
152.5°	536.0	535.4	534.9	534.3
155°	551.8	551.1	550.3	549.5
157.5°	565.8	565.1	564.4	563.8
160°	578.8	578.4	578.0	577.5
162.5°	590.1	589.4	588.6	587.9
165°	600.0	599.2	598.4	597.7
167.5°	608.5	607.8	607.2	606.5
170°	615.2	614.4	613.7	612.9
172.5°	620.1	619.3	618.6	617.8
175°	623.5	622.8	622.0	621.2
177.5°	625.5	624.7	624.0	623.2
180°	625.2	625.2	625.2	625.2



TEST NUMBER: P831685

CATALOG NUMBER: S123DIP-S775D585U935-4F0-1E-UDD-G1

**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	15.26	16.21	16.09	17.06	18.12	17.49	18.44	18.33	19.30	20.36
	3H	16.91	17.76	17.76	18.62	19.71	18.92	19.78	19.77	20.64	21.73
	4H	17.49	18.29	18.36	19.16	20.27	19.38	20.18	20.24	21.05	22.15
	6H	17.87	18.61	18.74	19.48	20.60	19.66	20.40	20.54	21.28	22.39
	8H	17.97	18.67	18.85	19.56	20.68	19.72	20.43	20.61	21.32	22.44
	12H	18.01	18.68	18.90	19.57	20.71	19.75	20.42	20.64	21.30	22.44
4H	2H	15.84	16.64	16.71	17.51	18.62	17.67	18.47	18.54	19.34	20.44
	3H	17.68	18.35	18.56	19.25	20.36	19.29	19.96	20.17	20.86	21.98
	4H	18.38	18.99	19.27	19.89	21.03	19.88	20.49	20.77	21.39	22.53
	6H	18.86	19.38	19.77	20.31	21.45	20.29	20.81	21.20	21.74	22.88
	8H	19.00	19.49	19.91	20.40	21.56	20.40	20.89	21.31	21.81	22.97
	12H	19.07	19.51	20.00	20.45	21.61	20.45	20.89	21.38	21.83	22.99
8H	4H	18.65	19.14	19.56	20.06	21.22	19.99	20.48	20.90	21.40	22.56
	6H	19.24	19.65	20.18	20.61	21.76	20.50	20.90	21.44	21.86	23.02
	8H	19.45	19.81	20.40	20.76	21.93	20.68	21.04	21.63	21.99	23.16
	12H	19.58	19.89	20.53	20.84	22.06	20.78	21.10	21.73	22.04	23.27
12H	4H	18.66	19.10	19.59	20.03	21.20	19.97	20.41	20.90	21.35	22.51
	6H	19.30	19.65	20.24	20.60	21.78	20.51	20.87	21.46	21.82	23.00
	8H	19.53	19.85	20.48	20.79	22.02	20.72	21.03	21.67	21.97	23.20