

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: P831658

Luminaire Tested: S123DIP-S775D365U935-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831658  
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-S775D365U935-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

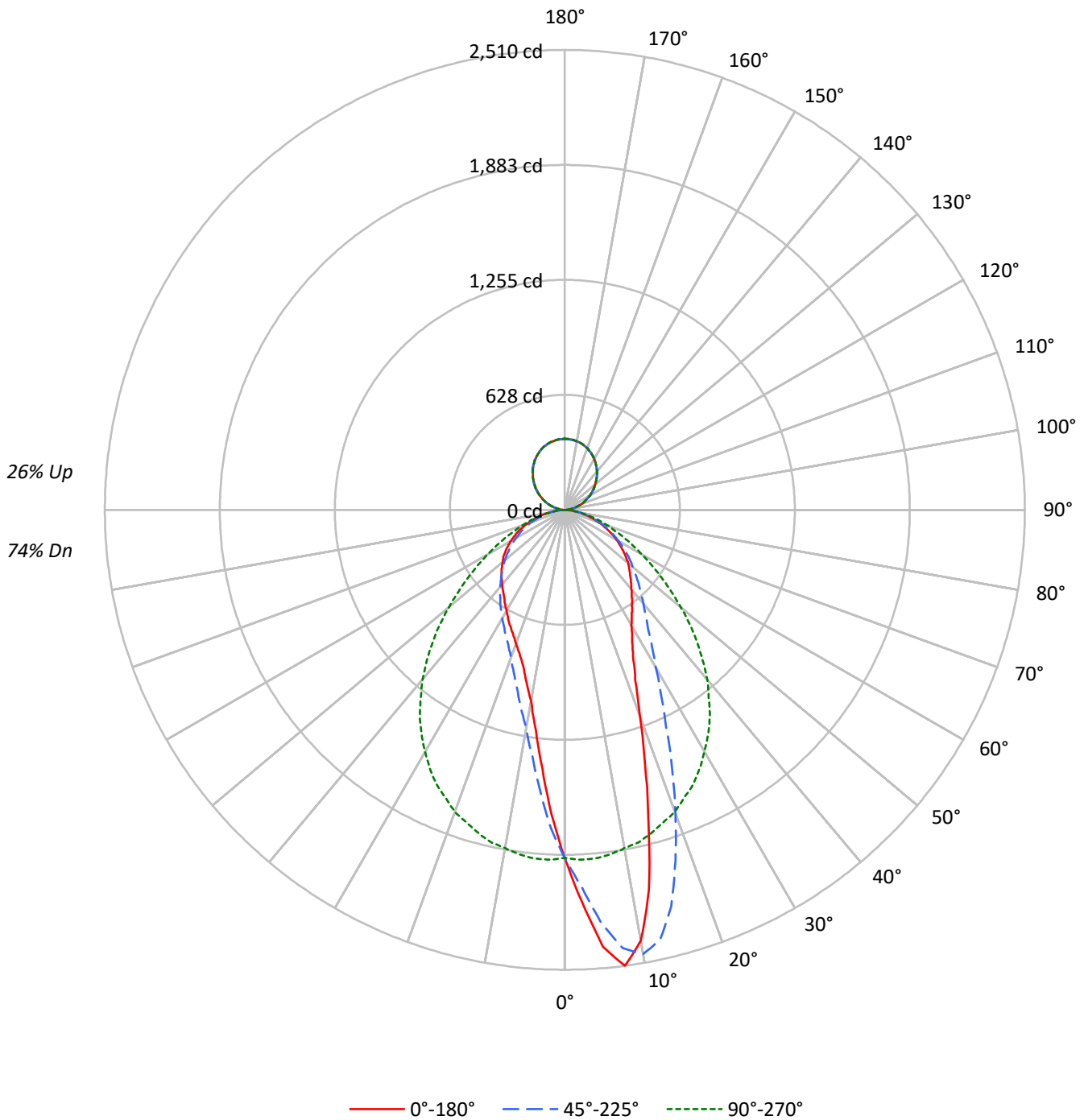
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4127.8 lumens  
Efficiency: N/A  
Efficacy: 115.0 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): 35.9  
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

TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-G1

### 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	113	113	113	113	107	107	107	107	97	97	97	87	87	87	78	78	78	74		
1	104	100	96	93	99	95	92	89	86	83	81	78	76	74	70	69	68	64		
2	95	88	82	77	90	84	79	74	76	72	69	69	66	63	63	60	58	55		
3	88	78	71	65	83	75	68	63	68	63	59	62	58	55	57	53	51	48		
4	81	70	62	56	77	67	60	55	61	56	51	56	52	48	51	48	45	42		
5	75	63	55	49	71	61	53	48	56	50	45	51	46	42	47	43	40	37		
6	69	57	49	44	66	55	48	42	51	45	40	47	42	38	43	39	35	33		
7	65	52	45	39	61	50	43	38	47	40	36	43	38	34	40	35	32	30		
8	60	48	40	35	57	46	39	34	43	37	33	40	35	31	37	32	29	27		
9	57	44	37	32	54	43	36	31	40	34	30	37	32	28	34	30	27	25		
10	53	41	34	29	51	40	33	29	37	31	27	35	30	26	32	28	25	23		

**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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CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-G1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	179.6	4.4
10°-20°	446.8	10.8
20°-30°	529.0	12.8
30°-40°	531.9	12.9
40°-50°	488.0	11.8
50°-60°	402.8	9.8
60°-70°	284.9	6.9
70°-80°	152.1	3.7
80°-90°	39.4	1.0
90°-100°	24.9	0.6
100°-110°	75.5	1.8
110°-120°	128.5	3.1
120°-130°	169.0	4.1
130°-140°	190.0	4.6
140°-150°	186.8	4.5
150°-160°	157.2	3.8
160°-170°	104.7	2.5
170°-180°	36.7	0.9
0°-30°	1155.4	28.0
0°-40°	1687.3	40.9
0°-60°	2578.1	62.5
0°-90°	3054.6	74.0
90°-120°	228.9	5.5
90°-150°	774.6	18.8
90°-180°	1073.0	26.0
0°-180°	4127.8	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°	9	7	0	7	9	6
95°	24	22	18	22	24	24
105°	72	72	68	72	72	77
115°	130	130	129	130	130	128
125°	187	190	189	190	187	167
135°	245	247	246	247	245	189
145°	298	299	298	299	298	186
155°	340	341	341	341	340	157
165°	370	371	372	371	370	104
175°	385	385	386	385	385	37
180°	387	387	387	387	387	



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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°	9.1	9.0	8.9	8.7	8.6	8.4	8.1	7.8	7.6	7.3	6.4
92.5°	13.1	13.2	13.4	13.5	13.6	13.6	13.4	13.2	13.0	12.8	12.4
95°	23.7	23.7	23.7	23.7	23.7	23.6	23.3	23.1	22.8	22.5	22.0
97.5°	34.1	34.1	34.2	34.3	34.3	34.2	33.9	33.5	33.2	32.9	32.5
100°	46.2	46.1	46.0	45.8	45.7	45.5	45.3	45.1	44.9	44.7	44.4
102.5°	58.7	58.8	58.9	58.9	59.0	58.9	58.7	58.5	58.3	58.1	57.6
105°	72.4	72.3	72.1	72.0	71.9	71.8	71.8	71.8	71.8	71.8	71.2
107.5°	86.4	86.5	86.5	86.6	86.7	86.6	86.4	86.2	86.0	85.8	85.5
110°	100.7	100.8	101.0	101.1	101.3	101.2	100.9	100.6	100.4	100.1	100.0



TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	115.9	115.9	115.9	115.9	115.9	115.8	115.4	115.1	114.7	114.4	114.4
115°	129.6	129.7	129.8	129.8	129.9	129.9	129.8	129.8	129.7	129.6	129.8
117.5°	143.6	143.8	144.0	144.2	144.4	144.5	144.5	144.5	144.5	144.5	144.7
120°	158.5	158.7	158.8	158.9	159.1	159.2	159.2	159.3	159.4	159.4	159.8
122.5°	172.8	173.0	173.2	173.4	173.6	173.8	174.0	174.2	174.4	174.7	174.8
125°	187.1	187.4	187.7	187.9	188.2	188.5	188.7	189.0	189.3	189.6	189.7
127.5°	201.4	201.7	202.0	202.2	202.5	202.8	203.3	203.7	204.1	204.5	204.6
130°	215.4	215.9	216.4	216.8	217.3	217.7	218.0	218.2	218.5	218.8	219.0
132.5°	230.0	230.4	230.7	231.0	231.4	231.7	232.1	232.4	232.7	233.1	233.2
135°	245.2	245.4	245.5	245.6	245.8	246.0	246.3	246.5	246.8	247.1	247.1
137.5°	258.6	258.8	259.0	259.2	259.4	259.7	260.0	260.4	260.7	261.1	260.9
140°	271.7	272.2	272.7	273.1	273.6	273.9	273.9	274.0	274.1	274.1	274.1
142.5°	285.1	285.4	285.8	286.1	286.5	286.7	286.7	286.8	286.9	286.9	286.8
145°	297.9	298.1	298.4	298.7	299.0	299.1	299.2	299.3	299.3	299.4	299.2
147.5°	309.4	309.8	310.3	310.7	311.1	311.3	311.3	311.3	311.3	311.3	311.1
150°	320.4	320.8	321.2	321.6	322.0	322.2	322.2	322.2	322.2	322.2	322.1
152.5°	331.0	331.4	331.7	332.1	332.4	332.5	332.4	332.2	332.1	332.0	331.9
155°	340.5	341.0	341.4	341.9	342.4	342.5	342.2	341.9	341.7	341.4	341.3
157.5°	349.3	349.7	350.1	350.5	350.9	351.0	350.7	350.5	350.2	349.9	349.8
160°	357.8	358.1	358.4	358.6	358.9	358.9	358.5	358.2	357.9	357.5	357.5
162.5°	364.2	364.7	365.2	365.6	366.1	366.2	365.8	365.5	365.2	364.8	364.8
165°	370.3	370.8	371.2	371.7	372.2	372.2	371.8	371.4	371.0	370.6	370.6
167.5°	375.8	376.2	376.6	377.0	377.4	377.4	377.0	376.6	376.2	375.8	375.7
170°	379.7	380.2	380.7	381.1	381.6	381.6	381.1	380.7	380.2	379.7	379.7
172.5°	382.8	383.2	383.7	384.2	384.7	384.7	384.3	383.9	383.5	383.1	383.1
175°	384.9	385.4	385.8	386.3	386.8	386.8	386.4	386.0	385.6	385.2	385.2
177.5°	386.1	386.6	387.1	387.5	388.0	388.0	387.6	387.2	386.8	386.4	386.4
180°	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3



TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-G1

**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°	5.5	4.7	3.8	3.0	2.3	1.7	1.0	0.3	1.0	1.7	2.3
92.5°	12.0	11.6	11.2	10.8	10.3	9.9	9.5	9.1	9.5	9.9	10.3
95°	21.4	20.9	20.4	19.8	19.4	18.9	18.4	18.0	18.4	18.9	19.4
97.5°	32.0	31.6	31.2	30.9	30.5	30.2	29.9	29.5	29.9	30.2	30.5
100°	44.1	43.7	43.4	43.0	42.6	42.2	41.8	41.4	41.8	42.2	42.6
102.5°	57.2	56.7	56.2	55.9	55.7	55.5	55.3	55.1	55.3	55.5	55.7
105°	70.6	70.0	69.4	69.0	68.9	68.7	68.6	68.5	68.6	68.7	68.9
107.5°	85.3	85.0	84.7	84.6	84.5	84.4	84.4	84.3	84.4	84.4	84.5
110°	99.8	99.7	99.6	99.4	99.3	99.2	99.0	98.9	99.0	99.2	99.3





TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	114.4	114.4	114.4	114.4	114.3	114.2	114.2	114.1	114.2	114.2	114.3
115°	129.9	130.0	130.2	130.1	129.9	129.7	129.5	129.3	129.5	129.7	129.9
117.5°	144.8	144.9	145.1	145.1	145.0	145.0	144.9	144.8	144.9	145.0	145.0
120°	160.1	160.5	160.8	160.8	160.3	159.9	159.5	159.1	159.5	159.9	160.3
122.5°	174.9	175.1	175.2	175.1	174.9	174.6	174.3	174.0	174.3	174.6	174.9
125°	189.8	190.0	190.1	190.1	189.9	189.7	189.5	189.3	189.5	189.7	189.9
127.5°	204.7	204.9	205.0	204.9	204.5	204.1	203.7	203.3	203.7	204.1	204.5
130°	219.2	219.4	219.6	219.4	218.9	218.3	217.8	217.2	217.8	218.3	218.9
132.5°	233.3	233.5	233.6	233.4	232.9	232.3	231.8	231.2	231.8	232.3	232.9
135°	247.2	247.3	247.3	247.2	246.8	246.4	246.0	245.5	246.0	246.4	246.8
137.5°	260.7	260.5	260.3	260.0	259.6	259.3	259.0	258.6	259.0	259.3	259.6
140°	274.0	273.9	273.9	273.7	273.3	273.0	272.7	272.3	272.7	273.0	273.3
142.5°	286.7	286.5	286.4	286.1	285.8	285.5	285.1	284.8	285.1	285.5	285.8
145°	299.0	298.8	298.6	298.4	298.3	298.1	298.0	297.9	298.0	298.1	298.3
147.5°	310.9	310.7	310.5	310.2	309.9	309.7	309.4	309.1	309.4	309.7	309.9
150°	322.0	321.8	321.7	321.5	321.4	321.3	321.1	321.0	321.1	321.3	321.4
152.5°	331.8	331.8	331.7	331.6	331.3	331.1	330.9	330.7	330.9	331.1	331.3
155°	341.3	341.2	341.1	341.1	341.1	341.1	341.1	341.1	341.1	341.1	341.1
157.5°	349.8	349.7	349.6	349.6	349.7	349.8	349.8	349.9	349.8	349.8	349.7
160°	357.5	357.5	357.5	357.6	357.7	357.9	358.0	358.1	358.0	357.9	357.7
162.5°	364.7	364.6	364.5	364.6	364.8	365.0	365.2	365.4	365.2	365.0	364.8
165°	370.6	370.6	370.6	370.7	370.9	371.1	371.3	371.5	371.3	371.1	370.9
167.5°	375.6	375.6	375.5	375.6	375.9	376.1	376.4	376.7	376.4	376.1	375.9
170°	379.7	379.7	379.7	379.9	380.1	380.4	380.7	380.9	380.7	380.4	380.1
172.5°	383.1	383.1	383.1	383.2	383.5	383.8	384.0	384.3	384.0	383.8	383.5
175°	385.2	385.2	385.2	385.3	385.6	385.9	386.2	386.4	386.2	385.9	385.6
177.5°	386.4	386.4	386.4	386.6	386.8	387.1	387.4	387.6	387.4	387.1	386.8
180°	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3



TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-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°	3.0	3.8	4.7	5.5	6.4	7.3	7.6	7.8	8.1	8.4	8.6
92.5°	10.8	11.2	11.6	12.0	12.4	12.8	13.0	13.2	13.4	13.6	13.6
95°	19.8	20.4	20.9	21.4	22.0	22.5	22.8	23.1	23.3	23.6	23.7
97.5°	30.9	31.2	31.6	32.0	32.5	32.9	33.2	33.5	33.9	34.2	34.3
100°	43.0	43.4	43.7	44.1	44.4	44.7	44.9	45.1	45.3	45.5	45.7
102.5°	55.9	56.2	56.7	57.2	57.6	58.1	58.3	58.5	58.7	58.9	59.0
105°	69.0	69.4	70.0	70.6	71.2	71.8	71.8	71.8	71.8	71.8	71.9
107.5°	84.6	84.7	85.0	85.3	85.5	85.8	86.0	86.2	86.4	86.6	86.7
110°	99.4	99.6	99.7	99.8	100.0	100.1	100.4	100.6	100.9	101.2	101.3



TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	114.4	114.4	114.4	114.4	114.4	114.4	114.7	115.1	115.4	115.8	115.9
115°	130.1	130.2	130.0	129.9	129.8	129.6	129.7	129.8	129.8	129.9	129.9
117.5°	145.1	145.1	144.9	144.8	144.7	144.5	144.5	144.5	144.5	144.5	144.4
120°	160.8	160.8	160.5	160.1	159.8	159.4	159.4	159.3	159.2	159.2	159.1
122.5°	175.1	175.2	175.1	174.9	174.8	174.7	174.4	174.2	174.0	173.8	173.6
125°	190.1	190.1	190.0	189.8	189.7	189.6	189.3	189.0	188.7	188.5	188.2
127.5°	204.9	205.0	204.9	204.7	204.6	204.5	204.1	203.7	203.3	202.8	202.5
130°	219.4	219.6	219.4	219.2	219.0	218.8	218.5	218.2	218.0	217.7	217.3
132.5°	233.4	233.6	233.5	233.3	233.2	233.1	232.7	232.4	232.1	231.7	231.4
135°	247.2	247.3	247.3	247.2	247.1	247.1	246.8	246.5	246.3	246.0	245.8
137.5°	260.0	260.3	260.5	260.7	260.9	261.1	260.7	260.4	260.0	259.7	259.4
140°	273.7	273.9	273.9	274.0	274.1	274.1	274.1	274.0	273.9	273.9	273.6
142.5°	286.1	286.4	286.5	286.7	286.8	286.9	286.9	286.8	286.7	286.7	286.5
145°	298.4	298.6	298.8	299.0	299.2	299.4	299.3	299.3	299.2	299.1	299.0
147.5°	310.2	310.5	310.7	310.9	311.1	311.3	311.3	311.3	311.3	311.3	311.1
150°	321.5	321.7	321.8	322.0	322.1	322.2	322.2	322.2	322.2	322.2	322.0
152.5°	331.6	331.7	331.8	331.8	331.9	332.0	332.1	332.2	332.4	332.5	332.4
155°	341.1	341.1	341.2	341.3	341.3	341.4	341.7	341.9	342.2	342.5	342.4
157.5°	349.6	349.6	349.7	349.8	349.8	349.9	350.2	350.5	350.7	351.0	350.9
160°	357.6	357.5	357.5	357.5	357.5	357.5	357.9	358.2	358.5	358.9	358.9
162.5°	364.6	364.5	364.6	364.7	364.8	364.8	365.2	365.5	365.8	366.2	366.1
165°	370.7	370.6	370.6	370.6	370.6	370.6	371.0	371.4	371.8	372.2	372.2
167.5°	375.6	375.5	375.6	375.6	375.7	375.8	376.2	376.6	377.0	377.4	377.4
170°	379.9	379.7	379.7	379.7	379.7	379.7	380.2	380.7	381.1	381.6	381.6
172.5°	383.2	383.1	383.1	383.1	383.1	383.1	383.5	383.9	384.3	384.7	384.7
175°	385.3	385.2	385.2	385.2	385.2	385.2	385.6	386.0	386.4	386.8	386.8
177.5°	386.6	386.4	386.4	386.4	386.4	386.4	386.8	387.2	387.6	388.0	388.0
180°	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3	387.3



TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-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°	8.7	8.9	9.0	9.1
92.5°	13.5	13.4	13.2	13.1
95°	23.7	23.7	23.7	23.7
97.5°	34.3	34.2	34.1	34.1
100°	45.8	46.0	46.1	46.2
102.5°	58.9	58.9	58.8	58.7
105°	72.0	72.1	72.3	72.4
107.5°	86.6	86.5	86.5	86.4
110°	101.1	101.0	100.8	100.7



TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	115.9	115.9	115.9	115.9
115°	129.8	129.8	129.7	129.6
117.5°	144.2	144.0	143.8	143.6
120°	158.9	158.8	158.7	158.5
122.5°	173.4	173.2	173.0	172.8
125°	187.9	187.7	187.4	187.1
127.5°	202.2	202.0	201.7	201.4
130°	216.8	216.4	215.9	215.4
132.5°	231.0	230.7	230.4	230.0
135°	245.6	245.5	245.4	245.2
137.5°	259.2	259.0	258.8	258.6
140°	273.1	272.7	272.2	271.7
142.5°	286.1	285.8	285.4	285.1
145°	298.7	298.4	298.1	297.9
147.5°	310.7	310.3	309.8	309.4
150°	321.6	321.2	320.8	320.4
152.5°	332.1	331.7	331.4	331.0
155°	341.9	341.4	341.0	340.5
157.5°	350.5	350.1	349.7	349.3
160°	358.6	358.4	358.1	357.8
162.5°	365.6	365.2	364.7	364.2
165°	371.7	371.2	370.8	370.3
167.5°	377.0	376.6	376.2	375.8
170°	381.1	380.7	380.2	379.7
172.5°	384.2	383.7	383.2	382.8
175°	386.3	385.8	385.4	384.9
177.5°	387.5	387.1	386.6	386.1
180°	387.3	387.3	387.3	387.3



TEST NUMBER: P831658

CATALOG NUMBER: S123DIP-S775D365U935-4F0-1E-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	16.06	17.12	16.79	17.87	18.75	18.29	19.36	19.02	20.10	20.99
	3H	17.72	18.67	18.46	19.43	20.34	19.73	20.69	20.47	21.44	22.36
	4H	18.31	19.21	19.07	19.97	20.90	20.19	21.09	20.95	21.85	22.78
	6H	18.69	19.52	19.46	20.29	21.23	20.48	21.31	21.25	22.08	23.02
	8H	18.79	19.58	19.57	20.37	21.31	20.55	21.34	21.33	22.13	23.07
	12H	18.84	19.59	19.63	20.38	21.35	20.57	21.32	21.36	22.11	23.08
4H	2H	16.66	17.56	17.42	18.32	19.25	18.48	19.38	19.24	20.14	21.07
	3H	18.50	19.25	19.28	20.05	20.99	20.12	20.87	20.89	21.66	22.61
	4H	19.21	19.89	20.00	20.69	21.66	20.71	21.39	21.50	22.19	23.16
	6H	19.69	20.28	20.50	21.10	22.09	21.12	21.71	21.93	22.53	23.52
	8H	19.83	20.38	20.65	21.20	22.19	21.24	21.79	22.05	22.61	23.60
	12H	19.91	20.40	20.74	21.24	22.24	21.29	21.79	22.12	22.63	23.62
8H	4H	19.49	20.04	20.30	20.86	21.85	20.83	21.38	21.64	22.20	23.19
	6H	20.09	20.54	20.92	21.40	22.39	21.34	21.79	22.18	22.65	23.65
	8H	20.29	20.70	21.15	21.55	22.56	21.52	21.92	22.37	22.78	23.79
	12H	20.43	20.78	21.28	21.63	22.69	21.63	21.98	22.48	22.83	23.90
12H	4H	19.50	19.99	20.33	20.83	21.83	20.81	21.31	21.64	22.15	23.14
	6H	20.14	20.54	20.99	21.40	22.41	21.35	21.76	22.21	22.61	23.62
	8H	20.38	20.73	21.23	21.58	22.65	21.56	21.92	22.42	22.76	23.83