

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: P831665

Luminaire Tested: S123DIP-S775D365U950-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

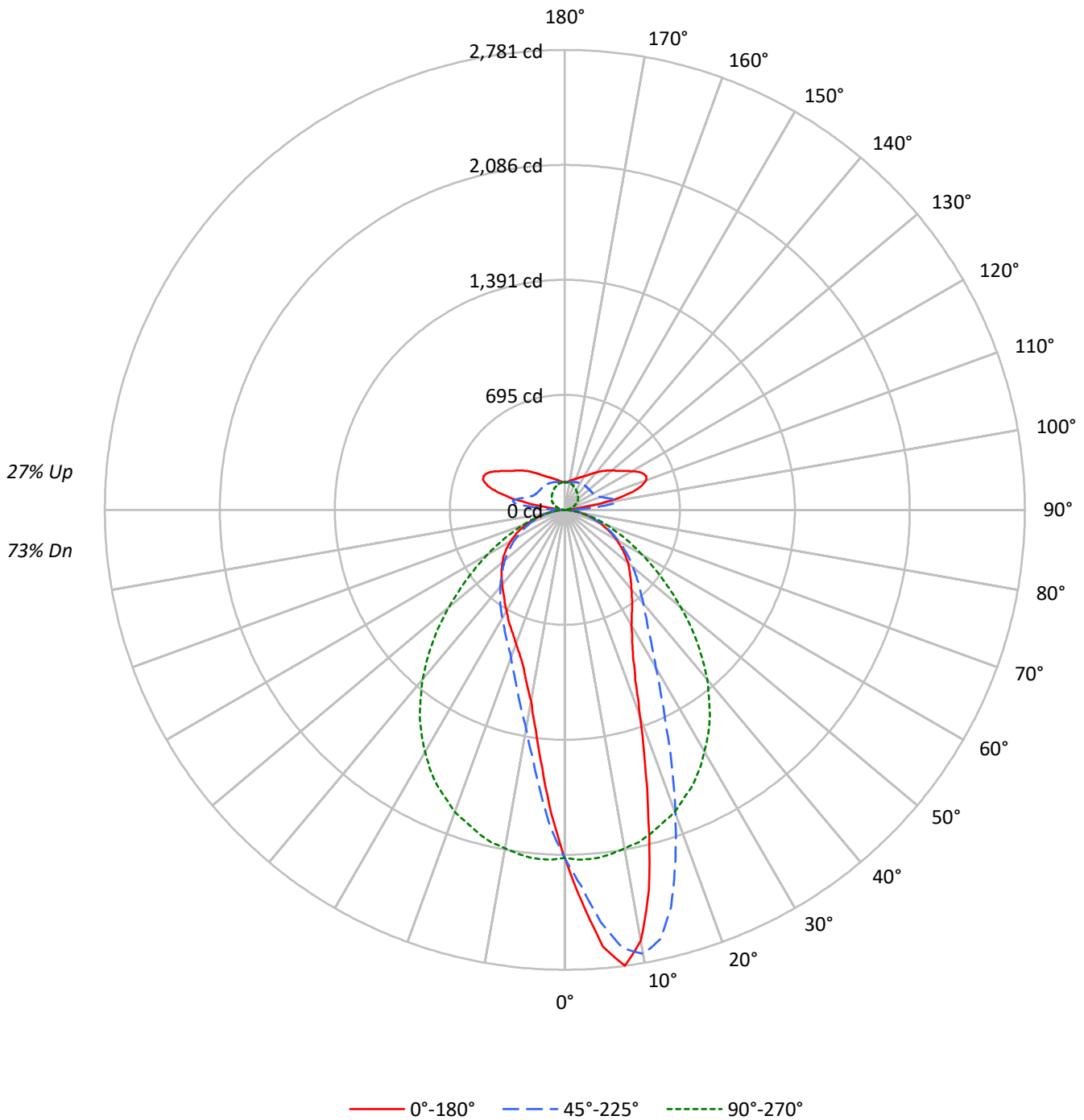
Test Method: LM-79-2019  
Report Number: P831665  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D365U950-4F0-1E-UDD-G4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4637.3 lumens  
Efficiency: N/A  
Efficacy: 129.2 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: P831665  
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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	113	113	113	113	107	107	107	107	96	96	96	86	86	86	77	77	77	73		
1	104	99	96	92	98	95	91	88	86	83	81	77	75	73	69	68	67	63		
2	95	88	82	77	90	84	78	74	76	72	68	69	66	63	62	60	57	54		
3	87	78	71	65	83	75	68	63	68	63	58	62	58	54	56	53	50	47		
4	81	70	62	56	76	67	60	54	61	55	51	56	51	47	51	47	44	41		
5	74	63	55	49	71	60	53	48	55	49	45	51	46	42	46	42	39	36		
6	69	57	49	43	66	55	48	42	50	44	40	46	41	37	42	38	35	33		
7	64	52	44	39	61	50	43	38	46	40	36	43	38	34	39	35	32	29		
8	60	48	40	35	57	46	39	34	43	37	32	39	34	31	36	32	29	27		
9	56	44	37	32	54	43	36	31	40	34	29	37	32	28	34	30	27	25		
10	53	41	34	29	50	40	33	28	37	31	27	34	29	26	32	27	24	23		

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

	0°	45°	90°	135°	180°
0°	22657	22657	22657	22657	22657
5°	28653	27044	22859	18421	16928
10°	28931	29806	22707	14684	12832
15°	21790	27673	22552	12435	10852
20°	15182	22393	22265	10875	9857
25°	11577	17221	21773	10005	9246
30°	10015	13682	20990	9390	8753
35°	9293	11552	20086	8946	8407
40°	8798	10361	18816	8524	8289
45°	8505	9590	17203	8193	8237
50°	8358	8979	15292	7892	8194
55°	8047	8533	13418	7606	8231
60°	7759	8054	11565	7339	8094
65°	7289	7600	9976	7053	7936
70°	6732	7024	8485	6578	7468
75°	6093	6297	7270	6114	6825
80°	5027	5511	5752	5331	5752
85°	3977	4458	4224	4520	4582

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 19642 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	199.0	4.3
10°-20°	495.1	10.7
20°-30°	586.2	12.6
30°-40°	589.4	12.7
40°-50°	540.7	11.7
50°-60°	446.3	9.6
60°-70°	315.7	6.8
70°-80°	168.5	3.6
80°-90°	43.7	0.9
90°-100°	90.4	1.9
100°-110°	264.6	5.7
110°-120°	258.4	5.6
120°-130°	205.8	4.4
130°-140°	162.3	3.5
140°-150°	121.1	2.6
150°-160°	84.4	1.8
160°-170°	49.6	1.1
170°-180°	16.1	0.3
0°-30°	1280.2	27.6
0°-40°	1869.6	40.3
0°-60°	2856.6	61.6
0°-90°	3384.5	73.0
90°-120°	613.3	13.2
90°-150°	1102.5	23.8
90°-180°	1253.0	27.0
0°-180°	4637.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2105	2105	2105	2105	2105	
5°	2652	2503	2116	1705	1567	253
15°	1955	2483	2024	1116	974	540
25°	975	1450	1833	842	778	460
35°	707	879	1529	681	640	444
45°	559	630	1130	538	541	433
55°	429	455	715	405	439	384
65°	286	298	392	277	312	284
75°	146	151	175	147	164	154
85°	32	36	34	37	37	36
90°	10	8	1	8	10	7
95°	39	200	12	200	39	64
105°	429	271	39	271	429	428
115°	522	207	69	207	522	509
125°	411	194	96	194	411	372
135°	333	191	113	191	333	259
145°	261	188	128	188	261	165
155°	216	182	146	182	216	101
165°	188	175	160	175	188	54
175°	170	168	166	168	170	16
180°	166	166	166	166	166	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9
2.5°	2372.5	2370.0	2367.6	2355.4	2343.2	2337.3	2331.5	2313.9	2296.3	2276.8	2257.2
5°	2651.8	2658.7	2665.5	2657.7	2649.9	2625.9	2602.0	2570.3	2538.5	2502.9	2467.2
7.5°	2780.8	2784.7	2788.6	2783.7	2778.8	2772.5	2766.1	2737.8	2709.5	2672.8	2636.2
10°	2646.9	2655.7	2664.5	2683.6	2702.6	2724.1	2745.6	2741.7	2737.8	2727.0	2716.3
12.5°	2353.0	2363.7	2374.4	2412.5	2450.6	2499.5	2548.3	2590.3	2632.3	2661.6	2690.9
15°	1955.4	1985.2	2015.0	2049.7	2084.3	2156.1	2227.9	2316.3	2404.7	2483.3	2562.0
17.5°	1610.6	1621.9	1633.1	1670.2	1707.3	1797.7	1888.0	1990.1	2092.2	2222.6	2353.0
20°	1325.4	1335.7	1345.9	1394.8	1443.6	1514.4	1585.2	1700.0	1814.8	1954.9	2095.1
22.5°	1113.5	1129.6	1145.7	1173.1	1200.4	1268.3	1336.2	1438.2	1540.3	1695.1	1849.9
25°	974.8	986.5	998.2	1014.8	1031.4	1085.6	1139.8	1223.8	1307.8	1450.0	1592.1
27.5°	880.0	884.9	889.8	906.4	923.0	958.2	993.3	1065.6	1137.9	1258.5	1379.1
30°	805.8	809.2	812.6	827.3	841.9	865.9	889.8	942.1	994.3	1100.8	1207.2
32.5°	754.0	756.5	758.9	770.2	781.4	798.5	815.6	853.7	891.8	979.7	1067.6
35°	707.2	708.6	710.1	718.4	726.7	739.4	752.1	780.9	809.7	879.1	948.4
37.5°	666.1	668.1	670.0	674.9	679.8	691.0	702.3	725.2	748.2	801.4	854.6
40°	626.1	629.5	632.9	636.3	639.8	649.0	658.3	675.9	693.5	737.4	781.4
42.5°	591.9	595.3	598.7	600.2	601.7	607.0	612.4	628.5	644.6	677.4	710.1
45°	558.7	560.2	561.6	563.1	564.6	568.9	573.3	587.5	601.7	630.0	658.3
47.5°	528.4	528.4	528.4	529.4	530.4	534.3	538.2	548.4	558.7	580.7	602.6
50°	499.1	499.1	499.1	497.6	496.2	498.6	501.1	508.9	516.7	536.2	555.8
52.5°	463.9	463.9	463.9	464.4	464.9	464.9	464.9	471.8	478.6	496.2	513.8
55°	428.8	430.7	432.7	431.2	429.8	430.7	431.7	436.1	440.5	454.7	468.8
57.5°	393.6	394.6	395.6	395.1	394.6	395.1	395.6	399.5	403.4	414.1	424.9
60°	360.4	360.4	360.4	359.4	358.5	359.4	360.4	362.4	364.3	374.1	383.9
62.5°	323.3	323.8	324.3	324.8	325.3	324.3	323.3	325.7	328.2	335.5	342.8
65°	286.2	286.7	287.2	288.6	290.1	289.1	288.1	290.6	293.0	298.4	303.8
67.5°	253.0	252.0	251.0	251.5	252.0	253.5	254.9	255.4	255.9	261.8	267.6
70°	213.9	214.9	215.9	215.4	214.9	215.4	215.9	217.3	218.8	223.2	227.6
72.5°	178.7	179.2	179.7	179.7	179.7	180.7	181.7	183.1	184.6	187.0	189.5
75°	146.5	146.5	146.5	147.5	148.5	149.0	149.4	149.4	149.4	151.4	153.3
77.5°	111.3	113.8	116.2	115.7	115.3	116.2	117.2	118.7	120.1	121.1	122.1
80°	81.1	81.1	81.1	81.6	82.0	83.5	85.0	86.0	86.9	88.9	90.8
82.5°	51.8	52.3	52.7	54.2	55.7	56.7	57.6	59.1	60.6	60.6	60.6
85°	32.2	31.3	30.3	31.3	32.2	33.2	34.2	34.7	35.2	36.1	37.1
87.5°	15.6	15.6	15.6	15.6	15.6	16.1	16.6	16.6	16.6	16.6	16.6
90°	9.8	10.1	9.8	9.4	9.8	9.1	8.8	8.4	8.1	8.4	7.4
92.5°	17.9	18.5	18.2	19.6	20.2	22.6	26.0	33.4	46.9	62.7	69.4
95°	39.1	40.5	42.8	45.8	52.3	64.4	82.3	121.4	162.2	199.9	178.0
97.5°	80.2	83.9	92.0	104.8	127.4	165.9	210.4	278.8	317.9	307.5	229.6
100°	211.4	211.0	224.2	248.8	282.8	330.7	370.2	397.5	385.7	319.3	215.8
102.5°	334.8	344.5	355.0	373.2	397.8	423.8	442.6	436.9	389.0	297.3	195.5
105°	428.8	430.5	441.3	454.1	469.6	478.4	472.0	438.3	367.8	271.0	179.7
107.5°	490.2	493.9	498.3	504.3	506.4	497.3	471.0	418.0	337.5	247.8	168.2
110°	525.2	525.9	526.6	523.9	514.5	490.9	448.4	386.3	309.1	228.6	162.2



TEST NUMBER: P831665

CATALOG NUMBER: S123DIP-S775D365U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	532.3	532.0	528.6	518.8	499.6	467.6	418.7	355.0	284.5	215.8	158.8
115°	521.5	519.8	513.1	498.3	473.0	436.2	386.7	328.0	265.7	207.3	158.4
117.5°	497.9	495.6	485.5	468.9	442.6	404.6	359.0	307.1	253.2	201.6	158.8
120°	466.9	464.9	456.8	437.9	411.3	377.2	336.8	291.3	243.7	197.9	160.1
122.5°	437.9	435.2	426.1	409.6	386.7	355.7	318.9	278.8	236.0	195.5	162.5
125°	411.3	408.9	400.5	385.7	364.1	337.1	304.8	268.0	229.6	193.5	164.9
127.5°	388.4	386.3	378.6	365.8	346.2	321.3	291.6	258.2	223.5	192.5	167.6
130°	369.5	366.8	359.7	347.6	329.7	306.8	279.5	249.1	218.8	191.5	170.2
132.5°	350.9	349.3	343.2	331.1	314.5	293.0	268.0	240.7	214.4	191.2	172.3
135°	333.4	331.1	325.0	314.9	298.4	279.1	257.2	233.3	210.7	190.8	174.3
137.5°	314.9	312.9	307.8	297.3	283.2	266.0	246.4	226.2	207.3	190.1	175.6
140°	295.3	295.7	290.3	280.8	268.0	253.5	237.3	220.1	204.3	189.8	177.0
142.5°	277.1	277.5	272.7	264.6	254.2	242.1	228.6	214.4	201.6	189.1	178.0
145°	260.6	259.9	257.2	250.1	241.7	231.9	221.2	210.0	199.2	188.5	178.3
147.5°	246.4	246.1	243.4	238.3	231.6	224.5	215.4	206.3	196.9	187.4	178.3
150°	234.3	234.3	232.3	228.6	223.5	217.1	210.0	202.3	194.5	186.1	178.3
152.5°	224.2	224.2	223.2	219.8	216.1	211.0	205.0	198.6	191.8	184.4	177.3
155°	216.1	215.8	215.1	212.4	209.4	205.3	200.3	194.9	189.1	182.4	176.7
157.5°	208.3	208.3	207.7	205.6	202.9	199.6	195.5	190.8	186.1	180.7	175.6
160°	200.9	201.3	201.3	199.2	196.9	194.5	191.2	187.4	183.1	178.7	175.0
162.5°	194.2	194.5	194.5	192.8	191.5	189.5	186.4	183.4	180.0	176.7	173.6
165°	188.5	188.5	188.8	187.4	186.1	184.4	182.0	180.0	177.3	174.6	172.3
167.5°	182.7	182.7	183.1	182.0	181.4	180.0	178.7	177.0	174.6	172.6	170.9
170°	177.7	177.7	178.0	177.3	177.0	176.3	175.0	174.0	172.3	170.6	169.6
172.5°	172.9	173.3	174.0	173.3	173.3	172.9	171.9	171.3	169.9	168.9	168.6
175°	169.6	169.9	170.2	169.9	169.9	169.9	169.2	168.9	168.2	167.6	167.6
177.5°	167.2	167.2	167.9	167.6	167.9	167.9	167.6	167.2	166.9	166.5	166.9
180°	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9
2.5°	2251.4	2245.5	2224.0	2202.5	2178.1	2153.7	2135.6	2117.6	2090.7	2063.8	2041.9
5°	2439.9	2412.5	2367.1	2321.7	2260.2	2198.6	2157.1	2115.6	2059.9	2004.3	1959.8
7.5°	2589.3	2542.4	2478.9	2415.5	2334.9	2254.3	2178.1	2101.9	2017.0	1932.0	1862.6
10°	2684.6	2652.8	2579.6	2506.3	2398.4	2290.4	2184.0	2077.5	1968.1	1858.7	1766.9
12.5°	2693.8	2696.8	2629.4	2562.0	2439.9	2317.8	2188.4	2059.0	1921.2	1783.5	1676.6
15°	2612.3	2662.6	2625.5	2588.3	2465.3	2342.2	2183.0	2023.8	1865.1	1706.4	1582.8
17.5°	2460.9	2568.8	2574.2	2579.6	2456.5	2333.4	2157.1	1980.8	1801.1	1621.4	1491.5
20°	2254.3	2413.5	2468.2	2522.9	2422.8	2322.7	2133.2	1943.7	1742.5	1541.3	1405.0
22.5°	2043.3	2236.7	2336.8	2437.0	2362.7	2288.5	2086.8	1885.1	1672.7	1460.2	1322.0
25°	1803.1	2014.0	2167.9	2321.7	2276.3	2230.9	2032.1	1833.3	1607.2	1381.1	1240.0
27.5°	1593.5	1807.9	1993.5	2179.1	2169.3	2159.6	1962.3	1765.0	1533.5	1302.0	1165.7
30°	1407.0	1606.7	1814.3	2021.8	2045.8	2069.7	1879.2	1688.8	1456.8	1224.8	1093.5
32.5°	1241.9	1416.3	1639.0	1861.7	1908.5	1955.4	1783.5	1611.6	1382.1	1152.5	1026.1
35°	1106.6	1264.9	1487.6	1710.3	1768.9	1827.5	1678.0	1528.6	1304.9	1081.2	960.6
37.5°	987.0	1119.3	1336.7	1554.0	1625.8	1697.6	1563.8	1429.9	1220.4	1010.9	900.1
40°	887.9	994.3	1194.1	1393.8	1476.8	1559.8	1449.5	1339.1	1140.3	941.6	839.5
42.5°	804.8	899.6	1080.8	1261.9	1341.5	1421.1	1327.9	1234.6	1057.8	881.0	787.7
45°	734.0	809.7	974.3	1138.9	1214.6	1290.3	1210.2	1130.1	974.3	818.5	731.6
47.5°	667.6	732.6	873.2	1013.8	1081.2	1148.6	1086.1	1023.6	891.8	759.9	681.3
50°	608.0	660.3	783.3	906.4	965.0	1023.6	968.4	913.2	804.8	696.4	628.0
52.5°	556.2	598.7	701.8	804.8	855.1	905.4	858.1	810.7	724.7	638.8	579.2
55°	505.0	541.1	630.5	719.9	754.0	788.2	751.6	715.0	645.6	576.3	526.0
57.5°	457.1	489.3	562.6	635.9	662.2	688.6	655.4	622.2	569.9	517.7	475.7
60°	410.2	436.6	497.6	558.7	574.8	590.9	564.1	537.2	500.6	463.9	426.3
62.5°	366.8	390.7	436.1	481.5	492.3	503.0	482.5	462.0	434.2	406.3	377.0
65°	321.8	339.9	377.0	414.1	421.0	427.8	409.7	391.7	370.7	349.7	328.2
67.5°	280.3	293.0	323.3	353.6	354.1	354.6	339.9	325.3	313.5	301.8	284.7
70°	239.8	252.0	272.0	292.0	292.5	293.0	281.3	269.6	260.8	252.0	239.3
72.5°	198.3	207.1	222.2	237.3	236.4	235.4	228.1	220.7	213.9	207.1	197.8
75°	160.7	168.0	178.3	188.5	185.6	182.6	178.7	174.8	169.0	163.1	157.3
77.5°	126.5	130.9	136.7	142.6	140.6	138.7	135.3	131.9	127.5	123.1	120.6
80°	92.8	94.7	98.7	102.6	101.6	100.6	96.7	92.8	91.8	90.8	87.4
82.5°	63.0	65.4	66.4	67.4	66.9	66.4	63.5	60.6	59.6	58.6	58.1
85°	37.6	38.1	38.6	39.1	37.6	36.1	35.2	34.2	34.2	34.2	33.7
87.5°	17.1	17.6	17.6	17.6	17.1	16.6	15.6	14.7	15.1	15.6	15.6
90°	6.4	5.4	4.4	3.7	3.0	2.0	1.3	0.7	1.3	2.0	3.0
92.5°	51.9	34.0	23.3	17.2	13.8	10.8	7.4	5.1	7.4	10.8	13.8
95°	122.7	72.5	43.8	30.7	21.9	16.2	12.5	11.5	12.5	16.2	21.9
97.5°	136.5	78.2	49.9	35.4	26.6	21.6	18.5	18.2	18.5	21.6	26.6
100°	127.1	77.2	53.6	40.5	32.4	27.6	25.3	24.9	25.3	27.6	32.4
102.5°	119.0	78.6	58.0	46.2	39.1	34.7	32.7	32.0	32.7	34.7	39.1
105°	116.0	81.2	63.0	52.6	46.2	42.1	40.1	39.1	40.1	42.1	46.2
107.5°	115.3	85.6	69.4	59.7	53.6	49.6	47.5	46.5	47.5	49.6	53.6
110°	117.0	91.4	76.2	66.8	61.0	57.3	55.6	54.6	55.6	57.3	61.0





TEST NUMBER: P831665

CATALOG NUMBER: S123DIP-S775D365U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	120.4	97.1	83.3	74.2	68.4	64.7	63.0	62.0	63.0	64.7	68.4
115°	124.1	103.5	90.7	81.6	75.9	72.5	70.5	69.1	70.5	72.5	75.9
117.5°	128.8	110.2	97.4	89.0	82.6	79.6	77.9	76.2	77.9	79.6	82.6
120°	134.2	116.6	104.5	96.1	89.7	86.3	84.6	83.6	84.6	86.3	89.7
122.5°	139.2	123.4	111.6	102.5	96.4	92.7	91.0	90.0	91.0	92.7	96.4
125°	144.6	129.8	118.0	108.9	102.5	98.8	96.8	96.1	96.8	98.8	102.5
127.5°	149.0	135.5	124.1	115.0	107.9	104.2	101.8	100.8	101.8	104.2	107.9
130°	153.4	140.6	129.5	120.4	113.3	109.2	106.2	105.2	106.2	109.2	113.3
132.5°	157.4	145.0	134.2	125.4	118.3	113.3	109.9	108.6	109.9	113.3	118.3
135°	160.8	149.3	138.9	129.8	122.7	117.7	113.9	112.6	113.9	117.7	122.7
137.5°	163.5	152.4	142.3	133.8	126.8	121.4	117.7	116.3	117.7	121.4	126.8
140°	165.5	155.4	145.6	137.2	130.5	125.1	121.7	120.0	121.7	125.1	130.5
142.5°	167.6	157.8	148.3	140.6	133.8	129.1	125.4	124.1	125.4	129.1	133.8
145°	168.9	159.8	151.0	143.3	137.5	132.5	129.5	128.4	129.5	132.5	137.5
147.5°	169.9	161.5	153.4	146.6	140.9	136.5	133.5	132.8	133.5	136.5	140.9
150°	170.2	163.2	155.4	149.3	144.6	140.2	137.5	137.2	137.5	140.2	144.6
152.5°	170.9	164.2	157.8	152.0	148.0	144.3	141.6	141.6	141.6	144.3	148.0
155°	170.9	165.5	159.8	155.1	151.4	148.0	146.0	146.0	146.0	148.0	151.4
157.5°	171.3	166.2	161.5	157.8	154.4	151.4	149.7	149.3	149.7	151.4	154.4
160°	171.3	167.2	163.2	159.8	157.4	154.7	153.4	153.4	153.4	154.7	157.4
162.5°	170.9	167.6	164.2	161.5	159.5	157.4	156.4	156.4	156.4	157.4	159.5
165°	170.2	167.9	165.2	162.8	161.5	159.8	159.1	159.5	159.1	159.8	161.5
167.5°	169.9	167.9	165.9	164.2	163.2	161.8	161.5	161.8	161.5	161.8	163.2
170°	168.9	167.6	165.9	165.2	164.5	163.5	163.2	163.8	163.2	163.5	164.5
172.5°	168.6	167.6	166.2	165.9	165.5	164.9	164.9	165.2	164.9	164.9	165.5
175°	167.9	167.2	166.5	166.2	166.2	165.5	165.9	166.2	165.9	165.5	166.2
177.5°	167.6	166.9	166.5	166.5	166.5	166.2	166.5	166.9	166.5	166.2	166.5
180°	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5



TEST NUMBER: P831665

CATALOG NUMBER: S123DIP-S775D365U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9	2104.9
2.5°	2019.9	2000.8	1981.8	1967.1	1952.5	1927.6	1902.7	1896.8	1891.0	1882.7	1874.4
5°	1915.4	1868.5	1821.6	1779.6	1737.6	1704.9	1672.2	1650.7	1629.2	1613.6	1597.9
7.5°	1793.3	1723.0	1652.6	1602.8	1553.0	1505.6	1458.3	1443.1	1428.0	1407.5	1387.0
10°	1675.1	1597.4	1519.8	1454.8	1389.9	1343.5	1297.1	1278.5	1260.0	1234.1	1208.2
12.5°	1569.6	1484.6	1399.7	1334.2	1268.8	1223.8	1178.9	1152.1	1125.2	1110.5	1095.9
15°	1459.2	1368.4	1277.6	1217.0	1156.5	1115.9	1075.4	1051.9	1028.5	1014.3	1000.2
17.5°	1361.6	1271.7	1181.8	1123.7	1065.6	1028.5	991.4	970.9	950.4	939.6	928.9
20°	1268.8	1180.9	1093.0	1036.3	979.7	949.4	919.1	905.9	892.7	883.9	875.2
22.5°	1183.8	1097.4	1010.9	962.6	914.2	889.8	865.4	856.1	846.8	839.5	832.2
25°	1098.8	1021.7	944.5	903.5	862.5	842.4	822.4	813.1	803.9	796.5	789.2
27.5°	1029.5	955.7	882.0	846.8	811.7	796.0	780.4	773.1	765.8	758.9	752.1
30°	962.1	896.2	830.2	799.9	769.7	755.5	741.3	734.0	726.7	720.3	714.0
32.5°	899.6	842.9	786.3	758.4	730.6	718.9	707.2	698.4	689.6	684.7	679.8
35°	840.0	789.2	738.4	715.5	692.5	680.8	669.1	661.7	654.4	650.5	646.6
37.5°	789.2	743.8	698.4	676.4	654.4	643.2	631.9	625.6	619.2	617.8	616.3
40°	737.4	698.4	659.3	637.8	616.3	606.6	596.8	592.9	589.0	588.0	587.0
42.5°	694.5	656.4	618.3	598.7	579.2	570.9	562.6	560.6	558.7	560.2	561.6
45°	644.6	612.9	581.2	563.1	545.0	538.2	531.3	529.9	528.4	531.3	534.3
47.5°	602.6	573.3	544.0	526.9	509.9	505.0	500.1	499.6	499.1	503.0	506.9
50°	559.7	531.3	503.0	489.3	475.7	471.3	466.9	468.3	469.8	476.2	482.5
52.5°	519.6	493.3	466.9	454.2	441.5	438.6	435.6	439.0	442.5	449.3	456.1
55°	475.7	451.7	427.8	418.0	408.3	405.3	402.4	409.3	416.1	422.4	428.8
57.5°	433.7	412.7	391.7	382.9	374.1	373.6	373.1	379.5	385.8	392.6	399.5
60°	388.7	371.2	353.6	346.7	339.9	340.9	341.9	349.2	356.5	361.9	367.3
62.5°	347.7	333.1	318.4	312.1	305.7	308.2	310.6	317.9	325.3	331.6	337.9
65°	306.7	294.5	282.3	277.9	273.5	276.9	280.3	286.7	293.0	297.4	301.8
67.5°	267.6	257.4	247.1	243.7	240.3	243.7	247.1	253.5	259.8	264.2	268.6
70°	226.6	218.3	210.0	207.6	205.1	209.0	212.9	218.3	223.7	228.1	232.5
72.5°	188.5	182.2	175.8	175.3	174.8	178.3	181.7	187.0	192.4	195.3	198.3
75°	151.4	148.0	144.6	144.1	143.6	147.0	150.4	153.3	156.3	158.7	161.2
77.5°	118.2	115.3	112.3	112.8	113.3	115.7	118.2	121.1	124.0	125.5	127.0
80°	84.0	83.0	82.0	83.0	84.0	86.0	87.9	89.9	91.8	92.8	93.8
82.5°	57.6	56.7	55.7	57.1	58.6	60.1	61.5	63.0	64.5	65.0	65.4
85°	33.2	34.7	36.1	36.1	36.1	36.6	37.1	37.6	38.1	37.6	37.1
87.5°	15.6	16.1	16.6	16.6	16.6	17.1	17.6	17.6	17.6	17.1	16.6
90°	3.7	4.4	5.4	6.4	7.4	8.4	8.1	8.4	8.8	9.1	9.8
92.5°	17.2	23.3	34.0	51.9	69.4	62.7	46.9	33.4	26.0	22.6	20.2
95°	30.7	43.8	72.5	122.7	178.0	199.9	162.2	121.4	82.3	64.4	52.3
97.5°	35.4	49.9	78.2	136.5	229.6	307.5	317.9	278.8	210.4	165.9	127.4
100°	40.5	53.6	77.2	127.1	215.8	319.3	385.7	397.5	370.2	330.7	282.8
102.5°	46.2	58.0	78.6	119.0	195.5	297.3	389.0	436.9	442.6	423.8	397.8
105°	52.6	63.0	81.2	116.0	179.7	271.0	367.8	438.3	472.0	478.4	469.6
107.5°	59.7	69.4	85.6	115.3	168.2	247.8	337.5	418.0	471.0	497.3	506.4
110°	66.8	76.2	91.4	117.0	162.2	228.6	309.1	386.3	448.4	490.9	514.5



TEST NUMBER: P831665

CATALOG NUMBER: S123DIP-S775D365U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	74.2	83.3	97.1	120.4	158.8	215.8	284.5	355.0	418.7	467.6	499.6
115°	81.6	90.7	103.5	124.1	158.4	207.3	265.7	328.0	386.7	436.2	473.0
117.5°	89.0	97.4	110.2	128.8	158.8	201.6	253.2	307.1	359.0	404.6	442.6
120°	96.1	104.5	116.6	134.2	160.1	197.9	243.7	291.3	336.8	377.2	411.3
122.5°	102.5	111.6	123.4	139.2	162.5	195.5	236.0	278.8	318.9	355.7	386.7
125°	108.9	118.0	129.8	144.6	164.9	193.5	229.6	268.0	304.8	337.1	364.1
127.5°	115.0	124.1	135.5	149.0	167.6	192.5	223.5	258.2	291.6	321.3	346.2
130°	120.4	129.5	140.6	153.4	170.2	191.5	218.8	249.1	279.5	306.8	329.7
132.5°	125.4	134.2	145.0	157.4	172.3	191.2	214.4	240.7	268.0	293.0	314.5
135°	129.8	138.9	149.3	160.8	174.3	190.8	210.7	233.3	257.2	279.1	298.4
137.5°	133.8	142.3	152.4	163.5	175.6	190.1	207.3	226.2	246.4	266.0	283.2
140°	137.2	145.6	155.4	165.5	177.0	189.8	204.3	220.1	237.3	253.5	268.0
142.5°	140.6	148.3	157.8	167.6	178.0	189.1	201.6	214.4	228.6	242.1	254.2
145°	143.3	151.0	159.8	168.9	178.3	188.5	199.2	210.0	221.2	231.9	241.7
147.5°	146.6	153.4	161.5	169.9	178.3	187.4	196.9	206.3	215.4	224.5	231.6
150°	149.3	155.4	163.2	170.2	178.3	186.1	194.5	202.3	210.0	217.1	223.5
152.5°	152.0	157.8	164.2	170.9	177.3	184.4	191.8	198.6	205.0	211.0	216.1
155°	155.1	159.8	165.5	170.9	176.7	182.4	189.1	194.9	200.3	205.3	209.4
157.5°	157.8	161.5	166.2	171.3	175.6	180.7	186.1	190.8	195.5	199.6	202.9
160°	159.8	163.2	167.2	171.3	175.0	178.7	183.1	187.4	191.2	194.5	196.9
162.5°	161.5	164.2	167.6	170.9	173.6	176.7	180.0	183.4	186.4	189.5	191.5
165°	162.8	165.2	167.9	170.2	172.3	174.6	177.3	180.0	182.0	184.4	186.1
167.5°	164.2	165.9	167.9	169.9	170.9	172.6	174.6	177.0	178.7	180.0	181.4
170°	165.2	165.9	167.6	168.9	169.6	170.6	172.3	174.0	175.0	176.3	177.0
172.5°	165.9	166.2	167.6	168.6	168.6	168.9	169.9	171.3	171.9	172.9	173.3
175°	166.2	166.5	167.2	167.9	167.6	167.6	168.2	168.9	169.2	169.9	169.9
177.5°	166.5	166.5	166.9	167.6	166.9	166.5	166.9	167.2	167.6	167.9	167.9
180°	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5



TEST NUMBER: P831665

CATALOG NUMBER: S123DIP-S775D365U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2104.9	2104.9	2104.9	2104.9
2.5°	1870.9	1867.5	1853.8	1840.2
5°	1586.2	1574.5	1570.6	1566.7
7.5°	1386.0	1385.0	1364.5	1344.0
10°	1209.7	1211.1	1192.6	1174.0
12.5°	1083.7	1071.5	1070.0	1068.5
15°	988.9	977.7	975.8	973.8
17.5°	922.0	915.2	913.2	911.3
20°	871.2	867.3	863.9	860.5
22.5°	827.3	822.4	819.5	816.5
25°	784.8	780.4	779.4	778.5
27.5°	746.7	741.3	741.3	741.3
30°	710.6	707.2	705.7	704.2
32.5°	676.9	673.9	673.9	673.9
35°	645.1	643.7	641.7	639.8
37.5°	616.3	616.3	615.3	614.4
40°	588.5	589.9	589.9	589.9
42.5°	563.1	564.6	564.6	564.6
45°	536.7	539.2	540.1	541.1
47.5°	510.8	514.7	515.7	516.7
50°	485.4	488.4	488.9	489.3
52.5°	459.6	463.0	465.4	467.9
55°	432.2	435.6	437.1	438.6
57.5°	402.9	406.3	406.8	407.3
60°	370.7	374.1	375.1	376.0
62.5°	339.9	341.9	342.8	343.8
65°	304.7	307.7	309.6	311.6
67.5°	271.0	273.5	273.5	273.5
70°	233.4	234.4	235.9	237.3
72.5°	198.8	199.3	199.3	199.3
75°	162.1	163.1	163.6	164.1
77.5°	127.5	128.0	128.0	128.0
80°	93.3	92.8	92.8	92.8
82.5°	64.0	62.5	62.5	62.5
85°	36.6	36.1	36.6	37.1
87.5°	16.6	16.6	16.6	16.6
90°	9.4	9.8	10.1	9.8
92.5°	19.6	18.2	18.5	17.9
95°	45.8	42.8	40.5	39.1
97.5°	104.8	92.0	83.9	80.2
100°	248.8	224.2	211.0	211.4
102.5°	373.2	355.0	344.5	334.8
105°	454.1	441.3	430.5	428.8
107.5°	504.3	498.3	493.9	490.2
110°	523.9	526.6	525.9	525.2



TEST NUMBER: P831665

CATALOG NUMBER: S123DIP-S775D365U950-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	518.8	528.6	532.0	532.3
115°	498.3	513.1	519.8	521.5
117.5°	468.9	485.5	495.6	497.9
120°	437.9	456.8	464.9	466.9
122.5°	409.6	426.1	435.2	437.9
125°	385.7	400.5	408.9	411.3
127.5°	365.8	378.6	386.3	388.4
130°	347.6	359.7	366.8	369.5
132.5°	331.1	343.2	349.3	350.9
135°	314.9	325.0	331.1	333.4
137.5°	297.3	307.8	312.9	314.9
140°	280.8	290.3	295.7	295.3
142.5°	264.6	272.7	277.5	277.1
145°	250.1	257.2	259.9	260.6
147.5°	238.3	243.4	246.1	246.4
150°	228.6	232.3	234.3	234.3
152.5°	219.8	223.2	224.2	224.2
155°	212.4	215.1	215.8	216.1
157.5°	205.6	207.7	208.3	208.3
160°	199.2	201.3	201.3	200.9
162.5°	192.8	194.5	194.5	194.2
165°	187.4	188.8	188.5	188.5
167.5°	182.0	183.1	182.7	182.7
170°	177.3	178.0	177.7	177.7
172.5°	173.3	174.0	173.3	172.9
175°	169.9	170.2	169.9	169.6
177.5°	167.6	167.9	167.2	167.2
180°	166.5	166.5	166.5	166.5



TEST NUMBER: P831665

CATALOG NUMBER: S123DIP-S775D365U950-4F0-1E-UDD-G4

**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	16.34	17.39	17.08	18.14	19.05	18.57	19.63	19.31	20.38	21.28
	3H	18.00	18.94	18.75	19.71	20.64	20.01	20.96	20.76	21.72	22.65
	4H	18.58	19.47	19.35	20.25	21.19	20.47	21.36	21.24	22.13	23.08
	6H	18.96	19.78	19.75	20.57	21.53	20.76	21.57	21.54	22.36	23.32
	8H	19.07	19.85	19.86	20.65	21.61	20.82	21.60	21.62	22.40	23.37
	12H	19.12	19.86	19.91	20.65	21.64	20.85	21.59	21.65	22.39	23.37
4H	2H	16.93	17.82	17.71	18.60	19.54	18.76	19.65	19.53	20.42	21.37
	3H	18.78	19.52	19.56	20.33	21.29	20.39	21.13	21.18	21.94	22.91
	4H	19.48	20.16	20.28	20.96	21.96	20.98	21.66	21.79	22.47	23.46
	6H	19.97	20.55	20.79	21.38	22.38	21.40	21.98	22.22	22.81	23.81
	8H	20.11	20.65	20.93	21.48	22.49	21.52	22.06	22.34	22.89	23.90
	12H	20.19	20.67	21.03	21.52	22.54	21.57	22.06	22.41	22.91	23.92
8H	4H	19.76	20.31	20.59	21.13	22.14	21.10	21.65	21.93	22.47	23.48
	6H	20.36	20.81	21.21	21.68	22.69	21.61	22.06	22.46	22.93	23.94
	8H	20.57	20.97	21.43	21.83	22.86	21.79	22.19	22.66	23.06	24.09
	12H	20.70	21.05	21.56	21.91	22.99	21.91	22.25	22.77	23.11	24.20
12H	4H	19.77	20.26	20.61	21.11	22.13	21.09	21.57	21.93	22.43	23.44
	6H	20.41	20.81	21.27	21.68	22.70	21.63	22.03	22.49	22.89	23.92
	8H	20.66	21.00	21.52	21.86	22.95	21.84	22.19	22.70	23.04	24.13