

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: P831638

Luminaire Tested: S123DIP-S775D1195U950-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831638
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-S775D1195U950-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

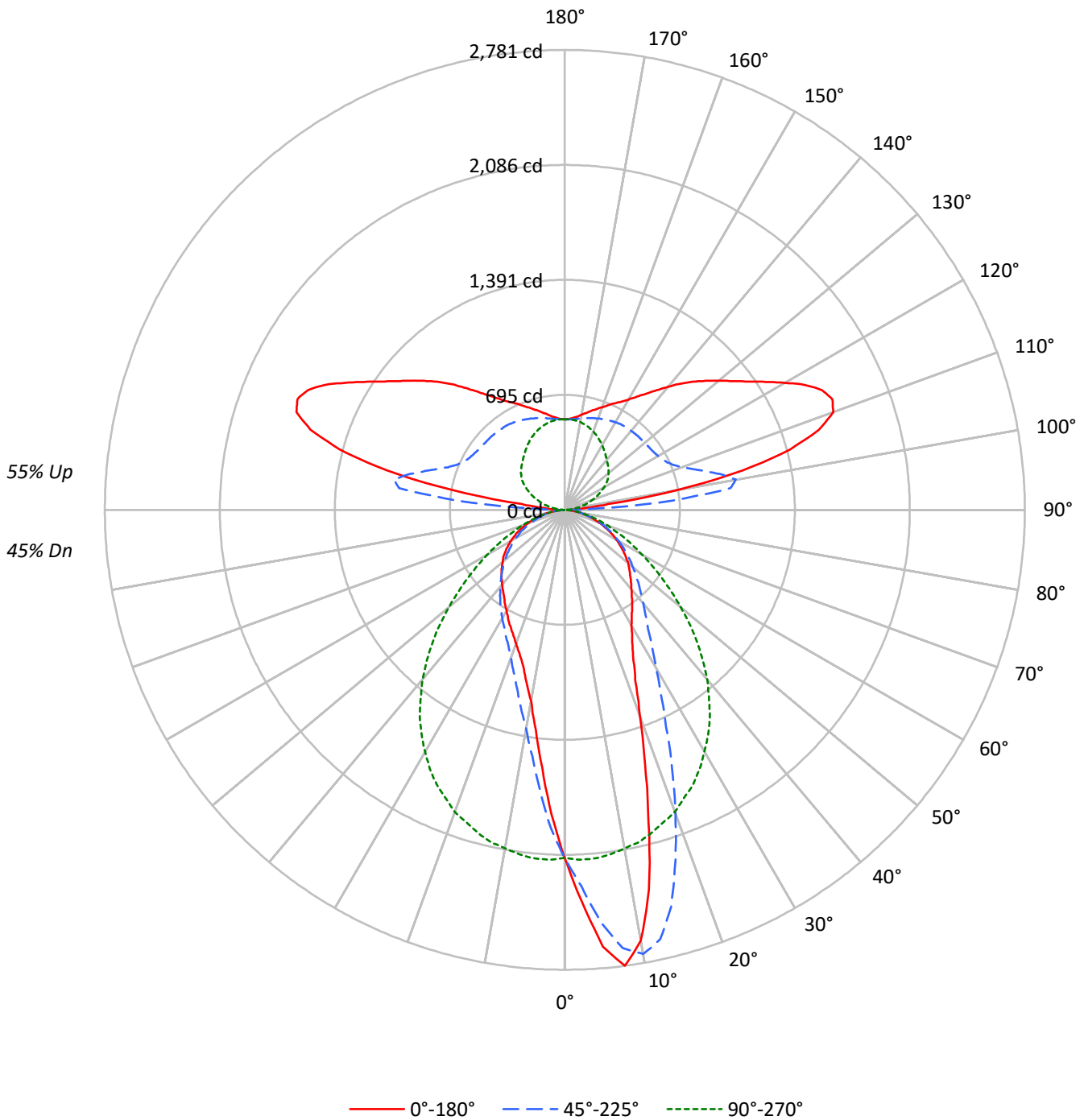
Lumens per Lamp: N/A
Luminaire Lumens: 7505.4 lumens
Efficiency: N/A
Efficacy: 131.9 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 56.9
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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39				
2	89	82	76	71	81	75	70	66	63	59	56	52	49	47	41	40	38	33				
3	81	72	65	60	74	67	61	56	56	52	48	46	43	40	37	35	33	29				
4	75	64	57	51	68	60	53	48	50	45	41	42	38	35	34	31	29	25				
5	69	58	50	44	63	53	47	42	45	40	36	38	34	31	31	28	26	23				
6	64	52	44	39	58	48	41	36	41	36	32	34	30	27	28	25	23	20				
7	59	47	40	34	54	44	37	32	37	32	28	32	28	25	26	23	21	18				
8	55	43	36	31	50	40	33	29	34	29	25	29	25	22	24	21	19	17				
9	51	40	32	27	47	37	30	26	32	27	23	27	23	20	22	19	17	15				
10	48	36	29	25	44	34	28	24	29	24	21	25	21	18	21	18	16	14				

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	2.7
10°-20°	495.1	6.6
20°-30°	586.2	7.8
30°-40°	589.4	7.9
40°-50°	540.7	7.2
50°-60°	446.3	5.9
60°-70°	315.7	4.2
70°-80°	168.5	2.2
80°-90°	45.8	0.6
90°-100°	297.1	4.0
100°-110°	869.9	11.6
110°-120°	849.5	11.3
120°-130°	676.5	9.0
130°-140°	533.8	7.1
140°-150°	398.2	5.3
150°-160°	277.6	3.7
160°-170°	163.1	2.2
170°-180°	53.0	0.7
0°-30°	1280.2	17.1
0°-40°	1869.6	24.9
0°-60°	2856.6	38.1
0°-90°	3386.6	45.1
90°-120°	2016.5	26.9
90°-150°	3625.0	48.3
90°-180°	4119.0	54.9
0°-180°	7505.4	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°	32	28	2	28	32	19
95°	129	657	38	657	129	209
105°	1410	891	129	891	1410	1407
115°	1715	682	227	682	1715	1672
125°	1352	636	316	636	1352	1224
135°	1096	627	370	627	1096	850
145°	857	620	422	620	857	544
155°	710	600	480	600	710	331
165°	620	574	524	574	620	177
175°	558	551	546	551	558	54
180°	548	548	548	548	548	



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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°	32.1	33.3	32.1	31.0	32.1	29.9	28.8	27.7	26.6	27.7	24.4
92.5°	58.7	61.0	59.9	64.3	66.5	74.3	85.3	109.7	154.1	206.2	228.3
95°	128.6	133.0	140.8	150.7	171.8	211.7	270.5	399.0	533.1	657.3	585.2
97.5°	263.8	276.0	302.6	344.7	419.0	545.3	691.6	916.6	1045.2	1010.9	754.8
100°	695.0	693.9	737.1	818.0	929.9	1087.3	1217.0	1306.8	1268.0	1049.7	709.4
102.5°	1100.6	1132.8	1167.1	1227.0	1307.9	1393.3	1455.3	1436.5	1279.1	977.6	642.9
105°	1409.9	1415.4	1450.9	1493.0	1544.0	1572.8	1551.8	1440.9	1209.3	891.2	590.8
107.5°	1611.6	1623.8	1638.2	1658.2	1664.8	1634.9	1548.4	1374.4	1109.5	814.7	553.1
110°	1726.9	1729.1	1731.3	1722.5	1691.4	1613.8	1474.2	1270.2	1016.4	751.5	533.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	1750.2	1749.1	1738.0	1705.8	1642.7	1537.4	1376.6	1167.1	935.5	709.4	522.1
115°	1714.7	1709.2	1687.0	1638.2	1555.1	1434.3	1271.3	1078.5	873.4	681.7	520.9
117.5°	1637.1	1629.4	1596.1	1541.8	1455.3	1330.1	1180.4	1009.8	832.4	662.8	522.1
120°	1535.1	1528.5	1501.9	1439.8	1352.3	1240.3	1107.3	957.7	801.4	650.6	526.5
122.5°	1439.8	1430.9	1401.0	1346.7	1271.3	1169.4	1048.5	916.6	775.9	642.9	534.3
125°	1352.3	1344.5	1316.8	1268.0	1197.1	1108.4	1002.0	881.2	754.8	636.2	542.0
127.5°	1276.9	1270.2	1244.7	1202.6	1138.3	1056.3	958.8	849.0	734.9	632.9	550.9
130°	1214.8	1205.9	1182.7	1142.8	1084.0	1008.6	918.9	819.1	719.4	629.6	559.7
132.5°	1153.8	1148.3	1128.4	1088.5	1034.1	963.2	881.2	791.4	704.9	628.5	566.4
135°	1096.2	1088.5	1068.5	1035.2	980.9	917.8	845.7	767.0	692.8	627.4	573.0
137.5°	1035.2	1028.6	1012.0	977.6	931.1	874.5	810.2	743.7	681.7	625.1	577.5
140°	971.0	972.1	954.3	923.3	881.2	833.5	780.3	723.8	671.7	624.0	581.9
142.5°	911.1	912.2	896.7	870.1	835.7	795.8	751.5	704.9	662.8	621.8	585.2
145°	856.8	854.6	845.7	822.4	794.7	762.6	727.1	690.5	655.1	619.6	586.3
147.5°	810.2	809.1	800.3	783.6	761.5	738.2	708.3	678.3	647.3	616.3	586.3
150°	770.3	770.3	763.7	751.5	734.9	713.8	690.5	665.0	639.5	611.8	586.3
152.5°	737.1	737.1	733.8	722.7	710.5	693.9	673.9	652.8	630.7	606.3	583.0
155°	710.5	709.4	707.2	698.3	688.3	675.0	658.4	640.7	621.8	599.6	580.8
157.5°	685.0	685.0	682.8	676.1	667.3	656.2	642.9	627.4	611.8	594.1	577.5
160°	660.6	661.7	661.7	655.1	647.3	639.5	628.5	616.3	601.9	587.5	575.3
162.5°	638.4	639.5	639.5	634.0	629.6	622.9	612.9	603.0	591.9	580.8	570.8
165°	619.6	619.6	620.7	616.3	611.8	606.3	598.5	591.9	583.0	574.2	566.4
167.5°	600.8	600.8	601.9	598.5	596.3	591.9	587.5	581.9	574.2	567.5	562.0
170°	584.1	584.1	585.2	583.0	581.9	579.7	575.3	571.9	566.4	560.9	557.5
172.5°	568.6	569.7	571.9	569.7	569.7	568.6	565.3	563.1	558.6	555.3	554.2
175°	557.5	558.6	559.7	558.6	558.6	558.6	556.4	555.3	553.1	550.9	550.9
177.5°	549.8	549.8	552.0	550.9	552.0	552.0	550.9	549.8	548.7	547.6	548.7
180°	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6



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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°	21.1	17.7	14.4	12.2	10.0	6.7	4.4	2.2	4.4	6.7	10.0
92.5°	170.7	111.9	76.5	56.5	45.4	35.5	24.4	16.6	24.4	35.5	45.4
95°	403.5	238.3	144.1	100.9	72.0	53.2	41.0	37.7	41.0	53.2	72.0
97.5°	448.9	257.1	164.0	116.4	87.6	70.9	61.0	59.9	61.0	70.9	87.6
100°	417.9	253.8	176.2	133.0	106.4	90.9	83.1	82.0	83.1	90.9	106.4
102.5°	391.3	258.3	190.6	151.9	128.6	114.2	107.5	105.3	107.5	114.2	128.6
105°	381.3	267.1	207.3	172.9	151.9	138.6	131.9	128.6	131.9	138.6	151.9
107.5°	379.1	281.5	228.3	196.2	176.2	162.9	156.3	153.0	156.3	162.9	176.2
110°	384.6	300.4	250.5	219.5	200.6	188.4	182.9	179.6	182.9	188.4	200.6



TEST NUMBER: P831638

CATALOG NUMBER: S123DIP-S775D1195U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	395.7	319.2	273.8	243.8	225.0	212.8	207.3	203.9	207.3	212.8	225.0
115°	407.9	340.3	298.2	268.2	249.4	238.3	231.7	227.2	231.7	238.3	249.4
117.5°	423.4	362.4	320.3	292.6	271.6	261.6	256.0	250.5	256.0	261.6	271.6
120°	441.1	383.5	343.6	315.9	294.8	283.8	278.2	274.9	278.2	283.8	294.8
122.5°	457.8	405.7	366.9	337.0	317.0	304.8	299.3	295.9	299.3	304.8	317.0
125°	475.5	426.7	387.9	358.0	337.0	324.8	318.1	315.9	318.1	324.8	337.0
127.5°	489.9	445.6	407.9	378.0	354.7	342.5	334.7	331.4	334.7	342.5	354.7
130°	504.3	462.2	425.6	395.7	372.4	359.1	349.1	345.8	349.1	359.1	372.4
132.5°	517.6	476.6	441.1	412.3	389.0	372.4	361.3	356.9	361.3	372.4	389.0
135°	528.7	491.0	456.7	426.7	403.5	386.8	374.6	370.2	374.6	386.8	403.5
137.5°	537.6	501.0	467.7	440.0	416.8	399.0	386.8	382.4	386.8	399.0	416.8
140°	544.2	511.0	478.8	451.1	429.0	411.2	400.1	394.6	400.1	411.2	429.0
142.5°	550.9	518.7	487.7	462.2	440.0	424.5	412.3	407.9	412.3	424.5	440.0
145°	555.3	525.4	496.6	471.1	452.2	435.6	425.6	422.3	425.6	435.6	452.2
147.5°	558.6	530.9	504.3	482.2	463.3	448.9	438.9	436.7	438.9	448.9	463.3
150°	559.7	536.5	511.0	491.0	475.5	461.1	452.2	451.1	452.2	461.1	475.5
152.5°	562.0	539.8	518.7	499.9	486.6	474.4	465.5	465.5	465.5	474.4	486.6
155°	562.0	544.2	525.4	509.9	497.7	486.6	479.9	479.9	479.9	486.6	497.7
157.5°	563.1	546.4	530.9	518.7	507.6	497.7	492.1	491.0	492.1	497.7	507.6
160°	563.1	549.8	536.5	525.4	517.6	508.8	504.3	504.3	504.3	508.8	517.6
162.5°	562.0	550.9	539.8	530.9	524.3	517.6	514.3	514.3	514.3	517.6	524.3
165°	559.7	552.0	543.1	535.4	530.9	525.4	523.2	524.3	523.2	525.4	530.9
167.5°	558.6	552.0	545.3	539.8	536.5	532.0	530.9	532.0	530.9	532.0	536.5
170°	555.3	550.9	545.3	543.1	540.9	537.6	536.5	538.7	536.5	537.6	540.9
172.5°	554.2	550.9	546.4	545.3	544.2	542.0	542.0	543.1	542.0	542.0	544.2
175°	552.0	549.8	547.6	546.4	546.4	544.2	545.3	546.4	545.3	544.2	546.4
177.5°	550.9	548.7	547.6	547.6	547.6	546.4	547.6	548.7	547.6	546.4	547.6
180°	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6



TEST NUMBER: P831638

CATALOG NUMBER: S123DIP-S775D1195U950-4F0-1E-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°	12.2	14.4	17.7	21.1	24.4	27.7	26.6	27.7	28.8	29.9	32.1
92.5°	56.5	76.5	111.9	170.7	228.3	206.2	154.1	109.7	85.3	74.3	66.5
95°	100.9	144.1	238.3	403.5	585.2	657.3	533.1	399.0	270.5	211.7	171.8
97.5°	116.4	164.0	257.1	448.9	754.8	1010.9	1045.2	916.6	691.6	545.3	419.0
100°	133.0	176.2	253.8	417.9	709.4	1049.7	1268.0	1306.8	1217.0	1087.3	929.9
102.5°	151.9	190.6	258.3	391.3	642.9	977.6	1279.1	1436.5	1455.3	1393.3	1307.9
105°	172.9	207.3	267.1	381.3	590.8	891.2	1209.3	1440.9	1551.8	1572.8	1544.0
107.5°	196.2	228.3	281.5	379.1	553.1	814.7	1109.5	1374.4	1548.4	1634.9	1664.8
110°	219.5	250.5	300.4	384.6	533.1	751.5	1016.4	1270.2	1474.2	1613.8	1691.4



TEST NUMBER: P831638

CATALOG NUMBER: S123DIP-S775D1195U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	243.8	273.8	319.2	395.7	522.1	709.4	935.5	1167.1	1376.6	1537.4	1642.7
115°	268.2	298.2	340.3	407.9	520.9	681.7	873.4	1078.5	1271.3	1434.3	1555.1
117.5°	292.6	320.3	362.4	423.4	522.1	662.8	832.4	1009.8	1180.4	1330.1	1455.3
120°	315.9	343.6	383.5	441.1	526.5	650.6	801.4	957.7	1107.3	1240.3	1352.3
122.5°	337.0	366.9	405.7	457.8	534.3	642.9	775.9	916.6	1048.5	1169.4	1271.3
125°	358.0	387.9	426.7	475.5	542.0	636.2	754.8	881.2	1002.0	1108.4	1197.1
127.5°	378.0	407.9	445.6	489.9	550.9	632.9	734.9	849.0	958.8	1056.3	1138.3
130°	395.7	425.6	462.2	504.3	559.7	629.6	719.4	819.1	918.9	1008.6	1084.0
132.5°	412.3	441.1	476.6	517.6	566.4	628.5	704.9	791.4	881.2	963.2	1034.1
135°	426.7	456.7	491.0	528.7	573.0	627.4	692.8	767.0	845.7	917.8	980.9
137.5°	440.0	467.7	501.0	537.6	577.5	625.1	681.7	743.7	810.2	874.5	931.1
140°	451.1	478.8	511.0	544.2	581.9	624.0	671.7	723.8	780.3	833.5	881.2
142.5°	462.2	487.7	518.7	550.9	585.2	621.8	662.8	704.9	751.5	795.8	835.7
145°	471.1	496.6	525.4	555.3	586.3	619.6	655.1	690.5	727.1	762.6	794.7
147.5°	482.2	504.3	530.9	558.6	586.3	616.3	647.3	678.3	708.3	738.2	761.5
150°	491.0	511.0	536.5	559.7	586.3	611.8	639.5	665.0	690.5	713.8	734.9
152.5°	499.9	518.7	539.8	562.0	583.0	606.3	630.7	652.8	673.9	693.9	710.5
155°	509.9	525.4	544.2	562.0	580.8	599.6	621.8	640.7	658.4	675.0	688.3
157.5°	518.7	530.9	546.4	563.1	577.5	594.1	611.8	627.4	642.9	656.2	667.3
160°	525.4	536.5	549.8	563.1	575.3	587.5	601.9	616.3	628.5	639.5	647.3
162.5°	530.9	539.8	550.9	562.0	570.8	580.8	591.9	603.0	612.9	622.9	629.6
165°	535.4	543.1	552.0	559.7	566.4	574.2	583.0	591.9	598.5	606.3	611.8
167.5°	539.8	545.3	552.0	558.6	562.0	567.5	574.2	581.9	587.5	591.9	596.3
170°	543.1	545.3	550.9	555.3	557.5	560.9	566.4	571.9	575.3	579.7	581.9
172.5°	545.3	546.4	550.9	554.2	554.2	555.3	558.6	563.1	565.3	568.6	569.7
175°	546.4	547.6	549.8	552.0	550.9	550.9	553.1	555.3	556.4	558.6	558.6
177.5°	547.6	547.6	548.7	550.9	548.7	547.6	548.7	549.8	550.9	552.0	552.0
180°	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6	547.6



TEST NUMBER: P831638

CATALOG NUMBER: S123DIP-S775D1195U950-4F0-1E-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°	31.0	32.1	33.3	32.1
92.5°	64.3	59.9	61.0	58.7
95°	150.7	140.8	133.0	128.6
97.5°	344.7	302.6	276.0	263.8
100°	818.0	737.1	693.9	695.0
102.5°	1227.0	1167.1	1132.8	1100.6
105°	1493.0	1450.9	1415.4	1409.9
107.5°	1658.2	1638.2	1623.8	1611.6
110°	1722.5	1731.3	1729.1	1726.9



TEST NUMBER: P831638

CATALOG NUMBER: S123DIP-S775D1195U950-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	1705.8	1738.0	1749.1	1750.2
115°	1638.2	1687.0	1709.2	1714.7
117.5°	1541.8	1596.1	1629.4	1637.1
120°	1439.8	1501.9	1528.5	1535.1
122.5°	1346.7	1401.0	1430.9	1439.8
125°	1268.0	1316.8	1344.5	1352.3
127.5°	1202.6	1244.7	1270.2	1276.9
130°	1142.8	1182.7	1205.9	1214.8
132.5°	1088.5	1128.4	1148.3	1153.8
135°	1035.2	1068.5	1088.5	1096.2
137.5°	977.6	1012.0	1028.6	1035.2
140°	923.3	954.3	972.1	971.0
142.5°	870.1	896.7	912.2	911.1
145°	822.4	845.7	854.6	856.8
147.5°	783.6	800.3	809.1	810.2
150°	751.5	763.7	770.3	770.3
152.5°	722.7	733.8	737.1	737.1
155°	698.3	707.2	709.4	710.5
157.5°	676.1	682.8	685.0	685.0
160°	655.1	661.7	661.7	660.6
162.5°	634.0	639.5	639.5	638.4
165°	616.3	620.7	619.6	619.6
167.5°	598.5	601.9	600.8	600.8
170°	583.0	585.2	584.1	584.1
172.5°	569.7	571.9	569.7	568.6
175°	558.6	559.7	558.6	557.5
177.5°	550.9	552.0	549.8	549.8
180°	547.6	547.6	547.6	547.6



TEST NUMBER: P831638

CATALOG NUMBER: S123DIP-S775D1195U950-4F0-1E-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	13.93	14.72	14.94	15.73	17.07	16.17	16.96	17.18	17.97	19.31
	3H	15.58	16.28	16.59	17.30	18.66	17.59	18.30	18.61	19.32	20.68
	4H	16.15	16.82	17.18	17.84	19.21	18.04	18.71	19.07	19.73	21.10
	6H	16.52	17.13	17.56	18.16	19.54	18.31	18.92	19.35	19.95	21.33
	8H	16.61	17.20	17.66	18.24	19.62	18.37	18.95	19.41	20.00	21.38
	12H	16.66	17.21	17.70	18.25	19.65	18.39	18.94	19.43	19.98	21.38
4H	2H	14.50	15.17	15.54	16.19	17.56	16.33	16.99	17.36	18.02	19.39
	3H	16.32	16.88	17.37	17.93	19.31	17.94	18.49	18.98	19.55	20.93
	4H	17.02	17.53	18.07	18.57	19.98	18.52	19.03	19.57	20.07	21.48
	6H	17.49	17.93	18.55	18.99	20.39	18.92	19.36	19.98	20.42	21.82
	8H	17.63	18.03	18.68	19.09	20.51	19.03	19.44	20.09	20.50	21.91
	12H	17.69	18.06	18.77	19.13	20.55	19.07	19.44	20.15	20.51	21.93
8H	4H	17.28	17.69	18.34	18.75	20.16	18.62	19.03	19.68	20.09	21.50
	6H	17.87	18.20	18.95	19.30	20.72	19.12	19.46	20.20	20.56	21.97
	8H	18.07	18.37	19.16	19.45	20.89	19.30	19.59	20.39	20.68	22.11
	12H	18.19	18.45	19.29	19.53	21.01	19.40	19.66	20.49	20.74	22.21
12H	4H	17.28	17.65	18.35	18.72	20.14	18.59	18.96	19.67	20.03	21.45
	6H	17.92	18.21	19.01	19.30	20.73	19.13	19.43	20.22	20.51	21.95
	8H	18.15	18.41	19.24	19.49	20.96	19.33	19.59	20.42	20.67	22.14