

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: P831647

Luminaire Tested: S123DIP-S775D365U840-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831647
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-S775D365U840-4F0-1E-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: -

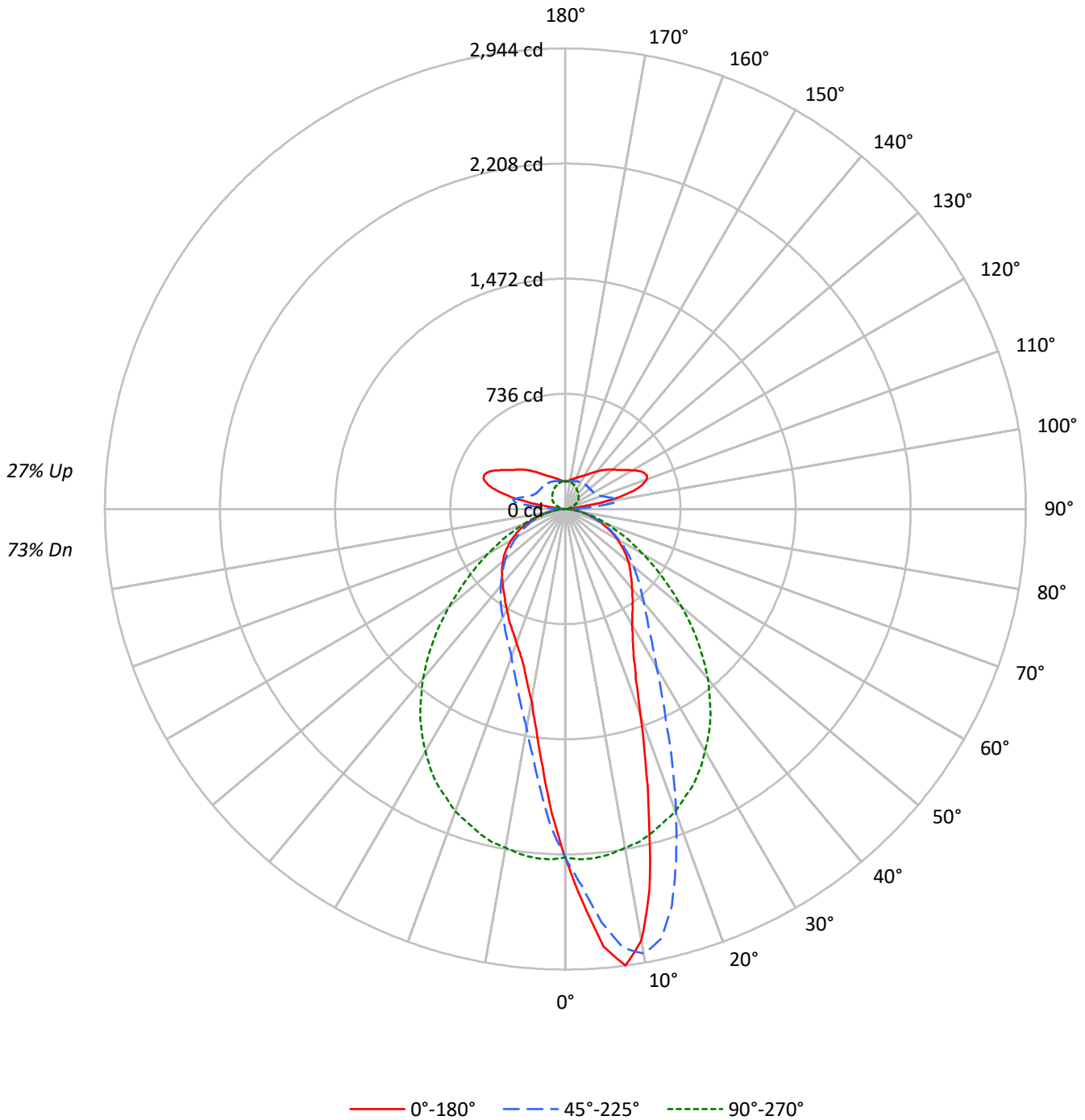
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4908.8 lumens
Efficiency: N/A
Efficacy: 136.7 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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	23983	23983	23983	23983	23983
5°	30331	28627	24198	19500	17919
10°	30626	31552	24037	15545	13584
15°	23066	29294	23873	13164	11487
20°	16071	23704	23568	11512	10434
25°	12256	18229	23049	10592	9786
30°	10602	14482	22219	9940	9266
35°	9837	12227	21262	9469	8899
40°	9312	10968	19918	9022	8775
45°	9003	10152	18211	8672	8719
50°	8847	9505	16188	8354	8674
55°	8518	9032	14202	8053	8711
60°	8213	8525	12243	7767	8570
65°	7715	8046	10560	7465	8400
70°	7125	7437	8982	6965	7906
75°	6450	6667	7698	6471	7224
80°	5318	5833	6087	5641	6087
85°	4211	4730	4471	4792	4854

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 20791 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.6	4.3
10°-20°	524.0	10.7
20°-30°	620.5	12.6
30°-40°	623.9	12.7
40°-50°	572.4	11.7
50°-60°	472.4	9.6
60°-70°	334.2	6.8
70°-80°	178.4	3.6
80°-90°	46.2	0.9
90°-100°	95.7	1.9
100°-110°	280.1	5.7
110°-120°	273.5	5.6
120°-130°	217.8	4.4
130°-140°	171.9	3.5
140°-150°	128.2	2.6
150°-160°	89.4	1.8
160°-170°	52.5	1.1
170°-180°	17.1	0.3
0°-30°	1355.2	27.6
0°-40°	1979.1	40.3
0°-60°	3023.9	61.6
0°-90°	3582.7	73.0
90°-120°	649.2	13.2
90°-150°	1167.1	23.8
90°-180°	1326.0	27.0
0°-180°	4908.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2228	2228	2228	2228	2228	
5°	2807	2649	2240	1805	1658	267
15°	2070	2629	2142	1181	1031	572
25°	1032	1535	1941	892	824	487
35°	749	930	1618	721	677	470
45°	591	667	1196	570	573	458
55°	454	481	757	429	464	406
65°	303	316	415	293	330	301
75°	155	160	185	156	174	163
85°	34	38	36	39	39	38
90°	10	9	1	9	10	8
95°	41	212	12	212	41	67
105°	454	287	41	287	454	453
115°	552	220	73	220	552	538
125°	435	205	102	205	435	394
135°	353	202	119	202	353	274
145°	276	200	136	200	276	175
155°	229	193	154	193	229	107
165°	200	185	169	185	200	57
175°	180	177	176	177	180	17
180°	176	176	176	176	176	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1
2.5°	2511.4	2508.8	2506.2	2493.3	2480.4	2474.2	2468.0	2449.4	2430.8	2410.1	2389.4
5°	2807.1	2814.4	2821.6	2813.3	2805.1	2779.7	2754.4	2720.8	2687.2	2649.4	2611.7
7.5°	2943.6	2947.7	2951.9	2946.7	2941.5	2934.8	2928.1	2898.1	2868.1	2829.4	2790.6
10°	2802.0	2811.3	2820.6	2840.7	2860.9	2883.6	2906.4	2902.2	2898.1	2886.7	2875.4
12.5°	2490.7	2502.1	2513.5	2553.8	2594.1	2645.8	2697.5	2742.0	2786.4	2817.5	2848.5
15°	2069.9	2101.5	2133.0	2169.7	2206.4	2282.4	2358.4	2452.0	2545.5	2628.8	2712.0
17.5°	1705.0	1716.8	1728.7	1768.0	1807.3	1902.9	1998.6	2106.6	2214.7	2352.7	2490.7
20°	1403.0	1413.9	1424.8	1476.5	1528.1	1603.1	1678.1	1799.6	1921.0	2069.4	2217.8
22.5°	1178.7	1195.7	1212.8	1241.8	1270.7	1342.6	1414.4	1522.5	1630.5	1794.4	1958.3
25°	1031.9	1044.3	1056.7	1074.3	1091.8	1149.2	1206.6	1295.5	1384.4	1534.9	1685.3
27.5°	931.6	936.7	941.9	959.5	977.1	1014.3	1051.5	1128.0	1204.5	1332.2	1459.9
30°	853.0	856.6	860.2	875.7	891.2	916.6	941.9	997.2	1052.5	1165.2	1277.9
32.5°	798.2	800.8	803.4	815.3	827.1	845.2	863.3	903.7	944.0	1037.0	1130.1
35°	748.6	750.1	751.7	760.5	769.2	782.7	796.1	826.6	857.1	930.5	1003.9
37.5°	705.1	707.2	709.3	714.4	719.6	731.5	743.4	767.7	792.0	848.3	904.7
40°	662.7	666.4	670.0	673.6	677.2	687.0	696.9	715.5	734.1	780.6	827.1
42.5°	626.6	630.2	633.8	635.4	636.9	642.6	648.3	665.3	682.4	717.0	751.7
45°	591.4	593.0	594.5	596.1	597.6	602.3	606.9	621.9	636.9	666.9	696.9
47.5°	559.4	559.4	559.4	560.4	561.4	565.6	569.7	580.6	591.4	614.7	637.9
50°	528.3	528.3	528.3	526.8	525.2	527.8	530.4	538.7	546.9	567.6	588.3
52.5°	491.1	491.1	491.1	491.6	492.2	492.2	492.2	499.4	506.6	525.2	543.8
55°	453.9	456.0	458.0	456.5	454.9	456.0	457.0	461.6	466.3	481.3	496.3
57.5°	416.7	417.7	418.7	418.2	417.7	418.2	418.7	422.9	427.0	438.4	449.8
60°	381.5	381.5	381.5	380.5	379.5	380.5	381.5	383.6	385.7	396.0	406.3
62.5°	342.2	342.7	343.3	343.8	344.3	343.3	342.2	344.8	347.4	355.2	362.9
65°	302.9	303.5	304.0	305.5	307.1	306.0	305.0	307.6	310.2	315.9	321.6
67.5°	267.8	266.8	265.7	266.2	266.8	268.3	269.9	270.4	270.9	277.1	283.3
70°	226.4	227.5	228.5	228.0	227.5	228.0	228.5	230.0	231.6	236.3	240.9
72.5°	189.2	189.7	190.2	190.2	190.2	191.3	192.3	193.9	195.4	198.0	200.6
75°	155.1	155.1	155.1	156.1	157.2	157.7	158.2	158.2	158.2	160.3	162.3
77.5°	117.9	120.5	123.0	122.5	122.0	123.0	124.1	125.6	127.2	128.2	129.2
80°	85.8	85.8	85.8	86.3	86.9	88.4	90.0	91.0	92.0	94.1	96.2
82.5°	54.8	55.3	55.8	57.4	58.9	60.0	61.0	62.6	64.1	64.1	64.1
85°	34.1	33.1	32.1	33.1	34.1	35.2	36.2	36.7	37.2	38.3	39.3
87.5°	16.5	16.5	16.5	16.5	16.5	17.1	17.6	17.6	17.6	17.6	17.6
90°	10.3	10.7	10.3	10.0	10.3	9.6	9.3	8.9	8.6	8.9	7.9
92.5°	18.9	19.6	19.3	20.7	21.4	23.9	27.5	35.3	49.6	66.4	73.5
95°	41.4	42.8	45.3	48.5	55.3	68.2	87.1	128.5	171.7	211.6	188.4
97.5°	84.9	88.9	97.4	111.0	134.9	175.6	222.7	295.1	336.5	325.5	243.0
100°	223.8	223.4	237.3	263.4	299.4	350.1	391.8	420.7	408.3	338.0	228.4
102.5°	354.4	364.7	375.8	395.1	421.1	448.6	468.6	462.5	411.8	314.8	207.0
105°	453.9	455.7	467.1	480.7	497.1	506.4	499.6	463.9	389.3	286.9	190.2
107.5°	518.9	522.8	527.4	533.9	536.0	526.4	498.5	442.5	357.2	262.3	178.1
110°	556.0	556.7	557.4	554.6	544.6	519.6	474.6	409.0	327.2	242.0	171.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	563.5	563.1	559.6	549.2	528.9	495.0	443.2	375.8	301.2	228.4	168.1
115°	552.1	550.3	543.2	527.4	500.7	461.8	409.3	347.2	281.2	219.5	167.7
117.5°	527.1	524.6	513.9	496.4	468.6	428.2	380.1	325.1	268.0	213.4	168.1
120°	494.3	492.1	483.6	463.6	435.4	399.3	356.5	308.3	258.0	209.5	169.5
122.5°	463.6	460.7	451.1	433.6	409.3	376.5	337.6	295.1	249.8	207.0	172.0
125°	435.4	432.9	424.0	408.3	385.4	356.9	322.6	283.7	243.0	204.8	174.5
127.5°	411.1	409.0	400.8	387.2	366.5	340.1	308.7	273.4	236.6	203.8	177.4
130°	391.1	388.3	380.8	367.9	349.0	324.7	295.8	263.7	231.6	202.7	180.2
132.5°	371.5	369.7	363.3	350.4	333.0	310.1	283.7	254.8	227.0	202.3	182.4
135°	352.9	350.4	344.0	333.3	315.8	295.5	272.3	247.0	223.0	202.0	184.5
137.5°	333.3	331.2	325.8	314.8	299.8	281.6	260.9	239.5	219.5	201.3	185.9
140°	312.6	313.0	307.3	297.3	283.7	268.4	251.2	233.0	216.3	200.9	187.4
142.5°	293.3	293.7	288.7	280.1	269.1	256.2	242.0	227.0	213.4	200.2	188.4
145°	275.9	275.1	272.3	264.8	255.9	245.5	234.1	222.3	210.9	199.5	188.8
147.5°	260.9	260.5	257.7	252.3	245.2	237.7	228.0	218.4	208.4	198.4	188.8
150°	248.0	248.0	245.9	242.0	236.6	229.8	222.3	214.1	205.9	197.0	188.8
152.5°	237.3	237.3	236.2	232.7	228.8	223.4	217.0	210.2	203.1	195.2	187.7
155°	228.8	228.4	227.7	224.8	221.6	217.3	212.0	206.3	200.2	193.1	187.0
157.5°	220.5	220.5	219.8	217.7	214.8	211.3	207.0	202.0	197.0	191.3	185.9
160°	212.7	213.0	213.0	210.9	208.4	205.9	202.3	198.4	193.8	189.1	185.2
162.5°	205.6	205.9	205.9	204.1	202.7	200.6	197.3	194.1	190.6	187.0	183.8
165°	199.5	199.5	199.8	198.4	197.0	195.2	192.7	190.6	187.7	184.9	182.4
167.5°	193.4	193.4	193.8	192.7	192.0	190.6	189.1	187.4	184.9	182.7	180.9
170°	188.1	188.1	188.4	187.7	187.4	186.6	185.2	184.1	182.4	180.6	179.5
172.5°	183.1	183.4	184.1	183.4	183.4	183.1	182.0	181.3	179.9	178.8	178.4
175°	179.5	179.9	180.2	179.9	179.9	179.9	179.1	178.8	178.1	177.4	177.4
177.5°	177.0	177.0	177.7	177.4	177.7	177.7	177.4	177.0	176.6	176.3	176.6
180°	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1
2.5°	2383.2	2377.0	2354.3	2331.5	2305.7	2279.8	2260.7	2241.6	2213.1	2184.7	2161.4
5°	2582.8	2553.8	2505.7	2457.7	2392.5	2327.4	2283.4	2239.5	2180.6	2121.6	2074.6
7.5°	2740.9	2691.3	2624.1	2556.9	2471.6	2386.3	2305.7	2225.0	2135.1	2045.1	1971.7
10°	2841.8	2808.2	2730.6	2653.1	2538.8	2424.6	2311.9	2199.2	2083.4	1967.6	1870.4
12.5°	2851.6	2854.7	2783.3	2712.0	2582.8	2453.5	2316.5	2179.5	2033.7	1888.0	1774.7
15°	2765.2	2818.5	2779.2	2739.9	2609.6	2479.4	2310.8	2142.3	1974.3	1806.3	1675.5
17.5°	2605.0	2719.2	2724.9	2730.6	2600.3	2470.1	2283.4	2096.8	1906.6	1716.3	1578.8
20°	2386.3	2554.8	2612.7	2670.6	2564.7	2458.7	2258.1	2057.5	1844.5	1631.5	1487.3
22.5°	2163.0	2367.7	2473.7	2579.7	2501.1	2422.5	2209.0	1995.5	1770.6	1545.7	1399.4
25°	1908.6	2132.0	2294.8	2457.7	2409.6	2361.5	2151.1	1940.7	1701.3	1462.0	1312.6
27.5°	1686.9	1913.8	2110.3	2306.7	2296.4	2286.0	2077.2	1868.3	1623.3	1378.2	1234.0
30°	1489.4	1700.8	1920.5	2140.2	2165.6	2190.9	1989.3	1787.7	1542.1	1296.5	1157.5
32.5°	1314.6	1499.2	1734.9	1970.7	2020.3	2069.9	1888.0	1706.0	1463.0	1220.0	1086.1
35°	1171.4	1338.9	1574.7	1810.4	1872.4	1934.5	1776.3	1618.1	1381.3	1144.6	1016.9
37.5°	1044.8	1184.9	1414.9	1645.0	1721.0	1797.0	1655.3	1513.7	1291.9	1070.1	952.8
40°	939.8	1052.5	1264.0	1475.4	1563.3	1651.2	1534.4	1417.5	1207.1	996.7	888.7
42.5°	852.0	952.2	1144.0	1335.8	1420.1	1504.4	1405.6	1306.9	1119.7	932.6	833.9
45°	777.0	857.1	1031.3	1205.6	1285.7	1365.8	1281.0	1196.3	1031.3	866.4	774.4
47.5°	706.7	775.4	924.3	1073.2	1144.6	1215.9	1149.7	1083.6	944.0	804.4	721.2
50°	643.6	698.9	829.2	959.5	1021.5	1083.6	1025.1	966.7	852.0	737.2	664.8
52.5°	588.8	633.8	742.9	852.0	905.2	958.5	908.3	858.2	767.2	676.2	613.1
55°	534.5	572.8	667.4	762.0	798.2	834.4	795.6	756.8	683.4	610.0	556.8
57.5°	483.9	518.0	595.5	673.1	701.0	728.9	693.8	658.6	603.3	548.0	503.5
60°	434.3	462.2	526.8	591.4	608.5	625.5	597.1	568.7	529.9	491.1	451.3
62.5°	388.2	413.6	461.6	509.7	521.1	532.5	510.8	489.0	459.6	430.1	399.1
65°	340.7	359.8	399.1	438.4	445.6	452.9	433.7	414.6	392.4	370.1	347.4
67.5°	296.7	310.2	342.2	374.3	374.8	375.3	359.8	344.3	331.9	319.5	301.4
70°	253.8	266.8	287.9	309.1	309.7	310.2	297.8	285.4	276.1	266.8	253.3
72.5°	209.9	219.2	235.2	251.2	250.2	249.2	241.4	233.7	226.4	219.2	209.4
75°	170.1	177.8	188.7	199.5	196.4	193.3	189.2	185.1	178.9	172.7	166.5
77.5°	133.9	138.5	144.8	151.0	148.9	146.8	143.2	139.6	134.9	130.3	127.7
80°	98.2	100.3	104.4	108.6	107.5	106.5	102.4	98.2	97.2	96.2	92.5
82.5°	66.7	69.3	70.3	71.3	70.8	70.3	67.2	64.1	63.1	62.0	61.5
85°	39.8	40.3	40.8	41.4	39.8	38.3	37.2	36.2	36.2	36.2	35.7
87.5°	18.1	18.6	18.6	18.6	18.1	17.6	16.5	15.5	16.0	16.5	16.5
90°	6.8	5.7	4.6	3.9	3.2	2.1	1.4	0.7	1.4	2.1	3.2
92.5°	55.0	36.0	24.6	18.2	14.6	11.4	7.9	5.4	7.9	11.4	14.6
95°	129.9	76.7	46.4	32.5	23.2	17.1	13.2	12.1	13.2	17.1	23.2
97.5°	144.5	82.8	52.8	37.5	28.2	22.8	19.6	19.3	19.6	22.8	28.2
100°	134.5	81.7	56.7	42.8	34.3	29.3	26.8	26.4	26.8	29.3	34.3
102.5°	126.0	83.2	61.4	48.9	41.4	36.8	34.6	33.9	34.6	36.8	41.4
105°	122.8	86.0	66.7	55.7	48.9	44.6	42.5	41.4	42.5	44.6	48.9
107.5°	122.0	90.6	73.5	63.2	56.7	52.5	50.3	49.2	50.3	52.5	56.7
110°	123.8	96.7	80.7	70.7	64.6	60.7	58.9	57.8	58.9	60.7	64.6



TEST NUMBER: P831647

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	127.4	102.8	88.1	78.5	72.4	68.5	66.7	65.7	66.7	68.5	72.4
115°	131.3	109.6	96.0	86.4	80.3	76.7	74.6	73.2	74.6	76.7	80.3
117.5°	136.3	116.7	103.1	94.2	87.4	84.2	82.4	80.7	82.4	84.2	87.4
120°	142.0	123.5	110.6	101.7	94.9	91.4	89.6	88.5	89.6	91.4	94.9
122.5°	147.4	130.6	118.1	108.5	102.1	98.1	96.4	95.3	96.4	98.1	102.1
125°	153.1	137.4	124.9	115.3	108.5	104.6	102.4	101.7	102.4	104.6	108.5
127.5°	157.7	143.5	131.3	121.7	114.2	110.3	107.8	106.7	107.8	110.3	114.2
130°	162.4	148.8	137.0	127.4	119.9	115.6	112.4	111.3	112.4	115.6	119.9
132.5°	166.7	153.5	142.0	132.8	125.3	119.9	116.3	114.9	116.3	119.9	125.3
135°	170.2	158.1	147.0	137.4	129.9	124.5	120.6	119.2	120.6	124.5	129.9
137.5°	173.1	161.3	150.6	141.7	134.2	128.5	124.5	123.1	124.5	128.5	134.2
140°	175.2	164.5	154.2	145.2	138.1	132.4	128.8	127.0	128.8	132.4	138.1
142.5°	177.4	167.0	157.0	148.8	141.7	136.7	132.8	131.3	132.8	136.7	141.7
145°	178.8	169.2	159.9	151.7	145.6	140.2	137.0	136.0	137.0	140.2	145.6
147.5°	179.9	170.9	162.4	155.2	149.2	144.5	141.3	140.6	141.3	144.5	149.2
150°	180.2	172.7	164.5	158.1	153.1	148.5	145.6	145.2	145.6	148.5	153.1
152.5°	180.9	173.8	167.0	160.9	156.7	152.7	149.9	149.9	149.9	152.7	156.7
155°	180.9	175.2	169.2	164.2	160.2	156.7	154.5	154.5	154.5	156.7	160.2
157.5°	181.3	175.9	170.9	167.0	163.4	160.2	158.4	158.1	158.4	160.2	163.4
160°	181.3	177.0	172.7	169.2	166.7	163.8	162.4	162.4	162.4	163.8	166.7
162.5°	180.9	177.4	173.8	170.9	168.8	166.7	165.6	165.6	165.6	166.7	168.8
165°	180.2	177.7	174.9	172.4	170.9	169.2	168.4	168.8	168.4	169.2	170.9
167.5°	179.9	177.7	175.6	173.8	172.7	171.3	170.9	171.3	170.9	171.3	172.7
170°	178.8	177.4	175.6	174.9	174.2	173.1	172.7	173.4	172.7	173.1	174.2
172.5°	178.4	177.4	175.9	175.6	175.2	174.5	174.5	174.9	174.5	174.5	175.2
175°	177.7	177.0	176.3	175.9	175.9	175.2	175.6	175.9	175.6	175.2	175.9
177.5°	177.4	176.6	176.3	176.3	176.3	175.9	176.3	176.6	176.3	175.9	176.3
180°	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3



TEST NUMBER: P831647

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1	2228.1
2.5°	2138.2	2118.0	2097.8	2082.3	2066.8	2040.5	2014.1	2007.9	2001.7	1992.9	1984.1
5°	2027.5	1977.9	1928.3	1883.8	1839.4	1804.7	1770.1	1747.3	1724.6	1708.1	1691.5
7.5°	1898.3	1823.9	1749.4	1696.7	1643.9	1593.8	1543.7	1527.6	1511.6	1489.9	1468.2
10°	1773.2	1691.0	1608.8	1540.0	1471.3	1422.2	1373.1	1353.4	1333.8	1306.4	1279.0
12.5°	1661.5	1571.6	1481.6	1412.3	1343.1	1295.5	1248.0	1219.5	1191.1	1175.6	1160.1
15°	1544.7	1448.5	1352.4	1288.3	1224.2	1181.3	1138.4	1113.5	1088.7	1073.7	1058.7
17.5°	1441.3	1346.2	1251.1	1189.5	1128.0	1088.7	1049.4	1027.7	1006.0	994.6	983.3
20°	1343.1	1250.0	1157.0	1097.0	1037.0	1005.0	972.9	959.0	945.0	935.7	926.4
22.5°	1253.1	1161.6	1070.1	1018.9	967.8	941.9	916.1	906.2	896.4	888.7	880.9
25°	1163.2	1081.5	999.8	956.4	913.0	891.8	870.6	860.7	850.9	843.2	835.4
27.5°	1089.8	1011.7	933.6	896.4	859.2	842.7	826.1	818.4	810.6	803.4	796.1
30°	1018.4	948.6	878.8	846.8	814.7	799.7	784.8	777.0	769.2	762.5	755.8
32.5°	952.2	892.3	832.3	802.8	773.4	761.0	748.6	739.3	730.0	724.8	719.6
35°	889.2	835.4	781.7	757.4	733.1	720.6	708.2	700.5	692.7	688.6	684.5
37.5°	835.4	787.3	739.3	716.0	692.7	680.8	669.0	662.2	655.5	654.0	652.4
40°	780.6	739.3	697.9	675.2	652.4	642.1	631.7	627.6	623.5	622.4	621.4
42.5°	735.1	694.8	654.5	633.8	613.1	604.3	595.5	593.5	591.4	593.0	594.5
45°	682.4	648.8	615.2	596.1	576.9	569.7	562.5	560.9	559.4	562.5	565.6
47.5°	637.9	606.9	575.9	557.8	539.7	534.5	529.4	528.9	528.3	532.5	536.6
50°	592.4	562.5	532.5	518.0	503.5	498.9	494.2	495.8	497.3	504.0	510.8
52.5°	550.1	522.1	494.2	480.8	467.3	464.2	461.1	464.8	468.4	475.6	482.8
55°	503.5	478.2	452.9	442.5	432.2	429.1	426.0	433.2	440.5	447.2	453.9
57.5°	459.1	436.8	414.6	405.3	396.0	395.5	395.0	401.7	408.4	415.6	422.9
60°	411.5	392.9	374.3	367.0	359.8	360.8	361.9	369.6	377.4	383.1	388.8
62.5°	368.1	352.6	337.1	330.3	323.6	326.2	328.8	336.5	344.3	351.0	357.7
65°	324.7	311.7	298.8	294.2	289.5	293.1	296.7	303.5	310.2	314.8	319.5
67.5°	283.3	272.4	261.6	258.0	254.3	258.0	261.6	268.3	275.0	279.7	284.3
70°	239.9	231.1	222.3	219.7	217.1	221.3	225.4	231.1	236.8	241.4	246.1
72.5°	199.5	192.8	186.1	185.6	185.1	188.7	192.3	198.0	203.7	206.8	209.9
75°	160.3	156.6	153.0	152.5	152.0	155.6	159.2	162.3	165.4	168.0	170.6
77.5°	125.1	122.0	118.9	119.4	119.9	122.5	125.1	128.2	131.3	132.9	134.4
80°	88.9	87.9	86.9	87.9	88.9	91.0	93.1	95.1	97.2	98.2	99.3
82.5°	61.0	60.0	58.9	60.5	62.0	63.6	65.1	66.7	68.2	68.8	69.3
85°	35.2	36.7	38.3	38.3	38.3	38.8	39.3	39.8	40.3	39.8	39.3
87.5°	16.5	17.1	17.6	17.6	17.6	18.1	18.6	18.6	18.6	18.1	17.6
90°	3.9	4.6	5.7	6.8	7.9	8.9	8.6	8.9	9.3	9.6	10.3
92.5°	18.2	24.6	36.0	55.0	73.5	66.4	49.6	35.3	27.5	23.9	21.4
95°	32.5	46.4	76.7	129.9	188.4	211.6	171.7	128.5	87.1	68.2	55.3
97.5°	37.5	52.8	82.8	144.5	243.0	325.5	336.5	295.1	222.7	175.6	134.9
100°	42.8	56.7	81.7	134.5	228.4	338.0	408.3	420.7	391.8	350.1	299.4
102.5°	48.9	61.4	83.2	126.0	207.0	314.8	411.8	462.5	468.6	448.6	421.1
105°	55.7	66.7	86.0	122.8	190.2	286.9	389.3	463.9	499.6	506.4	497.1
107.5°	63.2	73.5	90.6	122.0	178.1	262.3	357.2	442.5	498.5	526.4	536.0
110°	70.7	80.7	96.7	123.8	171.7	242.0	327.2	409.0	474.6	519.6	544.6



TEST NUMBER: P831647

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	78.5	88.1	102.8	127.4	168.1	228.4	301.2	375.8	443.2	495.0	528.9
115°	86.4	96.0	109.6	131.3	167.7	219.5	281.2	347.2	409.3	461.8	500.7
117.5°	94.2	103.1	116.7	136.3	168.1	213.4	268.0	325.1	380.1	428.2	468.6
120°	101.7	110.6	123.5	142.0	169.5	209.5	258.0	308.3	356.5	399.3	435.4
122.5°	108.5	118.1	130.6	147.4	172.0	207.0	249.8	295.1	337.6	376.5	409.3
125°	115.3	124.9	137.4	153.1	174.5	204.8	243.0	283.7	322.6	356.9	385.4
127.5°	121.7	131.3	143.5	157.7	177.4	203.8	236.6	273.4	308.7	340.1	366.5
130°	127.4	137.0	148.8	162.4	180.2	202.7	231.6	263.7	295.8	324.7	349.0
132.5°	132.8	142.0	153.5	166.7	182.4	202.3	227.0	254.8	283.7	310.1	333.0
135°	137.4	147.0	158.1	170.2	184.5	202.0	223.0	247.0	272.3	295.5	315.8
137.5°	141.7	150.6	161.3	173.1	185.9	201.3	219.5	239.5	260.9	281.6	299.8
140°	145.2	154.2	164.5	175.2	187.4	200.9	216.3	233.0	251.2	268.4	283.7
142.5°	148.8	157.0	167.0	177.4	188.4	200.2	213.4	227.0	242.0	256.2	269.1
145°	151.7	159.9	169.2	178.8	188.8	199.5	210.9	222.3	234.1	245.5	255.9
147.5°	155.2	162.4	170.9	179.9	188.8	198.4	208.4	218.4	228.0	237.7	245.2
150°	158.1	164.5	172.7	180.2	188.8	197.0	205.9	214.1	222.3	229.8	236.6
152.5°	160.9	167.0	173.8	180.9	187.7	195.2	203.1	210.2	217.0	223.4	228.8
155°	164.2	169.2	175.2	180.9	187.0	193.1	200.2	206.3	212.0	217.3	221.6
157.5°	167.0	170.9	175.9	181.3	185.9	191.3	197.0	202.0	207.0	211.3	214.8
160°	169.2	172.7	177.0	181.3	185.2	189.1	193.8	198.4	202.3	205.9	208.4
162.5°	170.9	173.8	177.4	180.9	183.8	187.0	190.6	194.1	197.3	200.6	202.7
165°	172.4	174.9	177.7	180.2	182.4	184.9	187.7	190.6	192.7	195.2	197.0
167.5°	173.8	175.6	177.7	179.9	180.9	182.7	184.9	187.4	189.1	190.6	192.0
170°	174.9	175.6	177.4	178.8	179.5	180.6	182.4	184.1	185.2	186.6	187.4
172.5°	175.6	175.9	177.4	178.4	178.4	178.8	179.9	181.3	182.0	183.1	183.4
175°	175.9	176.3	177.0	177.7	177.4	177.4	178.1	178.8	179.1	179.9	179.9
177.5°	176.3	176.3	176.6	177.4	176.6	176.3	176.6	177.0	177.4	177.7	177.7
180°	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3	176.3



TEST NUMBER: P831647

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2228.1	2228.1	2228.1	2228.1
2.5°	1980.5	1976.9	1962.4	1947.9
5°	1679.1	1666.7	1662.6	1658.4
7.5°	1467.1	1466.1	1444.4	1422.7
10°	1280.5	1282.1	1262.4	1242.8
12.5°	1147.1	1134.2	1132.7	1131.1
15°	1046.9	1035.0	1032.9	1030.8
17.5°	976.0	968.8	966.7	964.7
20°	922.3	918.1	914.5	910.9
22.5°	875.7	870.6	867.5	864.4
25°	830.8	826.1	825.1	824.0
27.5°	790.4	784.8	784.8	784.8
30°	752.2	748.6	747.0	745.5
32.5°	716.5	713.4	713.4	713.4
35°	682.9	681.4	679.3	677.2
37.5°	652.4	652.4	651.4	650.3
40°	622.9	624.5	624.5	624.5
42.5°	596.1	597.6	597.6	597.6
45°	568.1	570.7	571.8	572.8
47.5°	540.7	544.9	545.9	546.9
50°	513.9	517.0	517.5	518.0
52.5°	486.5	490.1	492.7	495.3
55°	457.5	461.1	462.7	464.2
57.5°	426.5	430.1	430.6	431.1
60°	392.4	396.0	397.0	398.1
62.5°	359.8	361.9	362.9	363.9
65°	322.6	325.7	327.8	329.8
67.5°	286.9	289.5	289.5	289.5
70°	247.1	248.1	249.7	251.2
72.5°	210.4	210.9	210.9	210.9
75°	171.6	172.7	173.2	173.7
77.5°	134.9	135.4	135.4	135.4
80°	98.7	98.2	98.2	98.2
82.5°	67.7	66.2	66.2	66.2
85°	38.8	38.3	38.8	39.3
87.5°	17.6	17.6	17.6	17.6
90°	10.0	10.3	10.7	10.3
92.5°	20.7	19.3	19.6	18.9
95°	48.5	45.3	42.8	41.4
97.5°	111.0	97.4	88.9	84.9
100°	263.4	237.3	223.4	223.8
102.5°	395.1	375.8	364.7	354.4
105°	480.7	467.1	455.7	453.9
107.5°	533.9	527.4	522.8	518.9
110°	554.6	557.4	556.7	556.0



TEST NUMBER: P831647

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	549.2	559.6	563.1	563.5
115°	527.4	543.2	550.3	552.1
117.5°	496.4	513.9	524.6	527.1
120°	463.6	483.6	492.1	494.3
122.5°	433.6	451.1	460.7	463.6
125°	408.3	424.0	432.9	435.4
127.5°	387.2	400.8	409.0	411.1
130°	367.9	380.8	388.3	391.1
132.5°	350.4	363.3	369.7	371.5
135°	333.3	344.0	350.4	352.9
137.5°	314.8	325.8	331.2	333.3
140°	297.3	307.3	313.0	312.6
142.5°	280.1	288.7	293.7	293.3
145°	264.8	272.3	275.1	275.9
147.5°	252.3	257.7	260.5	260.9
150°	242.0	245.9	248.0	248.0
152.5°	232.7	236.2	237.3	237.3
155°	224.8	227.7	228.4	228.8
157.5°	217.7	219.8	220.5	220.5
160°	210.9	213.0	213.0	212.7
162.5°	204.1	205.9	205.9	205.6
165°	198.4	199.8	199.5	199.5
167.5°	192.7	193.8	193.4	193.4
170°	187.7	188.4	188.1	188.1
172.5°	183.4	184.1	183.4	183.1
175°	179.9	180.2	179.9	179.5
177.5°	177.4	177.7	177.0	177.0
180°	176.3	176.3	176.3	176.3



TEST NUMBER: P831647

CATALOG NUMBER: S123DIP-S775D365U840-4F0-1E-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	16.53	17.59	17.27	18.34	19.24	18.77	19.82	19.51	20.58	21.48
	3H	18.19	19.14	18.95	19.90	20.84	20.21	21.15	20.96	21.92	22.85
	4H	18.78	19.67	19.55	20.44	21.39	20.67	21.56	21.44	22.33	23.28
	6H	19.16	19.98	19.94	20.76	21.72	20.95	21.77	21.74	22.56	23.52
	8H	19.26	20.04	20.06	20.84	21.81	21.02	21.80	21.81	22.60	23.56
	12H	19.31	20.06	20.11	20.85	21.84	21.05	21.79	21.84	22.58	23.57
4H	2H	17.13	18.02	17.91	18.79	19.74	18.96	19.85	19.73	20.62	21.57
	3H	18.98	19.72	19.76	20.53	21.49	20.59	21.33	21.38	22.14	23.10
	4H	19.68	20.35	20.48	21.16	22.15	21.18	21.85	21.98	22.66	23.66
	6H	20.17	20.75	20.99	21.58	22.58	21.60	22.18	22.42	23.01	24.01
	8H	20.31	20.85	21.13	21.68	22.69	21.71	22.25	22.53	23.08	24.09
	12H	20.38	20.87	21.22	21.72	22.73	21.77	22.25	22.61	23.10	24.12
8H	4H	19.96	20.50	20.78	21.33	22.34	21.30	21.84	22.12	22.67	23.68
	6H	20.56	21.01	21.41	21.88	22.89	21.81	22.26	22.66	23.13	24.14
	8H	20.77	21.16	21.63	22.03	23.06	21.99	22.39	22.85	23.26	24.28
	12H	20.90	21.25	21.76	22.10	23.19	22.10	22.45	22.97	23.31	24.39
12H	4H	19.97	20.46	20.81	21.31	22.32	21.29	21.77	22.13	22.62	23.64
	6H	20.61	21.01	21.47	21.87	22.90	21.83	22.22	22.69	23.09	24.12
	8H	20.85	21.20	21.72	22.06	23.14	22.04	22.38	22.90	23.24	24.33