

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: P832366

Luminaire Tested: S123RDIP-S775D365U840-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832366
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-9)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D365U840-4F0-1E-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

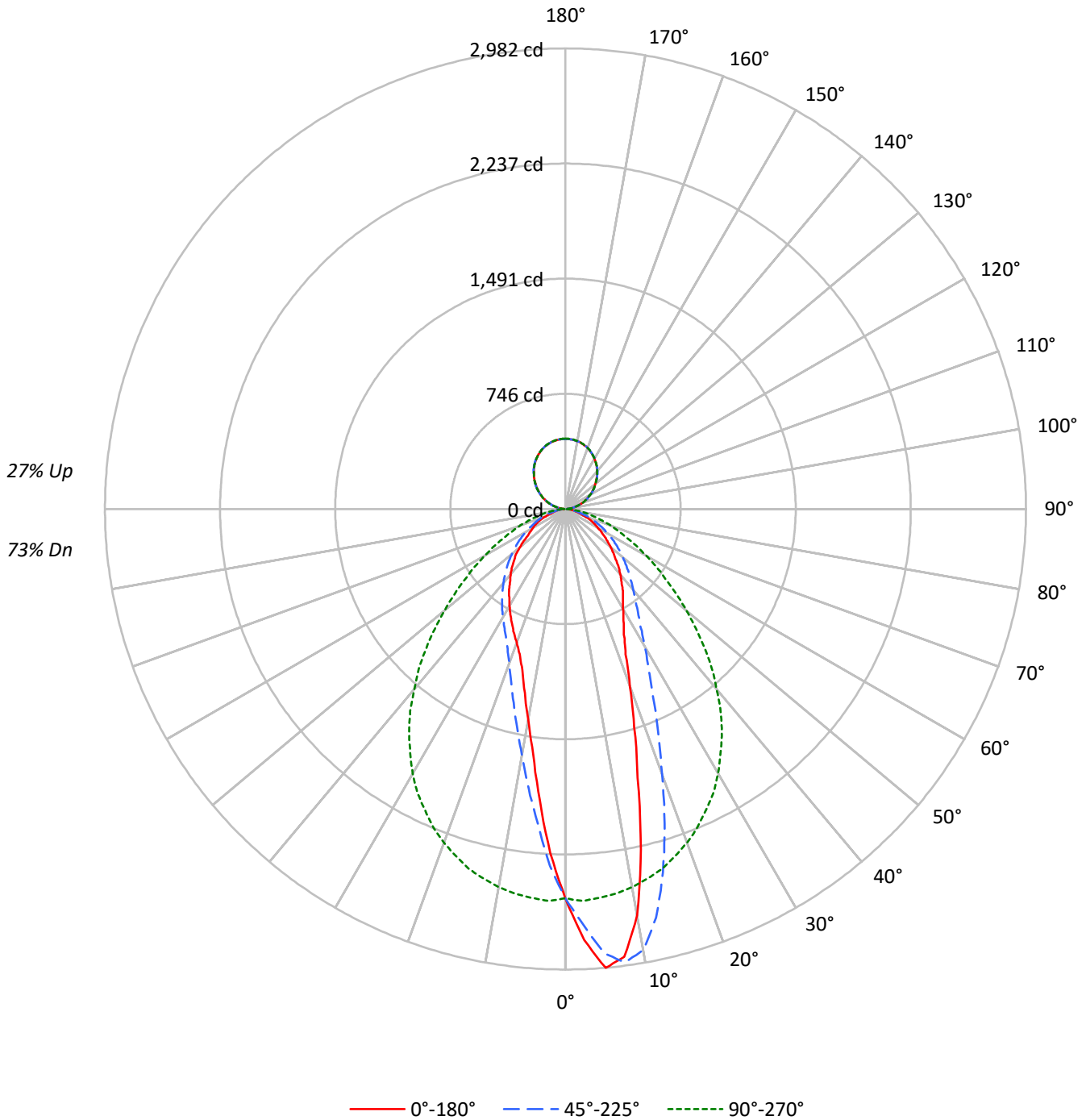
Lumens per Lamp: N/A
Luminaire Lumens: 4602.3 lumens
Efficiency: N/A
Efficacy: 128.2 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

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: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

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	100	96	93	99	95	92	89	86	84	81	78	76	74	70	68	67	67	67	67	63	
2	96	89	83	78	91	85	80	75	77	73	69	70	67	64	63	61	59	59	59	59	55	
3	88	79	72	67	84	76	69	64	69	64	60	63	59	56	57	54	51	51	51	51	48	
4	82	71	64	58	77	68	61	56	62	57	52	57	53	49	52	48	46	46	46	46	43	
5	76	64	57	51	72	62	55	49	57	51	46	52	47	44	48	44	41	41	41	41	38	
6	70	59	51	45	67	56	49	44	52	46	42	48	43	39	44	40	37	37	37	37	34	
7	66	54	46	41	62	52	45	40	48	42	37	44	39	35	41	37	33	33	33	33	31	
8	61	49	42	37	58	48	41	36	44	38	34	41	36	32	38	34	31	31	31	31	29	
9	58	46	38	33	55	44	37	33	41	35	31	38	33	30	35	31	28	28	28	28	26	
10	54	42	35	31	52	41	34	30	38	33	29	36	31	27	33	29	26	26	26	26	24	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	27137	27137	27137	27137	27137
5°	32222	31194	27308	22075	20495
10°	29194	31685	27172	17687	15173
15°	20100	27167	26885	14456	12003
20°	13984	20916	26345	12190	10550
25°	10656	15941	25560	10834	9723
30°	9276	12745	24577	10060	9006
35°	8516	10750	23186	9406	8353
40°	7770	9601	21365	8765	7756
45°	7018	8780	19401	8159	7159
50°	6370	8102	17084	7564	6422
55°	5761	7439	14859	6983	5510
60°	5162	6764	12906	6342	5208
65°	4765	6003	11110	5700	4923
70°	3871	5190	9693	5155	4000
75°	3398	4126	8210	4275	3527
80°	3075	3490	6726	3589	3335
85°	2803	3063	5101	3260	3063

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 20471 cd/sqm



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	229.8	5.0
10°-20°	531.7	11.6
20°-30°	610.1	13.3
30°-40°	601.4	13.1
40°-50°	530.3	11.5
50°-60°	408.0	8.9
60°-70°	268.2	5.8
70°-80°	130.3	2.8
80°-90°	33.8	0.7
90°-100°	29.2	0.6
100°-110°	88.5	1.9
110°-120°	150.7	3.3
120°-130°	198.2	4.3
130°-140°	222.8	4.8
140°-150°	219.1	4.8
150°-160°	184.4	4.0
160°-170°	122.8	2.7
170°-180°	43.0	0.9
0°-30°	1371.6	29.8
0°-40°	1973.0	42.9
0°-60°	2911.3	63.3
0°-90°	3343.6	72.6
90°-120°	268.4	5.8
90°-150°	908.6	19.7
90°-180°	1259.0	27.4
0°-180°	4602.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2521	2521	2521	2521	2521	
5°	2982	2887	2527	2043	1897	272
15°	1804	2438	2413	1297	1077	509
25°	897	1342	2152	912	819	424
35°	648	818	1764	716	636	404
45°	461	577	1274	536	470	358
55°	307	396	792	372	294	275
65°	187	236	436	224	193	183
75°	82	99	197	103	85	88
85°	23	25	41	26	25	24
90°	11	9	0	9	11	6
95°	28	26	21	26	28	28
105°	85	84	80	84	85	90
115°	152	152	152	152	152	151
125°	220	222	222	222	220	196
135°	288	290	288	290	288	221
145°	349	351	349	351	349	218
155°	399	400	400	400	399	184
165°	434	435	436	435	434	123
175°	452	452	453	452	452	43
180°	454	454	454	454	454	



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1
2.5°	2794.0	2785.2	2776.4	2773.8	2771.2	2763.0	2754.7	2736.1	2717.5	2698.4	2679.3
5°	2982.1	2983.1	2984.2	2981.6	2979.0	2968.2	2957.3	2934.6	2911.8	2887.0	2862.2
7.5°	2924.2	2940.8	2957.3	2960.4	2963.5	2971.8	2980.0	2974.9	2969.7	2960.4	2951.1
10°	2671.0	2669.9	2668.9	2687.5	2706.1	2761.4	2816.7	2845.2	2873.6	2898.9	2924.2
12.5°	2257.5	2259.1	2260.6	2321.6	2382.6	2434.8	2487.0	2559.3	2631.7	2709.7	2787.8
15°	1803.7	1829.1	1854.4	1908.7	1962.9	2041.5	2120.0	2217.2	2314.4	2437.9	2561.4
17.5°	1481.2	1492.1	1502.9	1555.1	1607.3	1681.8	1756.2	1866.3	1976.4	2135.5	2294.7
20°	1220.8	1230.6	1240.4	1278.1	1315.9	1387.2	1458.5	1563.4	1668.3	1826.0	1983.6
22.5°	1019.2	1038.3	1057.4	1082.8	1108.1	1159.8	1211.5	1318.4	1425.4	1569.1	1712.8
25°	897.2	906.0	914.8	936.5	958.2	1007.8	1057.4	1128.2	1199.0	1342.2	1485.4
27.5°	814.5	817.1	819.7	835.7	851.7	883.8	915.8	981.5	1047.1	1164.9	1282.8
30°	746.3	751.0	755.6	768.0	780.4	803.7	826.9	873.4	920.0	1025.4	1130.8
32.5°	693.6	696.2	698.8	709.1	719.4	736.5	753.5	790.2	826.9	907.6	988.2
35°	648.1	648.6	649.1	656.9	664.6	681.2	697.7	728.2	758.7	818.1	877.6
37.5°	596.4	600.0	603.7	609.3	615.0	629.5	644.0	668.8	693.6	742.7	791.8
40°	553.0	556.1	559.2	565.9	572.6	584.0	595.4	618.1	640.9	683.3	725.6
42.5°	509.6	511.7	513.7	520.4	527.2	541.1	555.1	573.2	591.3	626.4	661.5
45°	461.0	466.2	471.3	478.6	485.8	497.7	509.6	528.2	546.8	576.8	606.8
47.5°	420.7	423.3	425.9	432.1	438.3	452.7	467.2	483.8	500.3	528.2	556.1
50°	380.4	381.4	382.5	388.1	393.8	406.7	419.7	438.8	457.9	483.8	509.6
52.5°	342.1	344.7	347.3	353.0	358.7	367.5	376.3	395.9	415.5	440.9	466.2
55°	307.0	308.5	310.1	314.2	318.4	328.7	339.0	356.1	373.2	396.4	419.7
57.5°	273.9	276.0	278.1	281.2	284.3	293.6	302.9	317.9	332.8	356.1	379.4
60°	239.8	242.4	245.0	248.6	252.2	259.4	266.7	280.1	293.6	314.2	334.9
62.5°	215.0	215.5	216.0	219.1	222.2	227.4	232.6	243.4	254.3	275.0	295.6
65°	187.1	188.6	190.2	191.7	193.3	197.4	201.6	210.9	220.2	235.7	251.2
67.5°	158.2	159.7	161.3	163.8	166.4	170.0	173.7	179.9	186.1	200.5	215.0
70°	123.0	123.0	123.0	127.1	131.3	137.5	143.7	148.3	153.0	164.9	176.8
72.5°	100.3	100.8	101.3	101.8	102.3	106.0	109.6	117.3	125.1	132.3	139.5
75°	81.7	82.2	82.7	83.2	83.7	84.8	85.8	88.4	91.0	99.2	107.5
77.5°	65.1	65.6	66.2	66.7	67.2	68.2	69.3	70.3	71.3	74.4	77.5
80°	49.6	50.1	50.6	51.2	51.7	52.2	52.7	53.8	54.8	56.3	57.9
82.5°	36.2	36.2	36.2	36.2	36.2	37.2	38.2	38.2	38.2	39.3	40.3
85°	22.7	22.7	22.7	23.3	23.8	23.8	23.8	24.3	24.8	24.8	24.8
87.5°	10.3	9.8	9.3	9.8	10.3	10.3	10.3	10.9	11.4	11.4	11.4
90°	10.7	10.5	10.4	10.2	10.1	9.8	9.5	9.2	8.9	8.6	7.5
92.5°	15.3	15.5	15.7	15.8	16.0	15.9	15.7	15.5	15.2	15.0	14.5
95°	27.8	27.8	27.8	27.8	27.8	27.7	27.4	27.0	26.7	26.4	25.8
97.5°	40.0	40.0	40.1	40.2	40.3	40.1	39.7	39.3	38.9	38.5	38.1
100°	54.2	54.1	53.9	53.8	53.6	53.4	53.2	52.9	52.7	52.5	52.1
102.5°	68.9	69.0	69.0	69.1	69.2	69.1	68.9	68.6	68.4	68.2	67.6
105°	84.9	84.8	84.6	84.5	84.3	84.2	84.2	84.2	84.2	84.2	83.5
107.5°	101.4	101.4	101.5	101.6	101.7	101.6	101.4	101.1	100.9	100.6	100.3
110°	118.1	118.3	118.4	118.6	118.8	118.7	118.4	118.0	117.7	117.4	117.3



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	136.0	136.0	136.0	136.0	136.0	135.8	135.4	135.0	134.6	134.2	134.2
115°	152.0	152.1	152.2	152.3	152.3	152.3	152.3	152.2	152.1	152.0	152.2
117.5°	168.4	168.7	168.9	169.2	169.4	169.5	169.5	169.5	169.5	169.5	169.7
120°	185.9	186.1	186.3	186.4	186.6	186.7	186.8	186.8	186.9	187.0	187.4
122.5°	202.7	202.9	203.2	203.4	203.7	203.9	204.1	204.4	204.6	204.8	205.0
125°	219.5	219.8	220.1	220.4	220.7	221.1	221.4	221.7	222.0	222.3	222.5
127.5°	236.3	236.6	236.9	237.2	237.5	237.9	238.4	238.9	239.3	239.8	240.0
130°	252.7	253.2	253.8	254.3	254.9	255.3	255.6	256.0	256.3	256.6	256.8
132.5°	269.8	270.2	270.6	271.0	271.4	271.8	272.2	272.6	273.0	273.4	273.5
135°	287.6	287.8	288.0	288.1	288.3	288.5	288.8	289.2	289.5	289.8	289.9
137.5°	303.3	303.6	303.8	304.1	304.3	304.6	305.0	305.4	305.8	306.2	306.0
140°	318.7	319.2	319.8	320.4	320.9	321.2	321.3	321.4	321.5	321.5	321.5
142.5°	334.4	334.8	335.2	335.6	336.0	336.2	336.3	336.4	336.5	336.5	336.4
145°	349.4	349.7	350.0	350.3	350.7	350.9	350.9	351.0	351.1	351.2	350.9
147.5°	362.9	363.4	363.9	364.4	364.8	365.1	365.1	365.1	365.1	365.1	364.8
150°	375.8	376.3	376.7	377.2	377.7	377.9	377.9	377.9	377.9	377.9	377.8
152.5°	388.3	388.7	389.1	389.5	389.9	390.0	389.8	389.7	389.5	389.4	389.3
155°	399.3	399.9	400.5	401.0	401.6	401.7	401.4	401.1	400.7	400.4	400.3
157.5°	409.7	410.2	410.6	411.1	411.6	411.7	411.4	411.0	410.7	410.4	410.3
160°	419.7	420.0	420.3	420.6	421.0	420.9	420.5	420.1	419.7	419.3	419.3
162.5°	427.2	427.7	428.3	428.8	429.4	429.5	429.1	428.7	428.3	427.9	427.8
165°	434.3	434.9	435.4	436.0	436.5	436.6	436.1	435.6	435.2	434.7	434.7
167.5°	440.7	441.2	441.7	442.2	442.6	442.6	442.2	441.7	441.2	440.7	440.7
170°	445.4	445.9	446.5	447.0	447.6	447.6	447.0	446.5	445.9	445.4	445.4
172.5°	449.0	449.5	450.1	450.6	451.2	451.2	450.7	450.3	449.8	449.3	449.3
175°	451.5	452.0	452.6	453.1	453.7	453.7	453.2	452.8	452.3	451.8	451.8
177.5°	452.9	453.4	454.0	454.5	455.1	455.1	454.7	454.2	453.7	453.2	453.2
180°	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1
2.5°	2676.7	2674.1	2649.3	2624.5	2600.2	2575.9	2557.8	2539.7	2509.2	2478.7	2459.6
5°	2842.6	2822.9	2783.7	2744.4	2685.5	2626.5	2576.9	2527.3	2464.3	2401.2	2348.5
7.5°	2935.1	2919.1	2871.5	2824.0	2745.9	2667.9	2590.4	2512.8	2419.8	2326.8	2247.2
10°	2937.7	2951.1	2911.8	2872.5	2784.7	2696.8	2591.4	2486.0	2360.9	2235.8	2133.0
12.5°	2845.7	2903.6	2895.3	2887.0	2797.6	2708.2	2580.0	2451.8	2298.3	2144.8	2016.2
15°	2673.6	2785.7	2818.8	2851.9	2778.0	2704.1	2558.3	2412.6	2232.2	2051.8	1904.0
17.5°	2451.8	2609.0	2696.3	2783.7	2729.9	2676.2	2516.4	2356.7	2153.6	1950.5	1789.8
20°	2189.3	2395.0	2532.0	2668.9	2649.3	2629.6	2464.8	2299.9	2080.8	1861.6	1687.5
22.5°	1929.8	2146.9	2336.1	2525.2	2545.4	2565.5	2399.1	2232.7	1992.9	1753.1	1575.8
25°	1706.1	1926.7	2152.1	2377.4	2422.9	2468.4	2310.2	2152.1	1903.5	1654.9	1478.7
27.5°	1492.6	1702.4	1950.5	2198.6	2281.3	2364.0	2219.3	2074.6	1815.6	1556.7	1381.0
30°	1318.4	1506.0	1759.3	2012.5	2127.8	2243.0	2110.2	1977.4	1720.5	1463.7	1291.6
32.5°	1156.2	1324.1	1578.4	1832.7	1966.5	2100.4	1985.7	1870.9	1623.9	1376.8	1206.8
35°	1028.0	1178.4	1415.6	1652.8	1802.7	1952.6	1858.5	1764.5	1523.1	1281.7	1121.0
37.5°	917.9	1044.0	1266.8	1489.5	1648.7	1807.9	1729.3	1650.8	1423.9	1197.0	1045.0
40°	826.9	928.2	1135.5	1342.7	1498.8	1654.9	1587.7	1520.5	1317.4	1114.3	972.2
42.5°	748.9	836.2	1022.3	1208.4	1351.5	1494.7	1450.2	1405.8	1221.8	1037.8	906.0
45°	680.1	753.5	917.4	1081.2	1213.0	1344.8	1309.6	1274.5	1115.8	957.2	836.2
47.5°	619.2	682.2	828.5	974.7	1093.1	1211.5	1178.9	1146.3	1015.1	883.8	773.7
50°	563.3	617.1	739.1	861.0	967.5	1074.0	1047.1	1020.2	911.7	803.2	708.1
52.5°	510.6	555.1	664.6	774.2	860.0	945.8	925.1	904.5	820.7	737.0	650.7
55°	460.5	501.3	593.8	686.4	759.7	833.1	812.5	791.8	726.7	661.5	585.6
57.5°	415.0	450.7	525.6	600.6	659.0	717.4	707.5	697.7	643.5	589.2	526.7
60°	366.9	399.0	463.6	528.2	575.2	622.3	610.9	599.5	560.8	522.0	468.2
62.5°	324.1	352.5	404.2	455.8	494.1	532.3	524.1	515.8	486.3	456.9	412.4
65°	279.1	307.0	348.9	390.7	420.7	450.7	443.4	436.2	414.0	391.8	356.1
67.5°	238.3	261.5	297.7	333.9	354.0	374.2	370.1	365.9	348.9	331.8	303.9
70°	196.9	217.1	247.0	277.0	291.0	304.9	306.5	308.0	292.5	277.0	256.3
72.5°	155.6	171.6	199.5	227.4	238.3	249.1	248.6	248.1	238.8	229.5	210.9
75°	119.4	131.3	153.0	174.7	184.0	193.3	195.4	197.4	188.6	179.9	169.5
77.5°	85.8	94.1	110.6	127.1	137.5	147.8	148.8	149.9	145.7	141.6	131.8
80°	60.5	63.1	73.4	83.7	94.6	105.4	107.0	108.5	104.4	100.3	94.1
82.5°	41.9	43.4	47.0	50.6	59.4	68.2	70.3	72.4	70.3	68.2	61.5
85°	25.3	25.8	27.4	28.9	33.1	37.2	39.3	41.3	40.3	39.3	35.7
87.5°	11.4	11.4	11.9	12.4	13.4	14.5	17.1	19.6	18.1	16.5	15.0
90°	6.5	5.5	4.4	3.5	2.7	1.9	1.1	0.4	1.1	1.9	2.7
92.5°	14.0	13.6	13.1	12.6	12.1	11.7	11.2	10.7	11.2	11.7	12.1
95°	25.1	24.5	23.9	23.3	22.7	22.2	21.6	21.1	21.6	22.2	22.7
97.5°	37.6	37.1	36.6	36.2	35.8	35.4	35.0	34.6	35.0	35.4	35.8
100°	51.7	51.3	50.9	50.4	50.0	49.5	49.0	48.5	49.0	49.5	50.0
102.5°	67.1	66.5	65.9	65.5	65.3	65.1	64.8	64.6	64.8	65.1	65.3
105°	82.8	82.1	81.4	80.9	80.8	80.6	80.5	80.3	80.5	80.6	80.8
107.5°	100.0	99.7	99.4	99.2	99.1	99.0	98.9	98.9	98.9	99.0	99.1
110°	117.1	116.9	116.8	116.6	116.5	116.3	116.1	116.0	116.1	116.3	116.5



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	134.2	134.2	134.2	134.1	134.1	134.0	133.9	133.8	133.9	134.0	134.1
115°	152.3	152.5	152.7	152.6	152.4	152.1	151.9	151.7	151.9	152.1	152.4
117.5°	169.8	170.0	170.2	170.2	170.1	170.0	170.0	169.9	170.0	170.0	170.1
120°	187.8	188.2	188.6	188.6	188.1	187.6	187.1	186.6	187.1	187.6	188.1
122.5°	205.2	205.3	205.5	205.4	205.1	204.8	204.5	204.1	204.5	204.8	205.1
125°	222.7	222.8	223.0	222.9	222.7	222.5	222.2	222.0	222.2	222.5	222.7
127.5°	240.1	240.3	240.5	240.3	239.8	239.3	238.9	238.4	238.9	239.3	239.8
130°	257.1	257.3	257.5	257.3	256.7	256.1	255.4	254.8	255.4	256.1	256.7
132.5°	273.7	273.8	274.0	273.8	273.1	272.5	271.9	271.2	271.9	272.5	273.1
135°	289.9	290.0	290.1	289.9	289.4	289.0	288.5	288.0	288.5	289.0	289.4
137.5°	305.7	305.5	305.2	304.9	304.5	304.1	303.7	303.3	303.7	304.1	304.5
140°	321.4	321.3	321.2	321.0	320.6	320.2	319.8	319.4	319.8	320.2	320.6
142.5°	336.2	336.1	335.9	335.6	335.2	334.8	334.4	334.0	334.4	334.8	335.2
145°	350.7	350.5	350.2	350.0	349.9	349.7	349.5	349.4	349.5	349.7	349.9
147.5°	364.6	364.4	364.1	363.9	363.5	363.2	362.9	362.6	362.9	363.2	363.5
150°	377.6	377.5	377.3	377.1	377.0	376.8	376.7	376.5	376.7	376.8	377.0
152.5°	389.2	389.1	389.0	388.9	388.6	388.4	388.2	387.9	388.2	388.4	388.6
155°	400.3	400.2	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1	400.1
157.5°	410.3	410.2	410.1	410.1	410.2	410.3	410.3	410.4	410.3	410.3	410.2
160°	419.3	419.3	419.3	419.4	419.6	419.7	419.9	420.0	419.9	419.7	419.6
162.5°	427.7	427.7	427.6	427.7	427.9	428.1	428.4	428.6	428.4	428.1	427.9
165°	434.7	434.7	434.7	434.8	435.0	435.3	435.5	435.7	435.5	435.3	435.0
167.5°	440.6	440.5	440.4	440.5	440.9	441.2	441.5	441.8	441.5	441.2	440.9
170°	445.4	445.4	445.4	445.5	445.9	446.2	446.5	446.8	446.5	446.2	445.9
172.5°	449.3	449.3	449.3	449.5	449.8	450.1	450.4	450.7	450.4	450.1	449.8
175°	451.8	451.8	451.8	452.0	452.3	452.6	452.9	453.2	452.9	452.6	452.3
177.5°	453.2	453.2	453.2	453.4	453.7	454.0	454.3	454.7	454.3	454.0	453.7
180°	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1	2521.1
2.5°	2440.5	2411.0	2381.6	2360.4	2339.2	2312.8	2286.5	2285.4	2284.4	2264.8	2245.1
5°	2295.8	2244.6	2193.4	2143.3	2093.2	2043.0	1992.9	1981.5	1970.2	1953.1	1936.0
7.5°	2167.6	2085.9	2004.3	1940.2	1876.1	1826.0	1775.8	1741.7	1707.6	1681.3	1654.9
10°	2030.1	1928.8	1827.5	1750.0	1672.5	1618.2	1563.9	1524.7	1485.4	1466.8	1448.2
12.5°	1887.5	1777.4	1667.3	1591.3	1515.3	1450.2	1385.1	1349.4	1313.8	1287.9	1262.1
15°	1756.2	1637.8	1519.5	1438.9	1358.2	1297.2	1236.3	1200.6	1164.9	1139.1	1113.3
17.5°	1629.1	1509.7	1390.3	1308.6	1227.0	1171.7	1116.4	1081.7	1047.1	1031.1	1015.1
20°	1513.3	1392.9	1272.4	1195.4	1118.4	1064.2	1009.9	991.3	972.7	957.7	942.7
22.5°	1398.5	1282.8	1167.0	1093.1	1019.2	979.9	940.6	925.6	910.7	899.3	887.9
25°	1302.4	1187.2	1071.9	1007.3	942.7	912.2	881.7	871.9	862.1	850.7	839.3
27.5°	1205.2	1095.7	986.1	934.4	882.7	857.9	833.1	820.7	808.3	799.0	789.7
30°	1119.5	1018.2	916.9	874.0	831.1	809.4	787.7	774.2	760.8	752.0	743.2
32.5°	1036.8	946.8	856.9	820.2	783.5	762.3	741.1	728.2	715.3	705.0	694.6
35°	960.3	882.2	804.2	770.6	737.0	715.8	694.6	681.7	668.8	658.4	648.1
37.5°	893.1	822.3	751.5	719.9	688.4	669.8	651.2	637.8	624.3	613.5	602.6
40°	830.0	767.5	705.0	674.5	644.0	623.8	603.7	591.8	579.9	570.1	560.2
42.5°	774.2	716.8	659.5	629.5	599.5	580.4	561.3	547.3	533.4	527.7	522.0
45°	715.3	664.6	614.0	585.1	556.1	536.0	515.8	503.9	492.0	486.9	481.7
47.5°	663.6	616.6	569.5	541.1	512.7	494.6	476.5	467.2	457.9	450.7	443.4
50°	613.0	567.5	522.0	494.6	467.2	451.7	436.2	424.8	413.5	408.3	403.1
52.5°	564.4	523.0	481.7	453.8	425.9	410.9	395.9	386.1	376.3	365.4	354.5
55°	509.6	473.4	437.2	412.4	387.6	372.1	356.6	345.2	333.9	322.5	311.1
57.5°	464.1	428.5	392.8	370.6	348.3	333.4	318.4	306.0	293.6	284.3	275.0
60°	414.5	383.5	352.5	330.8	309.1	294.6	280.1	268.2	256.3	251.7	247.0
62.5°	368.0	339.0	310.1	291.0	271.9	257.9	243.9	236.2	228.4	225.3	222.2
65°	320.4	295.6	270.8	253.2	235.7	223.8	211.9	208.3	204.7	202.1	199.5
67.5°	276.0	254.8	233.6	218.1	202.6	194.3	186.1	181.9	177.8	174.7	171.6
70°	235.7	217.1	198.5	185.0	171.6	163.8	156.1	152.5	148.8	143.2	137.5
72.5°	192.3	177.8	163.3	153.0	142.6	135.9	129.2	122.0	114.7	109.6	104.4
75°	159.2	144.7	130.2	120.4	110.6	102.8	95.1	92.5	89.9	88.4	86.8
77.5°	122.0	109.6	97.2	89.4	81.7	78.0	74.4	72.9	71.3	70.8	70.3
80°	87.9	77.5	67.2	63.1	58.9	57.9	56.9	55.8	54.8	54.3	53.8
82.5°	54.8	49.6	44.4	43.4	42.4	41.9	41.3	40.8	40.3	39.8	39.3
85°	32.0	30.0	27.9	27.4	26.9	26.4	25.8	25.8	25.8	25.8	25.8
87.5°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	12.9	12.4
90°	3.5	4.4	5.5	6.5	7.5	8.6	8.9	9.2	9.5	9.8	10.1
92.5°	12.6	13.1	13.6	14.0	14.5	15.0	15.2	15.5	15.7	15.9	16.0
95°	23.3	23.9	24.5	25.1	25.8	26.4	26.7	27.0	27.4	27.7	27.8
97.5°	36.2	36.6	37.1	37.6	38.1	38.5	38.9	39.3	39.7	40.1	40.3
100°	50.4	50.9	51.3	51.7	52.1	52.5	52.7	52.9	53.2	53.4	53.6
102.5°	65.5	65.9	66.5	67.1	67.6	68.2	68.4	68.6	68.9	69.1	69.2
105°	80.9	81.4	82.1	82.8	83.5	84.2	84.2	84.2	84.2	84.2	84.3
107.5°	99.2	99.4	99.7	100.0	100.3	100.6	100.9	101.1	101.4	101.6	101.7
110°	116.6	116.8	116.9	117.1	117.3	117.4	117.7	118.0	118.4	118.7	118.8



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	134.1	134.2	134.2	134.2	134.2	134.2	134.6	135.0	135.4	135.8	136.0
115°	152.6	152.7	152.5	152.3	152.2	152.0	152.1	152.2	152.3	152.3	152.3
117.5°	170.2	170.2	170.0	169.8	169.7	169.5	169.5	169.5	169.5	169.5	169.4
120°	188.6	188.6	188.2	187.8	187.4	187.0	186.9	186.8	186.8	186.7	186.6
122.5°	205.4	205.5	205.3	205.2	205.0	204.8	204.6	204.4	204.1	203.9	203.7
125°	222.9	223.0	222.8	222.7	222.5	222.3	222.0	221.7	221.4	221.1	220.7
127.5°	240.3	240.5	240.3	240.1	240.0	239.8	239.3	238.9	238.4	237.9	237.5
130°	257.3	257.5	257.3	257.1	256.8	256.6	256.3	256.0	255.6	255.3	254.9
132.5°	273.8	274.0	273.8	273.7	273.5	273.4	273.0	272.6	272.2	271.8	271.4
135°	289.9	290.1	290.0	289.9	289.9	289.8	289.5	289.2	288.8	288.5	288.3
137.5°	304.9	305.2	305.5	305.7	306.0	306.2	305.8	305.4	305.0	304.6	304.3
140°	321.0	321.2	321.3	321.4	321.5	321.5	321.5	321.4	321.3	321.2	320.9
142.5°	335.6	335.9	336.1	336.2	336.4	336.5	336.5	336.4	336.3	336.2	336.0
145°	350.0	350.2	350.5	350.7	350.9	351.2	351.1	351.0	350.9	350.9	350.7
147.5°	363.9	364.1	364.4	364.6	364.8	365.1	365.1	365.1	365.1	365.1	364.8
150°	377.1	377.3	377.5	377.6	377.8	377.9	377.9	377.9	377.9	377.9	377.7
152.5°	388.9	389.0	389.1	389.2	389.3	389.4	389.5	389.7	389.8	390.0	389.9
155°	400.1	400.1	400.2	400.3	400.3	400.4	400.7	401.1	401.4	401.7	401.6
157.5°	410.1	410.1	410.2	410.3	410.3	410.4	410.7	411.0	411.4	411.7	411.6
160°	419.4	419.3	419.3	419.3	419.3	419.3	419.7	420.1	420.5	420.9	421.0
162.5°	427.7	427.6	427.7	427.7	427.8	427.9	428.3	428.7	429.1	429.5	429.4
165°	434.8	434.7	434.7	434.7	434.7	434.7	435.2	435.6	436.1	436.6	436.5
167.5°	440.5	440.4	440.5	440.6	440.7	440.7	441.2	441.7	442.2	442.6	442.6
170°	445.5	445.4	445.4	445.4	445.4	445.4	445.9	446.5	447.0	447.6	447.6
172.5°	449.5	449.3	449.3	449.3	449.3	449.3	449.8	450.3	450.7	451.2	451.2
175°	452.0	451.8	451.8	451.8	451.8	451.8	452.3	452.8	453.2	453.7	453.7
177.5°	453.4	453.2	453.2	453.2	453.2	453.2	453.7	454.2	454.7	455.1	455.1
180°	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3	454.3



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2521.1	2521.1	2521.1	2521.1
2.5°	2239.9	2234.8	2232.7	2230.6
5°	1920.0	1904.0	1900.4	1896.8
7.5°	1648.2	1641.5	1619.2	1597.0
10°	1427.5	1406.8	1397.5	1388.2
12.5°	1243.0	1223.9	1220.8	1217.7
15°	1099.8	1086.4	1081.7	1077.1
17.5°	1005.8	996.5	990.8	985.1
20°	936.0	929.3	925.1	921.0
22.5°	882.7	877.6	874.5	871.4
25°	831.6	823.8	821.2	818.7
27.5°	783.0	776.3	773.7	771.1
30°	737.5	731.8	728.2	724.6
32.5°	687.9	681.2	679.1	677.0
35°	644.0	639.8	637.8	635.7
37.5°	597.5	592.3	589.2	586.1
40°	557.7	555.1	553.5	552.0
42.5°	517.3	512.7	512.2	511.7
45°	477.0	472.4	471.3	470.3
47.5°	439.3	435.2	434.7	434.1
50°	397.4	391.8	387.6	383.5
52.5°	349.4	344.2	340.6	337.0
55°	305.4	299.8	296.7	293.6
57.5°	272.4	269.8	268.2	266.7
60°	245.5	243.9	242.9	241.9
62.5°	220.7	219.1	219.1	219.1
65°	197.9	196.4	194.8	193.3
67.5°	168.5	165.4	164.9	164.4
70°	132.8	128.2	127.7	127.1
72.5°	103.9	103.4	102.3	101.3
75°	85.8	84.8	84.8	84.8
77.5°	69.3	68.2	68.2	68.2
80°	53.2	52.7	53.2	53.8
82.5°	39.3	39.3	38.8	38.2
85°	25.3	24.8	24.8	24.8
87.5°	12.4	12.4	12.4	12.4
90°	10.2	10.4	10.5	10.7
92.5°	15.8	15.7	15.5	15.3
95°	27.8	27.8	27.8	27.8
97.5°	40.2	40.1	40.0	40.0
100°	53.8	53.9	54.1	54.2
102.5°	69.1	69.0	69.0	68.9
105°	84.5	84.6	84.8	84.9
107.5°	101.6	101.5	101.4	101.4
110°	118.6	118.4	118.3	118.1



TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	136.0	136.0	136.0	136.0
115°	152.3	152.2	152.1	152.0
117.5°	169.2	168.9	168.7	168.4
120°	186.4	186.3	186.1	185.9
122.5°	203.4	203.2	202.9	202.7
125°	220.4	220.1	219.8	219.5
127.5°	237.2	236.9	236.6	236.3
130°	254.3	253.8	253.2	252.7
132.5°	271.0	270.6	270.2	269.8
135°	288.1	288.0	287.8	287.6
137.5°	304.1	303.8	303.6	303.3
140°	320.4	319.8	319.2	318.7
142.5°	335.6	335.2	334.8	334.4
145°	350.3	350.0	349.7	349.4
147.5°	364.4	363.9	363.4	362.9
150°	377.2	376.7	376.3	375.8
152.5°	389.5	389.1	388.7	388.3
155°	401.0	400.5	399.9	399.3
157.5°	411.1	410.6	410.2	409.7
160°	420.6	420.3	420.0	419.7
162.5°	428.8	428.3	427.7	427.2
165°	436.0	435.4	434.9	434.3
167.5°	442.2	441.7	441.2	440.7
170°	447.0	446.5	445.9	445.4
172.5°	450.6	450.1	449.5	449.0
175°	453.1	452.6	452.0	451.5
177.5°	454.5	454.0	453.4	452.9
180°	454.3	454.3	454.3	454.3

TEST NUMBER: P832366

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-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	14.13	15.15	14.88	15.91	16.82	18.79	19.81	19.54	20.57	21.48
	3H	15.37	16.28	16.13	17.05	17.99	20.31	21.22	21.07	21.99	22.93
	4H	15.76	16.61	16.54	17.39	18.35	20.81	21.66	21.59	22.44	23.40
	6H	16.05	16.84	16.84	17.62	18.59	21.13	21.92	21.92	22.70	23.67
	8H	16.14	16.89	16.94	17.69	18.66	21.21	21.96	22.01	22.77	23.74
	12H	16.20	16.91	17.00	17.71	18.70	21.25	21.96	22.05	22.76	23.76
4H	2H	14.88	15.73	15.66	16.51	17.47	18.81	19.67	19.60	20.45	21.40
	3H	16.26	16.97	17.06	17.79	18.76	20.49	21.20	21.28	22.01	22.98
	4H	16.72	17.37	17.53	18.18	19.18	21.10	21.74	21.91	22.56	23.56
	6H	17.10	17.66	17.93	18.49	19.50	21.55	22.10	22.37	22.94	23.95
	8H	17.23	17.75	18.06	18.58	19.60	21.68	22.20	22.51	23.03	24.05
	12H	17.31	17.78	18.16	18.63	19.65	21.75	22.22	22.60	23.07	24.09
8H	4H	17.05	17.57	17.88	18.40	19.42	21.08	21.60	21.91	22.43	23.45
	6H	17.52	17.95	18.38	18.82	19.84	21.58	22.01	22.44	22.88	23.90
	8H	17.71	18.09	18.58	18.96	20.00	21.77	22.15	22.64	23.02	24.05
	12H	17.86	18.19	18.73	19.06	20.15	21.89	22.23	22.76	23.09	24.18
12H	4H	17.07	17.53	17.92	18.39	19.41	21.04	21.50	21.89	22.36	23.38
	6H	17.58	17.96	18.45	18.83	19.86	21.56	21.94	22.42	22.81	23.84
	8H	17.81	18.14	18.68	19.00	20.09	21.76	22.09	22.63	22.95	24.04