

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: P831837

Luminaire Tested: S123RDIP-S1000D365U935-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831837  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S1000D365U935-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

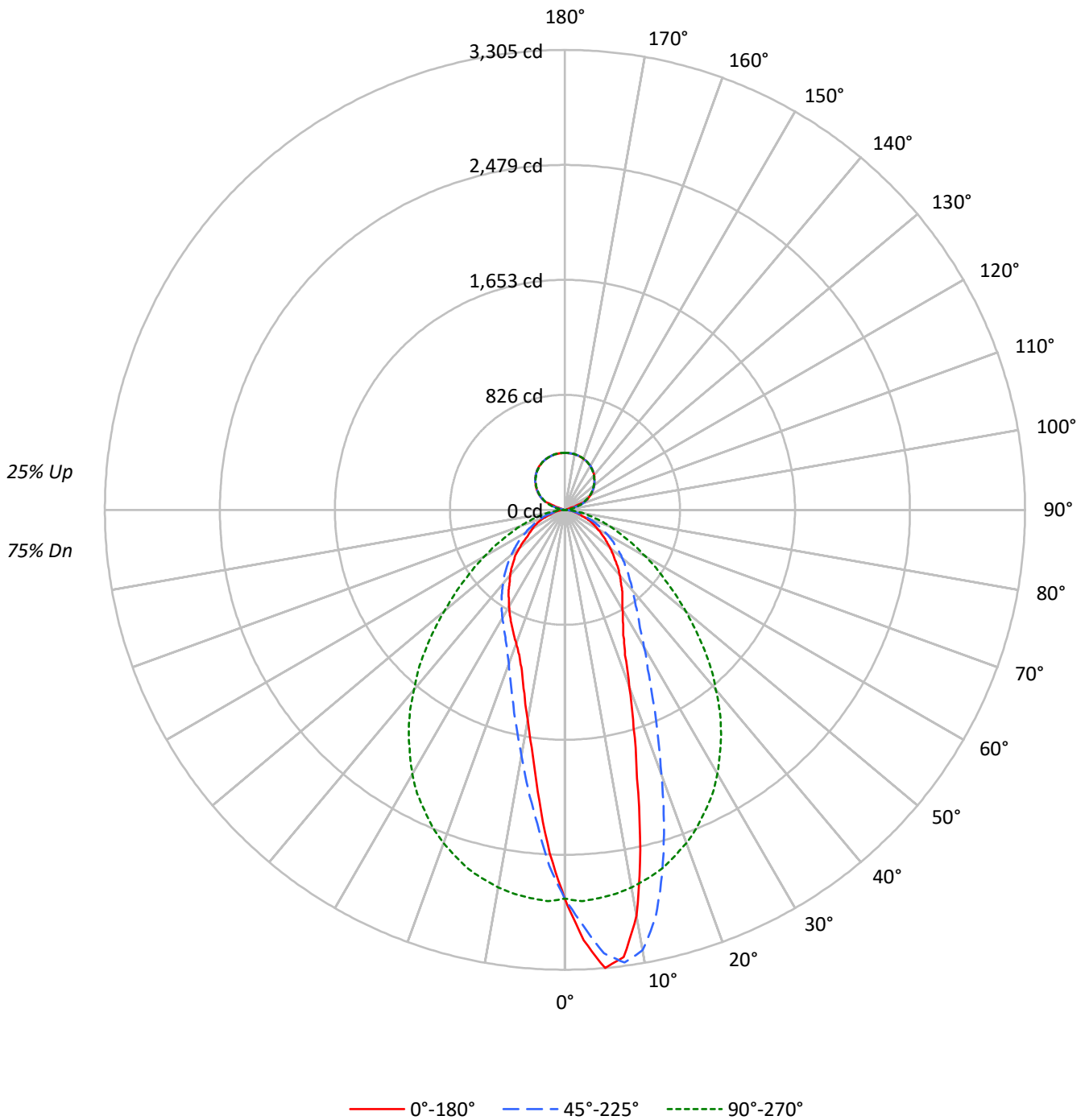
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4953.6 lumens  
Efficiency: N/A  
Efficacy: 109.8 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): 45.1  
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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	113	113	113	113	107	107	107	107	97	97	97	88	88	88	79	79	79	75		
1	105	100	97	94	99	96	93	90	87	85	82	79	77	75	72	70	69	65		
2	96	89	84	79	91	85	80	76	78	74	70	71	68	65	65	62	60	57		
3	89	80	73	67	84	76	70	65	70	65	61	64	60	57	58	55	53	50		
4	82	72	64	58	78	69	62	57	63	58	53	58	54	50	53	50	47	44		
5	76	65	57	51	72	62	55	50	58	52	47	53	48	44	49	45	42	39		
6	71	59	51	46	67	57	50	45	53	47	42	49	44	40	45	41	38	35		
7	66	54	46	41	63	52	45	40	48	42	38	45	40	36	42	37	34	32		
8	62	50	42	37	59	48	41	36	45	39	35	42	37	33	39	35	31	29		
9	58	46	39	34	55	45	38	33	42	36	32	39	34	30	36	32	29	27		
10	55	43	36	31	52	41	35	30	39	33	29	36	31	28	34	30	27	25		

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

	0°	45°	90°	135°	180°
0°	30074	30074	30074	30074	30074
5°	35710	34571	30263	24464	22713
10°	32354	35114	30112	19601	16816
15°	22276	30107	29795	16020	13301
20°	15497	23180	29196	13509	11692
25°	11809	17667	28326	12006	10776
30°	10280	14124	27237	11149	9981
35°	9437	11914	25695	10424	9257
40°	8612	10640	23678	9714	8595
45°	7777	9730	21500	9042	7934
50°	7060	8977	18933	8383	7117
55°	6384	8244	16467	7739	6105
60°	5722	7496	14303	7029	5772
65°	5280	6653	12312	6316	5456
70°	4290	5750	10744	5715	4434
75°	3764	4575	9100	4741	3905
80°	3409	3868	7457	3973	3694
85°	3112	3396	5656	3606	3396

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 22686 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	254.7	5.1
10°-20°	589.3	11.9
20°-30°	676.1	13.6
30°-40°	666.4	13.5
40°-50°	587.7	11.9
50°-60°	452.1	9.1
60°-70°	297.3	6.0
70°-80°	144.4	2.9
80°-90°	37.2	0.8
90°-100°	14.4	0.3
100°-110°	69.8	1.4
110°-120°	171.1	3.5
120°-130°	217.2	4.4
130°-140°	232.0	4.7
140°-150°	217.0	4.4
150°-160°	175.0	3.5
160°-170°	112.9	2.3
170°-180°	38.9	0.8
0°-30°	1520.1	30.7
0°-40°	2186.5	44.1
0°-60°	3226.4	65.1
0°-90°	3705.2	74.8
90°-120°	255.3	5.2
90°-150°	921.5	18.6
90°-180°	1248.0	25.2
0°-180°	4953.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2794	2794	2794	2794	2794	
5°	3305	3200	2801	2264	2102	302
15°	1999	2702	2674	1438	1194	564
25°	994	1488	2385	1011	907	470
35°	718	907	1955	793	704	448
45°	511	639	1412	594	521	397
55°	340	439	878	412	325	305
65°	207	261	483	248	214	203
75°	90	110	219	114	94	97
85°	25	28	46	29	28	27
90°	9	7	0	7	9	5
95°	12	9	19	9	12	10
105°	13	67	91	67	13	28
115°	179	175	170	175	179	168
125°	245	243	240	243	245	219
135°	302	302	298	302	302	233
145°	348	347	344	347	348	217
155°	379	379	379	379	379	175
165°	399	399	400	399	399	113
175°	408	408	410	408	408	39
180°	410	410	410	410	410	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0
2.5°	3096.4	3086.6	3076.9	3074.0	3071.2	3062.0	3052.8	3032.2	3011.6	2990.4	2969.2
5°	3304.9	3306.0	3307.2	3304.3	3301.4	3289.4	3277.4	3252.2	3227.0	3199.5	3172.0
7.5°	3240.7	3259.0	3277.4	3280.8	3284.2	3293.4	3302.6	3296.8	3291.1	3280.8	3270.5
10°	2960.1	2958.9	2957.8	2978.4	2999.0	3060.3	3121.6	3153.1	3184.6	3212.6	3240.7
12.5°	2501.8	2503.6	2505.3	2572.9	2640.5	2698.3	2756.2	2836.3	2916.5	3003.0	3089.5
15°	1999.0	2027.0	2055.1	2115.2	2175.4	2262.4	2349.5	2457.2	2564.8	2701.7	2838.6
17.5°	1641.5	1653.6	1665.6	1723.5	1781.3	1863.8	1946.3	2068.3	2190.3	2366.7	2543.1
20°	1352.9	1363.8	1374.6	1416.5	1458.3	1537.3	1616.3	1732.6	1848.9	2023.6	2198.3
22.5°	1129.5	1150.7	1171.9	1199.9	1228.0	1285.3	1342.6	1461.1	1579.7	1738.9	1898.1
25°	994.3	1004.1	1013.8	1037.9	1061.9	1116.9	1171.9	1250.3	1328.8	1487.5	1646.1
27.5°	902.7	905.5	908.4	926.2	943.9	979.4	1014.9	1087.7	1160.4	1291.0	1421.6
30°	827.1	832.2	837.4	851.1	864.9	890.7	916.4	968.0	1019.5	1136.4	1253.2
32.5°	768.7	771.5	774.4	785.8	797.3	816.2	835.1	875.8	916.4	1005.8	1095.1
35°	718.2	718.8	719.4	728.0	736.6	754.9	773.2	807.0	840.8	906.7	972.6
37.5°	661.0	665.0	669.0	675.3	681.6	697.6	713.7	741.2	768.7	823.1	877.5
40°	612.9	616.3	619.7	627.2	634.6	647.2	659.8	685.0	710.2	757.2	804.2
42.5°	564.7	567.0	569.3	576.8	584.2	599.7	615.2	635.2	655.2	694.2	733.1
45°	510.9	516.6	522.4	530.4	538.4	551.6	564.7	585.4	606.0	639.2	672.4
47.5°	466.2	469.1	472.0	478.8	485.7	501.7	517.8	536.1	554.4	585.4	616.3
50°	421.6	422.7	423.8	430.1	436.4	450.8	465.1	486.3	507.5	536.1	564.7
52.5°	379.2	382.0	384.9	391.2	397.5	407.2	417.0	438.7	460.5	488.6	516.6
55°	340.2	341.9	343.7	348.2	352.8	364.3	375.7	394.6	413.5	439.3	465.1
57.5°	303.6	305.9	308.1	311.6	315.0	325.3	335.6	352.3	368.9	394.6	420.4
60°	265.8	268.6	271.5	275.5	279.5	287.5	295.5	310.4	325.3	348.2	371.2
62.5°	238.3	238.8	239.4	242.9	246.3	252.0	257.7	269.8	281.8	304.7	327.6
65°	207.3	209.1	210.8	212.5	214.2	218.8	223.4	233.7	244.0	261.2	278.4
67.5°	175.3	177.0	178.7	181.6	184.4	188.4	192.4	199.3	206.2	222.2	238.3
70°	136.3	136.3	136.3	140.9	145.5	152.4	159.2	164.4	169.5	182.7	195.9
72.5°	111.1	111.7	112.3	112.8	113.4	117.4	121.4	130.0	138.6	146.6	154.6
75°	90.5	91.1	91.6	92.2	92.8	93.9	95.1	97.9	100.8	110.0	119.1
77.5°	72.2	72.7	73.3	73.9	74.5	75.6	76.8	77.9	79.0	82.5	85.9
80°	55.0	55.6	56.1	56.7	57.3	57.8	58.4	59.6	60.7	62.4	64.1
82.5°	40.1	40.1	40.1	40.1	40.1	41.2	42.4	42.4	42.4	43.5	44.7
85°	25.2	25.2	25.2	25.8	26.3	26.3	26.3	26.9	27.5	27.5	27.5
87.5°	11.5	10.9	10.3	10.9	11.5	11.5	11.5	12.0	12.6	12.6	12.6
90°	9.1	9.0	8.9	8.7	8.6	8.4	8.1	7.8	7.6	7.3	6.4
92.5°	10.3	10.3	10.2	10.1	10.1	9.8	9.3	8.9	8.4	7.9	7.3
95°	11.6	11.6	11.6	11.6	11.6	11.3	10.9	10.4	9.9	9.4	8.7
97.5°	12.5	12.4	12.3	12.3	12.2	11.9	11.4	10.8	10.3	9.7	13.2
100°	12.8	12.7	12.6	12.6	12.5	12.2	11.7	11.1	10.6	10.0	20.6
102.5°	13.1	12.9	12.8	12.7	12.5	13.6	15.8	18.1	20.3	22.5	34.3
105°	13.4	13.3	13.1	13.0	12.8	18.8	30.7	42.7	54.7	66.6	72.7
107.5°	31.6	40.5	49.4	58.2	67.1	76.7	87.1	97.5	107.9	118.4	117.3
110°	83.7	93.3	103.0	112.7	122.3	128.3	130.5	132.8	135.0	137.2	136.5



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	158.5	158.6	158.8	158.9	159.1	158.8	158.2	157.6	157.0	156.4	155.6
115°	178.9	178.6	178.4	178.1	177.8	177.3	176.7	176.0	175.3	174.6	174.0
117.5°	195.3	195.3	195.2	195.1	195.1	194.8	194.2	193.7	193.1	192.6	192.3
120°	212.4	212.4	212.4	212.4	212.4	212.1	211.6	211.0	210.5	209.9	209.7
122.5°	229.1	229.0	229.0	228.9	228.8	228.6	228.3	228.0	227.6	227.3	227.0
125°	244.6	244.5	244.3	244.2	244.1	243.9	243.8	243.7	243.5	243.4	243.1
127.5°	259.8	260.0	260.1	260.2	260.4	260.3	260.1	259.9	259.7	259.5	259.2
130°	274.4	274.6	274.7	274.8	275.0	274.9	274.6	274.4	274.1	273.8	273.6
132.5°	287.8	288.0	288.2	288.4	288.6	288.6	288.3	288.1	287.8	287.5	287.3
135°	301.5	301.7	301.9	302.1	302.3	302.3	302.1	301.9	301.7	301.5	301.2
137.5°	314.6	314.7	314.9	315.0	315.1	315.0	314.7	314.4	314.0	313.7	313.5
140°	326.2	326.3	326.4	326.6	326.7	326.6	326.4	326.1	325.8	325.5	325.3
142.5°	336.8	337.0	337.2	337.4	337.6	337.6	337.4	337.2	337.0	336.8	336.6
145°	347.8	347.8	347.8	347.8	347.8	347.7	347.6	347.4	347.3	347.1	347.0
147.5°	355.7	356.0	356.3	356.7	357.0	357.1	357.0	356.9	356.7	356.6	356.4
150°	364.8	365.0	365.2	365.4	365.6	365.6	365.5	365.4	365.2	365.1	365.0
152.5°	372.1	372.4	372.8	373.1	373.5	373.5	373.2	372.9	372.7	372.4	372.3
155°	378.8	379.2	379.6	380.0	380.4	380.4	380.1	379.8	379.4	379.1	379.0
157.5°	384.6	385.1	385.7	386.2	386.7	386.8	386.4	386.0	385.6	385.2	385.2
160°	390.0	390.5	391.0	391.5	391.9	392.0	391.6	391.2	390.8	390.4	390.4
162.5°	395.2	395.6	396.0	396.4	396.8	396.8	396.3	395.9	395.4	394.9	395.0
165°	399.2	399.6	400.1	400.6	401.1	401.0	400.5	400.0	399.4	398.9	398.9
167.5°	402.2	402.8	403.3	403.8	404.4	404.4	403.8	403.3	402.8	402.2	402.2
170°	405.0	405.5	406.0	406.6	407.1	407.1	406.6	406.0	405.5	405.0	405.0
172.5°	406.5	407.1	407.7	408.3	408.9	408.9	408.4	407.9	407.3	406.8	406.7
175°	408.0	408.5	409.1	409.6	410.2	410.2	409.7	409.3	408.8	408.3	408.2
177.5°	408.3	409.0	409.7	410.3	411.0	411.1	410.5	410.0	409.5	408.9	408.8
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0
2.5°	2966.4	2963.5	2936.0	2908.5	2881.6	2854.7	2834.6	2814.6	2780.8	2747.0	2725.8
5°	3150.2	3128.5	3084.9	3041.4	2976.1	2910.8	2855.8	2800.8	2731.0	2661.1	2602.7
7.5°	3252.7	3235.0	3182.3	3129.6	3043.1	2956.6	2870.7	2784.8	2681.7	2578.6	2490.4
10°	3255.6	3270.5	3227.0	3183.4	3086.1	2988.7	2871.9	2755.0	2616.4	2477.8	2363.8
12.5°	3153.7	3217.8	3208.6	3199.5	3100.4	3001.3	2859.3	2717.2	2547.1	2377.0	2234.4
15°	2962.9	3087.2	3123.9	3160.5	3078.6	2996.7	2835.2	2673.7	2473.8	2273.9	2110.1
17.5°	2717.2	2891.3	2988.1	3084.9	3025.4	2965.8	2788.8	2611.8	2386.7	2161.6	1983.5
20°	2426.2	2654.2	2806.0	2957.8	2936.0	2914.2	2731.5	2548.8	2306.0	2063.1	1870.1
22.5°	2138.7	2379.3	2588.9	2798.5	2820.9	2843.2	2658.8	2474.4	2208.6	1942.8	1746.4
25°	1890.7	2135.3	2385.0	2634.7	2685.1	2735.5	2560.3	2385.0	2109.5	1834.0	1638.7
27.5°	1654.2	1886.7	2161.6	2436.5	2528.2	2619.8	2459.5	2299.1	2012.1	1725.2	1530.4
30°	1461.1	1669.0	1949.7	2230.4	2358.1	2485.8	2338.6	2191.4	1906.7	1622.1	1431.3
32.5°	1281.3	1467.4	1749.2	2031.0	2179.4	2327.7	2200.6	2073.4	1799.6	1525.9	1337.4
35°	1139.2	1305.9	1568.8	1831.7	1997.8	2163.9	2059.7	1955.4	1687.9	1420.5	1242.3
37.5°	1017.2	1157.0	1403.9	1650.7	1827.1	2003.5	1916.5	1829.4	1578.0	1326.5	1158.1
40°	916.4	1028.7	1258.4	1488.0	1661.0	1834.0	1759.5	1685.1	1460.0	1234.9	1077.4
42.5°	829.9	926.7	1132.9	1339.1	1497.8	1656.4	1607.2	1557.9	1354.0	1150.1	1004.1
45°	753.8	835.1	1016.7	1198.2	1344.3	1490.3	1451.4	1412.4	1236.6	1060.8	926.7
47.5°	686.2	756.1	918.1	1080.2	1211.4	1342.6	1306.5	1270.4	1124.9	979.4	857.4
50°	624.3	683.9	819.1	954.2	1072.2	1190.2	1160.4	1130.6	1010.4	890.1	784.7
52.5°	565.9	615.2	736.6	858.0	953.1	1048.2	1025.3	1002.3	909.6	816.8	721.1
55°	510.3	555.6	658.1	760.6	842.0	923.3	900.4	877.5	805.3	733.1	648.9
57.5°	459.9	499.5	582.5	665.6	730.3	795.0	784.1	773.2	713.1	653.0	583.6
60°	406.7	442.2	513.8	585.4	637.5	689.6	677.0	664.4	621.5	578.5	518.9
62.5°	359.1	390.6	447.9	505.2	547.6	589.9	580.8	571.6	539.0	506.3	457.1
65°	309.3	340.2	386.6	433.0	466.2	499.5	491.4	483.4	458.8	434.2	394.6
67.5°	264.0	289.8	329.9	370.0	392.3	414.7	410.1	405.5	386.6	367.7	336.8
70°	218.2	240.6	273.8	307.0	322.5	337.9	339.7	341.4	324.2	307.0	284.1
72.5°	172.4	190.2	221.1	252.0	264.0	276.1	275.5	274.9	264.6	254.3	233.7
75°	132.3	145.5	169.5	193.6	203.9	214.2	216.5	218.8	209.1	199.3	187.9
77.5°	95.1	104.2	122.6	140.9	152.4	163.8	165.0	166.1	161.5	156.9	146.1
80°	67.0	69.9	81.3	92.8	104.8	116.8	118.6	120.3	115.7	111.1	104.2
82.5°	46.4	48.1	52.1	56.1	65.9	75.6	77.9	80.2	77.9	75.6	68.2
85°	28.1	28.6	30.4	32.1	36.7	41.2	43.5	45.8	44.7	43.5	39.5
87.5°	12.6	12.6	13.2	13.7	14.9	16.0	18.9	21.8	20.0	18.3	16.6
90°	5.5	4.7	3.8	3.0	2.3	1.7	1.0	0.3	1.0	1.7	2.3
92.5°	6.7	6.1	5.5	5.4	5.8	6.2	6.6	7.0	6.6	6.2	5.8
95°	7.9	7.2	6.5	7.5	10.2	13.0	15.8	18.6	15.8	13.0	10.2
97.5°	16.6	20.1	23.5	26.2	28.1	30.0	31.9	33.8	31.9	30.0	28.1
100°	31.1	41.7	52.2	56.8	55.5	54.1	52.8	51.4	52.8	54.1	55.5
102.5°	46.0	57.8	69.6	75.0	74.1	73.3	72.4	71.5	72.4	73.3	74.1
105°	78.8	84.9	91.0	93.6	92.9	92.2	91.4	90.7	91.4	92.2	92.9
107.5°	116.3	115.3	114.3	113.5	112.9	112.3	111.7	111.1	111.7	112.3	112.9
110°	135.7	135.0	134.2	133.6	133.1	132.5	132.0	131.4	132.0	132.5	133.1





TEST NUMBER: P831837

CATALOG NUMBER: S123RDIP-S1000D365U935-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	154.9	154.2	153.4	152.8	152.3	151.9	151.4	150.9	151.4	151.9	152.3
115°	173.4	172.8	172.2	171.7	171.3	170.9	170.5	170.1	170.5	170.9	171.3
117.5°	191.9	191.6	191.2	190.8	190.4	189.9	189.4	188.9	189.4	189.9	190.4
120°	209.5	209.3	209.1	208.7	208.1	207.5	206.9	206.3	206.9	207.5	208.1
122.5°	226.7	226.5	226.2	225.8	225.3	224.9	224.4	223.9	224.4	224.9	225.3
125°	242.9	242.6	242.3	241.9	241.4	240.8	240.3	239.7	240.3	240.8	241.4
127.5°	258.8	258.5	258.2	257.7	257.2	256.7	256.1	255.6	256.1	256.7	257.2
130°	273.3	273.0	272.7	272.3	271.8	271.3	270.7	270.2	270.7	271.3	271.8
132.5°	287.1	286.9	286.7	286.3	285.8	285.3	284.7	284.2	284.7	285.3	285.8
135°	301.0	300.7	300.4	300.1	299.7	299.3	298.9	298.5	298.9	299.3	299.7
137.5°	313.4	313.3	313.1	312.8	312.3	311.7	311.2	310.6	311.2	311.7	312.3
140°	325.1	324.9	324.7	324.4	324.0	323.6	323.2	322.8	323.2	323.6	324.0
142.5°	336.4	336.2	336.0	335.7	335.3	334.9	334.5	334.1	334.5	334.9	335.3
145°	346.9	346.7	346.6	346.3	345.8	345.4	344.9	344.4	344.9	345.4	345.8
147.5°	356.3	356.2	356.0	355.8	355.5	355.1	354.8	354.5	354.8	355.1	355.5
150°	364.8	364.7	364.6	364.4	364.2	364.0	363.8	363.6	363.8	364.0	364.2
152.5°	372.3	372.2	372.1	372.1	372.0	371.9	371.9	371.8	371.9	371.9	372.0
155°	379.0	378.9	378.8	378.9	379.0	379.1	379.3	379.4	379.3	379.1	379.0
157.5°	385.3	385.4	385.5	385.5	385.5	385.5	385.5	385.5	385.5	385.5	385.5
160°	390.5	390.6	390.6	390.7	390.8	390.8	390.9	391.0	390.9	390.8	390.8
162.5°	395.1	395.1	395.2	395.3	395.5	395.7	395.9	396.1	395.9	395.7	395.5
165°	399.0	399.1	399.1	399.3	399.5	399.7	399.9	400.1	399.9	399.7	399.5
167.5°	402.2	402.2	402.2	402.4	402.6	402.9	403.2	403.4	403.2	402.9	402.6
170°	405.0	405.0	405.0	405.1	405.4	405.6	405.9	406.2	405.9	405.6	405.4
172.5°	406.6	406.6	406.5	406.6	407.0	407.3	407.7	408.0	407.7	407.3	407.0
175°	408.2	408.1	408.0	408.2	408.5	408.8	409.2	409.5	409.2	408.8	408.5
177.5°	408.8	408.7	408.6	408.8	409.1	409.5	409.8	410.1	409.8	409.5	409.1
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5



TEST NUMBER: P831837

CATALOG NUMBER: S123RDIP-S1000D365U935-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0	2794.0
2.5°	2704.6	2672.0	2639.3	2615.8	2592.3	2563.1	2533.9	2532.8	2531.6	2509.9	2488.1
5°	2544.2	2487.5	2430.8	2375.3	2319.7	2264.1	2208.6	2196.0	2183.4	2164.5	2145.6
7.5°	2402.2	2311.7	2221.2	2150.2	2079.1	2023.6	1968.0	1930.2	1892.4	1863.2	1834.0
10°	2249.8	2137.6	2025.3	1939.4	1853.5	1793.3	1733.2	1689.7	1646.1	1625.5	1604.9
12.5°	2091.7	1969.7	1847.7	1763.5	1679.4	1607.2	1535.0	1495.5	1456.0	1427.3	1398.7
15°	1946.3	1815.1	1683.9	1594.6	1505.2	1437.6	1370.1	1330.5	1291.0	1262.4	1233.7
17.5°	1805.4	1673.1	1540.7	1450.2	1359.7	1298.5	1237.2	1198.8	1160.4	1142.7	1124.9
20°	1677.1	1543.6	1410.2	1324.8	1239.5	1179.3	1119.2	1098.6	1077.9	1061.3	1044.7
22.5°	1549.9	1421.6	1293.3	1211.4	1129.5	1086.0	1042.4	1025.8	1009.2	996.6	984.0
25°	1443.4	1315.6	1187.9	1116.3	1044.7	1010.9	977.1	966.3	955.4	942.8	930.2
27.5°	1335.7	1214.3	1092.8	1035.6	978.3	950.8	923.3	909.6	895.8	885.5	875.2
30°	1240.6	1128.4	1016.1	968.5	921.0	897.0	872.9	858.0	843.1	833.4	823.6
32.5°	1149.0	1049.3	949.6	909.0	868.3	844.8	821.3	807.0	792.7	781.3	769.8
35°	1064.2	977.7	891.2	854.0	816.8	793.3	769.8	755.5	741.2	729.7	718.2
37.5°	989.7	911.3	832.8	797.9	762.9	742.3	721.7	706.8	691.9	679.9	667.8
40°	919.9	850.6	781.3	747.5	713.7	691.3	669.0	655.8	642.6	631.8	620.9
42.5°	858.0	794.4	730.9	697.6	664.4	643.2	622.0	606.6	591.1	584.8	578.5
45°	792.7	736.6	680.4	648.4	616.3	594.0	571.6	558.4	545.3	539.5	533.8
47.5°	735.4	683.3	631.2	599.7	568.2	548.1	528.1	517.8	507.5	499.5	491.4
50°	679.3	628.9	578.5	548.1	517.8	500.6	483.4	470.8	458.2	452.5	446.8
52.5°	625.5	579.6	533.8	502.9	472.0	455.3	438.7	427.9	417.0	404.9	392.9
55°	564.7	524.7	484.6	457.1	429.6	412.4	395.2	382.6	370.0	357.4	344.8
57.5°	514.3	474.8	435.3	410.7	386.0	369.4	352.8	339.1	325.3	315.0	304.7
60°	459.4	425.0	390.6	366.6	342.5	326.5	310.4	297.3	284.1	278.9	273.8
62.5°	407.8	375.7	343.7	322.5	301.3	285.8	270.3	261.8	253.2	249.7	246.3
65°	355.1	327.6	300.1	280.7	261.2	248.0	234.8	230.8	226.8	224.0	221.1
67.5°	305.9	282.4	258.9	241.7	224.5	215.4	206.2	201.6	197.0	193.6	190.2
70°	261.2	240.6	219.9	205.1	190.2	181.6	173.0	169.0	165.0	158.7	152.4
72.5°	213.1	197.0	181.0	169.5	158.1	150.6	143.2	135.2	127.2	121.4	115.7
75°	176.4	160.4	144.3	133.5	122.6	114.0	105.4	102.5	99.7	97.9	96.2
77.5°	135.2	121.4	107.7	99.1	90.5	86.5	82.5	80.8	79.0	78.5	77.9
80°	97.4	85.9	74.5	69.9	65.3	64.1	63.0	61.9	60.7	60.1	59.6
82.5°	60.7	55.0	49.3	48.1	47.0	46.4	45.8	45.2	44.7	44.1	43.5
85°	35.5	33.2	30.9	30.4	29.8	29.2	28.6	28.6	28.6	28.6	28.6
87.5°	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.3	13.7
90°	3.0	3.8	4.7	5.5	6.4	7.3	7.6	7.8	8.1	8.4	8.6
92.5°	5.4	5.5	6.1	6.7	7.3	7.9	8.4	8.9	9.3	9.8	10.1
95°	7.5	6.5	7.2	7.9	8.7	9.4	9.9	10.4	10.9	11.3	11.6
97.5°	26.2	23.5	20.1	16.6	13.2	9.7	10.3	10.8	11.4	11.9	12.2
100°	56.8	52.2	41.7	31.1	20.6	10.0	10.6	11.1	11.7	12.2	12.5
102.5°	75.0	69.6	57.8	46.0	34.3	22.5	20.3	18.1	15.8	13.6	12.5
105°	93.6	91.0	84.9	78.8	72.7	66.6	54.7	42.7	30.7	18.8	12.8
107.5°	113.5	114.3	115.3	116.3	117.3	118.4	107.9	97.5	87.1	76.7	67.1
110°	133.6	134.2	135.0	135.7	136.5	137.2	135.0	132.8	130.5	128.3	122.3



TEST NUMBER: P831837

CATALOG NUMBER: S123RDIP-S1000D365U935-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	152.8	153.4	154.2	154.9	155.6	156.4	157.0	157.6	158.2	158.8	159.1
115°	171.7	172.2	172.8	173.4	174.0	174.6	175.3	176.0	176.7	177.3	177.8
117.5°	190.8	191.2	191.6	191.9	192.3	192.6	193.1	193.7	194.2	194.8	195.1
120°	208.7	209.1	209.3	209.5	209.7	209.9	210.5	211.0	211.6	212.1	212.4
122.5°	225.8	226.2	226.5	226.7	227.0	227.3	227.6	228.0	228.3	228.6	228.8
125°	241.9	242.3	242.6	242.9	243.1	243.4	243.5	243.7	243.8	243.9	244.1
127.5°	257.7	258.2	258.5	258.8	259.2	259.5	259.7	259.9	260.1	260.3	260.4
130°	272.3	272.7	273.0	273.3	273.6	273.8	274.1	274.4	274.6	274.9	275.0
132.5°	286.3	286.7	286.9	287.1	287.3	287.5	287.8	288.1	288.3	288.6	288.6
135°	300.1	300.4	300.7	301.0	301.2	301.5	301.7	301.9	302.1	302.3	302.3
137.5°	312.8	313.1	313.3	313.4	313.5	313.7	314.0	314.4	314.7	315.0	315.1
140°	324.4	324.7	324.9	325.1	325.3	325.5	325.8	326.1	326.4	326.6	326.7
142.5°	335.7	336.0	336.2	336.4	336.6	336.8	337.0	337.2	337.4	337.6	337.6
145°	346.3	346.6	346.7	346.9	347.0	347.1	347.3	347.4	347.6	347.7	347.8
147.5°	355.8	356.0	356.2	356.3	356.4	356.6	356.7	356.9	357.0	357.1	357.0
150°	364.4	364.6	364.7	364.8	365.0	365.1	365.2	365.4	365.5	365.6	365.6
152.5°	372.1	372.1	372.2	372.3	372.3	372.4	372.7	372.9	373.2	373.5	373.5
155°	378.9	378.8	378.9	379.0	379.0	379.1	379.4	379.8	380.1	380.4	380.4
157.5°	385.5	385.5	385.4	385.3	385.2	385.2	385.6	386.0	386.4	386.8	386.7
160°	390.7	390.6	390.6	390.5	390.4	390.4	390.8	391.2	391.6	392.0	391.9
162.5°	395.3	395.2	395.1	395.1	395.0	394.9	395.4	395.9	396.3	396.8	396.8
165°	399.3	399.1	399.1	399.0	398.9	398.9	399.4	400.0	400.5	401.0	401.1
167.5°	402.4	402.2	402.2	402.2	402.2	402.2	402.8	403.3	403.8	404.4	404.4
170°	405.1	405.0	405.0	405.0	405.0	405.0	405.5	406.0	406.6	407.1	407.1
172.5°	406.6	406.5	406.6	406.6	406.7	406.8	407.3	407.9	408.4	408.9	408.9
175°	408.2	408.0	408.1	408.2	408.2	408.3	408.8	409.3	409.7	410.2	410.2
177.5°	408.8	408.6	408.7	408.8	408.8	408.9	409.5	410.0	410.5	411.1	411.0
180°	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5	409.5



TEST NUMBER: P831837

CATALOG NUMBER: S123RDIP-S1000D365U935-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2794.0	2794.0	2794.0	2794.0
2.5°	2482.4	2476.6	2474.4	2472.1
5°	2127.8	2110.1	2106.1	2102.1
7.5°	1826.6	1819.1	1794.5	1769.8
10°	1582.0	1559.1	1548.8	1538.5
12.5°	1377.5	1356.3	1352.9	1349.4
15°	1218.8	1204.0	1198.8	1193.6
17.5°	1114.6	1104.3	1098.0	1091.7
20°	1037.3	1029.8	1025.3	1020.7
22.5°	978.3	972.6	969.1	965.7
25°	921.6	913.0	910.1	907.3
27.5°	867.7	860.3	857.4	854.6
30°	817.3	811.0	807.0	803.0
32.5°	762.4	754.9	752.6	750.3
35°	713.7	709.1	706.8	704.5
37.5°	662.1	656.4	653.0	649.5
40°	618.0	615.2	613.4	611.7
42.5°	573.3	568.2	567.6	567.0
45°	528.7	523.5	522.4	521.2
47.5°	486.9	482.3	481.7	481.1
50°	440.5	434.2	429.6	425.0
52.5°	387.2	381.5	377.5	373.4
55°	338.5	332.2	328.8	325.3
57.5°	301.8	299.0	297.3	295.5
60°	272.1	270.3	269.2	268.1
62.5°	244.6	242.9	242.9	242.9
65°	219.4	217.7	215.9	214.2
67.5°	186.7	183.3	182.7	182.1
70°	147.2	142.0	141.5	140.9
72.5°	115.1	114.6	113.4	112.3
75°	95.1	93.9	93.9	93.9
77.5°	76.8	75.6	75.6	75.6
80°	59.0	58.4	59.0	59.6
82.5°	43.5	43.5	43.0	42.4
85°	28.1	27.5	27.5	27.5
87.5°	13.7	13.7	13.7	13.7
90°	8.7	8.9	9.0	9.1
92.5°	10.1	10.2	10.3	10.3
95°	11.6	11.6	11.6	11.6
97.5°	12.3	12.3	12.4	12.5
100°	12.6	12.6	12.7	12.8
102.5°	12.7	12.8	12.9	13.1
105°	13.0	13.1	13.3	13.4
107.5°	58.2	49.4	40.5	31.6
110°	112.7	103.0	93.3	83.7



TEST NUMBER: P831837

CATALOG NUMBER: S123RDIP-S1000D365U935-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	158.9	158.8	158.6	158.5
115°	178.1	178.4	178.6	178.9
117.5°	195.1	195.2	195.3	195.3
120°	212.4	212.4	212.4	212.4
122.5°	228.9	229.0	229.0	229.1
125°	244.2	244.3	244.5	244.6
127.5°	260.2	260.1	260.0	259.8
130°	274.8	274.7	274.6	274.4
132.5°	288.4	288.2	288.0	287.8
135°	302.1	301.9	301.7	301.5
137.5°	315.0	314.9	314.7	314.6
140°	326.6	326.4	326.3	326.2
142.5°	337.4	337.2	337.0	336.8
145°	347.8	347.8	347.8	347.8
147.5°	356.7	356.3	356.0	355.7
150°	365.4	365.2	365.0	364.8
152.5°	373.1	372.8	372.4	372.1
155°	380.0	379.6	379.2	378.8
157.5°	386.2	385.7	385.1	384.6
160°	391.5	391.0	390.5	390.0
162.5°	396.4	396.0	395.6	395.2
165°	400.6	400.1	399.6	399.2
167.5°	403.8	403.3	402.8	402.2
170°	406.6	406.0	405.5	405.0
172.5°	408.3	407.7	407.1	406.5
175°	409.6	409.1	408.5	408.0
177.5°	410.3	409.7	409.0	408.3
180°	409.5	409.5	409.5	409.5



TEST NUMBER: P831837

CATALOG NUMBER: S123RDIP-S1000D365U935-4F0-1E-UDD-G

**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	14.65	15.70	15.38	16.43	17.30	19.32	20.36	20.04	21.10	21.97
	3H	15.89	16.82	16.63	17.57	18.47	20.83	21.77	21.57	22.51	23.41
	4H	16.28	17.16	17.04	17.91	18.83	21.33	22.21	22.09	22.96	23.88
	6H	16.57	17.38	17.34	18.15	19.07	21.65	22.46	22.42	23.23	24.16
	8H	16.67	17.44	17.44	18.22	19.15	21.74	22.51	22.52	23.29	24.22
	12H	16.73	17.46	17.51	18.23	19.19	21.78	22.51	22.56	23.28	24.24
4H	2H	15.40	16.28	16.16	17.03	17.95	19.34	20.22	20.10	20.97	21.89
	3H	16.79	17.52	17.56	18.31	19.24	21.02	21.74	21.78	22.53	23.46
	4H	17.25	17.91	18.04	18.70	19.66	21.63	22.29	22.41	23.08	24.04
	6H	17.63	18.20	18.43	19.01	19.98	22.08	22.65	22.88	23.46	24.43
	8H	17.76	18.29	18.57	19.10	20.08	22.21	22.74	23.02	23.55	24.53
	12H	17.85	18.32	18.67	19.15	20.14	22.28	22.76	23.11	23.59	24.58
8H	4H	17.58	18.11	18.39	18.92	19.90	21.61	22.14	22.42	22.95	23.93
	6H	18.05	18.49	18.89	19.34	20.32	22.11	22.55	22.95	23.40	24.39
	8H	18.25	18.63	19.09	19.48	20.48	22.30	22.69	23.15	23.54	24.54
	12H	18.39	18.74	19.24	19.58	20.63	22.43	22.77	23.27	23.61	24.66
12H	4H	17.60	18.08	18.43	18.91	19.89	21.57	22.05	22.40	22.88	23.86
	6H	18.11	18.50	18.96	19.35	20.35	22.09	22.48	22.94	23.33	24.33
	8H	18.34	18.68	19.19	19.52	20.58	22.29	22.63	23.14	23.47	24.53