

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: P831992

Luminaire Tested: S123RDIP-S1165D585U850-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831992
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDIP-S1165D585U850-4F0-1E-UDD-G4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: -

Summary

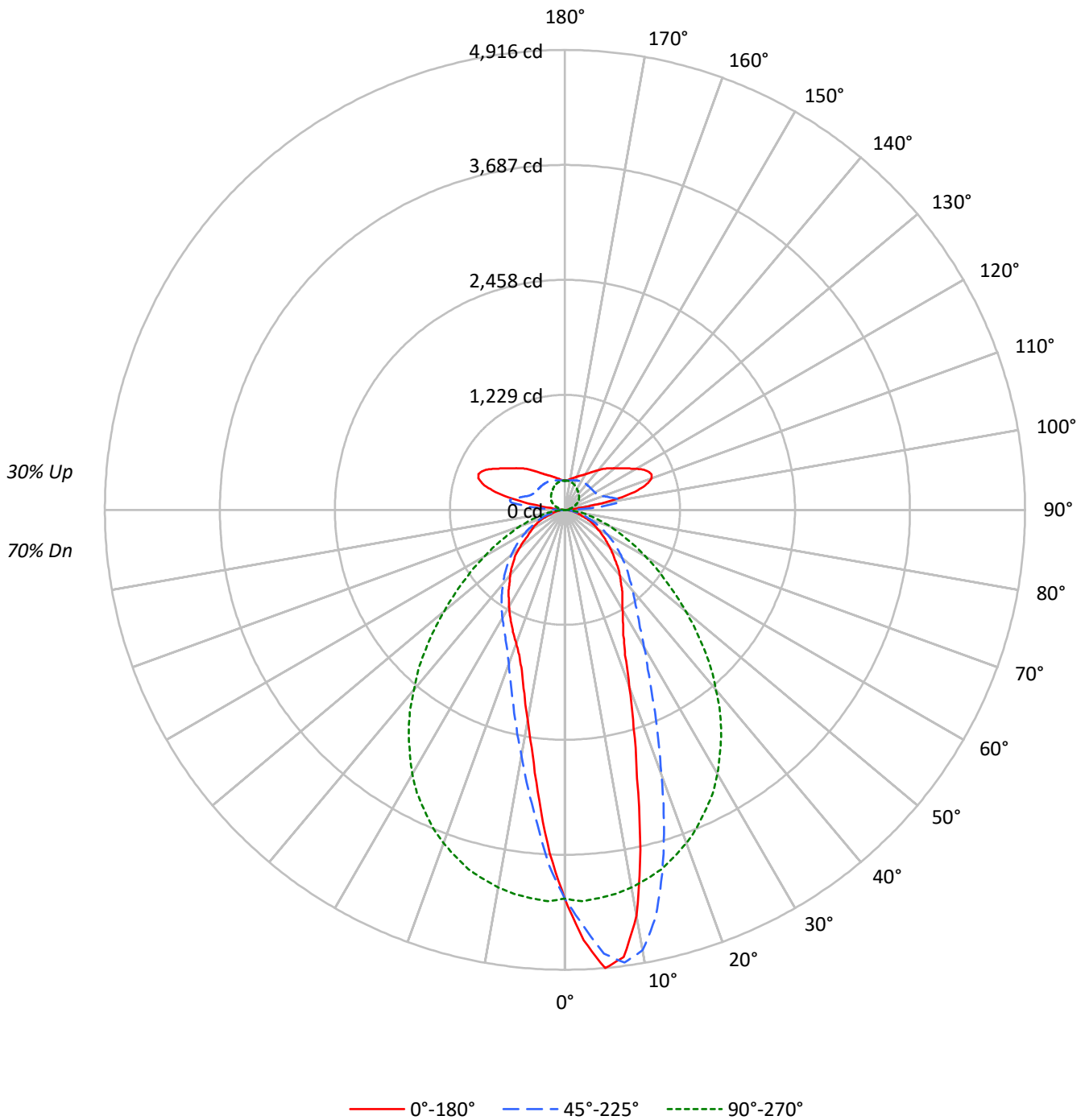
Lumens per Lamp: N/A
Luminaire Lumens: 7862.8 lumens
Efficiency: N/A
Efficacy: 137.0 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 57.4
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	112	112	112	112	106	106	106	106	95	95	95	84	84	84	75	75	75	70				
1	103	99	96	93	98	94	91	88	85	82	80	76	74	72	68	66	65	61				
2	95	88	82	78	90	84	79	74	76	72	68	68	65	62	61	59	57	53				
3	88	79	72	66	83	75	69	64	68	63	59	61	58	54	55	52	50	47				
4	81	71	63	57	77	67	61	55	61	56	52	56	51	48	50	47	44	41				
5	75	64	56	50	71	61	54	49	56	50	46	51	46	43	46	42	39	37				
6	70	58	50	45	66	56	49	43	51	45	41	47	42	38	42	39	36	33				
7	65	53	46	40	62	51	44	39	47	41	37	43	38	35	39	35	32	30				
8	61	49	41	36	58	47	40	35	43	37	33	40	35	31	37	33	30	28				
9	57	45	38	33	54	43	37	32	40	34	31	37	32	29	34	30	27	25				
10	54	42	35	30	51	40	34	30	37	32	28	35	30	27	32	28	25	23				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	44738	44738	44738	44738	44738
5°	53121	51427	45019	36392	33787
10°	48129	52235	44794	29159	25014
15°	33137	44787	44323	23832	19788
20°	23053	34482	43432	20096	17392
25°	17568	26281	42137	17861	16029
30°	15293	21011	40518	16584	14848
35°	14040	17724	38224	15507	13771
40°	12811	15827	35222	14450	12787
45°	11569	14475	31984	13451	11804
50°	10501	13355	28165	12471	10587
55°	9498	12264	24496	11513	9083
60°	8510	11151	21278	10456	8585
65°	7855	9895	18315	9396	8117
70°	6382	8554	15981	8500	6596
75°	5598	6804	13537	7053	5810
80°	5071	5759	11089	5914	5492
85°	4631	5051	8423	5372	5051

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 33748 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	378.8	4.8
10°-20°	876.6	11.1
20°-30°	1005.8	12.8
30°-40°	991.4	12.6
40°-50°	874.3	11.1
50°-60°	672.6	8.6
60°-70°	442.2	5.6
70°-80°	214.8	2.7
80°-90°	55.9	0.7
90°-100°	169.6	2.2
100°-110°	496.4	6.3
110°-120°	484.8	6.2
120°-130°	386.1	4.9
130°-140°	304.6	3.9
140°-150°	227.2	2.9
150°-160°	158.4	2.0
160°-170°	93.1	1.2
170°-180°	30.3	0.4
0°-30°	2261.3	28.8
0°-40°	3252.7	41.4
0°-60°	4799.5	61.0
0°-90°	5512.3	70.1
90°-120°	1150.8	14.6
90°-150°	2068.7	26.3
90°-180°	2350.0	29.9
0°-180°	7862.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	4156	4156	4156	4156	4156	
5°	4916	4760	4166	3368	3127	449
15°	2974	4019	3977	2139	1776	839
25°	1479	2213	3548	1504	1350	699
35°	1068	1349	2909	1180	1048	666
45°	760	951	2101	884	775	590
55°	506	654	1305	614	484	454
65°	308	388	719	369	319	302
75°	135	164	326	170	140	145
85°	38	41	68	44	41	40
90°	18	16	1	16	18	12
95°	73	375	22	375	73	119
105°	805	509	73	509	805	803
115°	978	389	130	389	978	954
125°	772	363	180	363	772	698
135°	626	358	211	358	626	485
145°	489	354	241	354	489	311
155°	406	342	274	342	406	189
165°	354	328	299	328	354	101
175°	318	314	312	314	318	31
180°	312	312	312	312	312	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3
2.5°	4606.2	4591.7	4577.2	4572.9	4568.7	4555.0	4541.4	4510.7	4480.1	4448.5	4417.0
5°	4916.3	4918.0	4919.7	4915.5	4911.2	4893.3	4875.4	4837.9	4800.4	4759.5	4718.6
7.5°	4820.9	4848.1	4875.4	4880.5	4885.6	4899.3	4912.9	4904.4	4895.9	4880.5	4865.2
10°	4403.4	4401.7	4400.0	4430.6	4461.3	4552.5	4643.7	4690.5	4737.4	4779.1	4820.9
12.5°	3721.7	3724.3	3726.9	3827.4	3927.9	4014.0	4100.1	4219.3	4338.6	4467.3	4595.9
15°	2973.6	3015.4	3057.1	3146.6	3236.1	3365.6	3495.1	3655.3	3815.5	4019.1	4222.7
17.5°	2442.0	2459.9	2477.8	2563.8	2649.9	2772.6	2895.3	3076.7	3258.2	3520.7	3783.1
20°	2012.5	2028.7	2044.9	2107.1	2169.3	2286.9	2404.5	2577.4	2750.4	3010.3	3270.2
22.5°	1680.2	1711.8	1743.3	1785.0	1826.8	1912.0	1997.2	2173.6	2349.9	2586.8	2823.7
25°	1479.2	1493.6	1508.1	1543.9	1579.7	1661.5	1743.3	1860.0	1976.7	2212.8	2448.8
27.5°	1342.8	1347.1	1351.3	1377.8	1404.2	1457.0	1509.8	1618.0	1726.2	1920.5	2114.8
30°	1230.4	1238.0	1245.7	1266.1	1286.6	1324.9	1363.3	1440.0	1516.6	1690.5	1864.3
32.5°	1143.4	1147.7	1152.0	1169.0	1186.0	1214.2	1242.3	1302.8	1363.3	1496.2	1629.1
35°	1068.5	1069.3	1070.2	1083.0	1095.7	1123.0	1150.3	1200.5	1250.8	1348.8	1446.8
37.5°	983.3	989.2	995.2	1004.6	1013.9	1037.8	1061.7	1102.5	1143.4	1224.4	1305.3
40°	911.7	916.8	921.9	933.0	944.1	962.8	981.6	1019.0	1056.5	1126.4	1196.3
42.5°	840.1	843.5	846.9	858.0	869.1	892.1	915.1	944.9	974.7	1032.7	1090.6
45°	760.0	768.5	777.1	789.0	800.9	820.5	840.1	870.8	901.5	950.9	1000.3
47.5°	693.6	697.8	702.1	712.3	722.5	746.4	770.3	797.5	824.8	870.8	916.8
50°	627.1	628.8	630.5	639.9	649.3	670.6	691.9	723.4	754.9	797.5	840.1
52.5°	564.1	568.3	572.6	581.9	591.3	605.8	620.3	652.7	685.0	726.8	768.5
55°	506.1	508.7	511.2	518.0	524.9	541.9	558.9	587.1	615.2	653.5	691.9
57.5°	451.6	455.0	458.4	463.5	468.6	484.0	499.3	524.0	548.7	587.1	625.4
60°	395.3	399.6	403.9	409.8	415.8	427.7	439.7	461.8	484.0	518.0	552.1
62.5°	354.5	355.3	356.2	361.3	366.4	374.9	383.4	401.3	419.2	453.3	487.4
65°	308.4	311.0	313.6	316.1	318.7	325.5	332.3	347.6	363.0	388.5	414.1
67.5°	260.7	263.3	265.8	270.1	274.4	280.3	286.3	296.5	306.7	330.6	354.5
70°	202.8	202.8	202.8	209.6	216.4	226.6	236.9	244.5	252.2	271.8	291.4
72.5°	165.3	166.1	167.0	167.9	168.7	174.7	180.6	193.4	206.2	218.1	230.1
75°	134.6	135.5	136.3	137.2	138.0	139.7	141.4	145.7	150.0	163.6	177.2
77.5°	107.4	108.2	109.1	109.9	110.8	112.5	114.2	115.9	117.6	122.7	127.8
80°	81.8	82.6	83.5	84.4	85.2	86.1	86.9	88.6	90.3	92.9	95.4
82.5°	59.6	59.6	59.6	59.6	59.6	61.3	63.1	63.1	63.1	64.8	66.5
85°	37.5	37.5	37.5	38.3	39.2	39.2	39.2	40.0	40.9	40.9	40.9
87.5°	17.0	16.2	15.3	16.2	17.0	17.0	17.0	17.9	18.7	18.7	18.7
90°	18.3	19.0	18.3	17.7	18.3	17.1	16.4	15.8	15.2	15.8	13.9
92.5°	33.5	34.8	34.2	36.7	38.0	42.4	48.7	62.6	87.9	117.7	130.3
95°	73.4	75.9	80.3	86.0	98.0	120.8	154.3	227.7	304.3	375.1	334.0
97.5°	150.5	157.5	172.7	196.7	239.1	311.2	394.7	523.1	596.5	576.9	430.8
100°	396.6	396.0	420.6	466.8	530.7	620.5	694.5	745.8	723.6	599.0	404.8
102.5°	628.1	646.5	666.1	700.2	746.4	795.1	830.5	819.8	730.0	557.9	366.9
105°	804.6	807.8	828.0	852.0	881.1	897.6	885.6	822.3	690.1	508.6	337.1
107.5°	919.7	926.7	934.9	946.3	950.1	933.0	883.7	784.4	633.2	464.9	315.6
110°	985.5	986.8	988.0	983.0	965.3	921.0	841.3	724.9	580.0	428.9	304.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	998.8	998.2	991.8	973.5	937.4	877.3	785.6	666.1	533.9	404.8	297.9
115°	978.5	975.4	962.7	934.9	887.5	818.5	725.5	615.5	498.4	389.0	297.3
117.5°	934.3	929.8	910.9	879.9	830.5	759.1	673.7	576.2	475.0	378.3	297.9
120°	876.1	872.3	857.1	821.7	771.7	707.8	631.9	546.5	457.3	371.3	300.5
122.5°	821.7	816.6	799.5	768.5	725.5	667.3	598.4	523.1	442.8	366.9	304.9
125°	771.7	767.3	751.5	723.6	683.1	632.5	571.8	502.9	430.8	363.1	309.3
127.5°	728.7	724.9	710.3	686.3	649.6	602.8	547.2	484.5	419.4	361.2	314.4
130°	693.3	688.2	674.9	652.2	618.6	575.6	524.4	467.5	410.5	359.3	319.4
132.5°	658.5	655.3	643.9	621.2	590.2	549.7	502.9	451.6	402.3	358.7	323.2
135°	625.6	621.2	609.8	590.8	559.8	523.7	482.6	437.7	395.3	358.0	327.0
137.5°	590.8	587.0	577.5	557.9	531.3	499.1	462.4	424.4	389.0	356.8	329.6
140°	554.1	554.7	544.6	526.9	502.9	475.7	445.3	413.1	383.3	356.1	332.1
142.5°	520.0	520.6	511.7	496.5	476.9	454.2	428.9	402.3	378.3	354.9	334.0
145°	489.0	487.7	482.6	469.3	453.5	435.2	414.9	394.1	373.8	353.6	334.6
147.5°	462.4	461.8	456.7	447.2	434.6	421.3	404.2	387.1	369.4	351.7	334.6
150°	439.6	439.6	435.8	428.9	419.4	407.4	394.1	379.5	365.0	349.2	334.6
152.5°	420.6	420.6	418.7	412.4	405.5	396.0	384.6	372.6	359.9	346.0	332.7
155°	405.5	404.8	403.6	398.5	392.8	385.2	375.7	365.6	354.9	342.2	331.5
157.5°	390.9	390.9	389.6	385.9	380.8	374.5	366.9	358.0	349.2	339.0	329.6
160°	377.0	377.6	377.6	373.8	369.4	365.0	358.7	351.7	343.5	335.2	328.3
162.5°	364.3	365.0	365.0	361.8	359.3	355.5	349.8	344.1	337.8	331.5	325.8
165°	353.6	353.6	354.2	351.7	349.2	346.0	341.6	337.8	332.7	327.7	323.2
167.5°	342.8	342.8	343.5	341.6	340.3	337.8	335.2	332.1	327.7	323.9	320.7
170°	333.4	333.4	334.0	332.7	332.1	330.8	328.3	326.4	323.2	320.1	318.2
172.5°	324.5	325.1	326.4	325.1	325.1	324.5	322.6	321.3	318.8	316.9	316.3
175°	318.2	318.8	319.4	318.8	318.8	318.8	317.5	316.9	315.6	314.4	314.4
177.5°	313.7	313.7	315.0	314.4	315.0	315.0	314.4	313.7	313.1	312.5	313.1
180°	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3
2.5°	4412.8	4408.5	4367.6	4326.7	4286.6	4246.6	4216.8	4187.0	4136.7	4086.4	4054.9
5°	4686.3	4653.9	4589.1	4524.4	4427.2	4330.1	4248.3	4166.5	4062.6	3958.6	3871.7
7.5°	4838.8	4812.4	4734.0	4655.6	4526.9	4398.3	4270.5	4142.7	3989.3	3835.9	3704.7
10°	4843.0	4865.2	4800.4	4735.7	4590.8	4446.0	4272.2	4098.3	3892.2	3686.0	3516.4
12.5°	4691.4	4786.8	4773.2	4759.5	4612.1	4464.7	4253.4	4042.1	3789.1	3536.0	3323.8
15°	4407.6	4592.5	4647.1	4701.6	4579.8	4457.9	4217.6	3977.4	3680.0	3382.6	3138.9
17.5°	4042.1	4301.1	4445.1	4589.1	4500.5	4411.9	4148.6	3885.3	3550.5	3215.6	2950.6
20°	3609.3	3948.4	4174.2	4400.0	4367.6	4335.2	4063.4	3791.6	3430.3	3069.1	2781.9
22.5°	3181.5	3539.4	3851.3	4163.1	4196.3	4229.6	3955.2	3680.8	3285.5	2890.1	2597.9
25°	2812.6	3176.4	3547.9	3919.4	3994.4	4069.4	3808.7	3547.9	3138.1	2728.3	2437.7
27.5°	2460.7	2806.6	3215.6	3624.6	3760.9	3897.3	3658.7	3420.1	2993.2	2566.4	2276.7
30°	2173.6	2482.9	2900.4	3317.9	3507.9	3697.9	3478.9	3259.9	2836.5	2413.0	2129.3
32.5°	1906.0	2182.9	2602.2	3021.4	3242.0	3462.7	3273.6	3084.4	2677.1	2269.9	1989.5
35°	1694.7	1942.7	2333.8	2724.8	2971.9	3219.0	3064.0	2908.9	2511.0	2113.1	1848.1
37.5°	1513.2	1721.1	2088.4	2455.6	2718.0	2980.5	2850.9	2721.4	2347.4	1973.3	1722.8
40°	1363.3	1530.3	1871.9	2213.6	2470.9	2728.3	2617.5	2506.7	2171.9	1837.0	1602.7
42.5°	1234.6	1378.6	1685.3	1992.1	2228.1	2464.1	2390.8	2317.6	2014.2	1710.9	1493.6
45°	1121.3	1242.3	1512.4	1782.5	1999.8	2217.0	2159.1	2101.1	1839.6	1578.0	1378.6
47.5°	1020.8	1124.7	1365.8	1607.0	1802.1	1997.2	1943.5	1889.8	1673.4	1457.0	1275.5
50°	928.7	1017.3	1218.4	1419.5	1595.0	1770.6	1726.2	1681.9	1503.0	1324.1	1167.3
52.5°	841.8	915.1	1095.7	1276.4	1417.8	1559.2	1525.2	1491.1	1353.1	1215.0	1072.7
55°	759.2	826.5	979.0	1131.5	1252.5	1373.5	1339.4	1305.3	1198.0	1090.6	965.4
57.5°	684.2	743.0	866.5	990.1	1086.4	1182.6	1166.5	1150.3	1060.8	971.3	868.2
60°	605.0	657.8	764.3	870.8	948.3	1025.9	1007.1	988.4	924.5	860.6	772.0
62.5°	534.2	581.1	666.3	751.5	814.6	877.6	864.0	850.3	801.8	753.2	679.9
65°	460.1	506.1	575.1	644.1	693.6	743.0	731.1	719.1	682.5	645.9	587.1
67.5°	392.8	431.1	490.8	550.4	583.7	616.9	610.1	603.2	575.1	547.0	501.0
70°	324.6	357.9	407.3	456.7	479.7	502.7	505.3	507.8	482.3	456.7	422.6
72.5°	256.5	282.9	328.9	374.9	392.8	410.7	409.8	409.0	393.6	378.3	347.6
75°	196.8	216.4	252.2	288.0	303.3	318.7	322.1	325.5	311.0	296.5	279.5
77.5°	141.4	155.1	182.3	209.6	226.6	243.7	245.4	247.1	240.3	233.5	217.3
80°	99.7	103.9	121.0	138.0	155.9	173.8	176.4	178.9	172.1	165.3	155.1
82.5°	69.0	71.6	77.5	83.5	98.0	112.5	115.9	119.3	115.9	112.5	101.4
85°	41.8	42.6	45.2	47.7	54.5	61.3	64.8	68.2	66.5	64.8	58.8
87.5°	18.7	18.7	19.6	20.4	22.2	23.9	28.1	32.4	29.8	27.3	24.7
90°	12.0	10.1	8.2	7.0	5.7	3.8	2.5	1.3	2.5	3.8	5.7
92.5°	97.4	63.9	43.6	32.3	25.9	20.2	13.9	9.5	13.9	20.2	25.9
95°	230.2	136.0	82.2	57.6	41.1	30.4	23.4	21.5	23.4	30.4	41.1
97.5°	256.2	146.8	93.6	66.4	50.0	40.5	34.8	34.2	34.8	40.5	50.0
100°	238.5	144.9	100.6	75.9	60.7	51.9	47.4	46.8	47.4	51.9	60.7
102.5°	223.3	147.4	108.8	86.7	73.4	65.2	61.4	60.1	61.4	65.2	73.4
105°	217.6	152.4	118.3	98.7	86.7	79.1	75.3	73.4	75.3	79.1	86.7
107.5°	216.3	160.7	130.3	112.0	100.6	93.0	89.2	87.3	89.2	93.0	100.6
110°	219.5	171.4	143.0	125.2	114.5	107.5	104.4	102.5	104.4	107.5	114.5



TEST NUMBER: P831992

CATALOG NUMBER: S123RDIP-S1165D585U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	225.8	182.2	156.2	139.2	128.4	121.4	118.3	116.4	118.3	121.4	128.4
115°	232.8	194.2	170.2	153.1	142.3	136.0	132.2	129.7	132.2	136.0	142.3
117.5°	241.6	206.8	182.8	167.0	155.0	149.3	146.1	143.0	146.1	149.3	155.0
120°	251.8	218.9	196.1	180.3	168.3	161.9	158.8	156.9	158.8	161.9	168.3
122.5°	261.2	231.5	209.4	192.3	180.9	173.9	170.8	168.9	170.8	173.9	180.9
125°	271.4	243.5	221.4	204.3	192.3	185.3	181.5	180.3	181.5	185.3	192.3
127.5°	279.6	254.3	232.8	215.7	202.4	195.5	191.0	189.1	191.0	195.5	202.4
130°	287.8	263.8	242.9	225.8	212.5	204.9	199.3	197.4	199.3	204.9	212.5
132.5°	295.4	272.0	251.8	235.3	222.0	212.5	206.2	203.7	206.2	212.5	222.0
135°	301.7	280.2	260.6	243.5	230.2	220.8	213.8	211.3	213.8	220.8	230.2
137.5°	306.8	285.9	266.9	251.1	237.8	227.7	220.8	218.2	220.8	227.7	237.8
140°	310.6	291.6	273.3	257.4	244.8	234.7	228.3	225.2	228.3	234.7	244.8
142.5°	314.4	296.0	278.3	263.8	251.1	242.3	235.3	232.8	235.3	242.3	251.1
145°	316.9	299.8	283.4	268.8	258.1	248.6	242.9	241.0	242.9	248.6	258.1
147.5°	318.8	303.0	287.8	275.2	264.4	256.2	250.5	249.2	250.5	256.2	264.4
150°	319.4	306.2	291.6	280.2	271.4	263.1	258.1	257.4	258.1	263.1	271.4
152.5°	320.7	308.0	296.0	285.3	277.7	270.7	265.7	265.7	265.7	270.7	277.7
155°	320.7	310.6	299.8	291.0	284.0	277.7	273.9	273.9	273.9	277.7	284.0
157.5°	321.3	311.8	303.0	296.0	289.7	284.0	280.8	280.2	280.8	284.0	289.7
160°	321.3	313.7	306.2	299.8	295.4	290.3	287.8	287.8	287.8	290.3	295.4
162.5°	320.7	314.4	308.0	303.0	299.2	295.4	293.5	293.5	293.5	295.4	299.2
165°	319.4	315.0	309.9	305.5	303.0	299.8	298.6	299.2	298.6	299.8	303.0
167.5°	318.8	315.0	311.2	308.0	306.2	303.6	303.0	303.6	303.0	303.6	306.2
170°	316.9	314.4	311.2	309.9	308.7	306.8	306.2	307.4	306.2	306.8	308.7
172.5°	316.3	314.4	311.8	311.2	310.6	309.3	309.3	309.9	309.3	309.3	310.6
175°	315.0	313.7	312.5	311.8	311.8	310.6	311.2	311.8	311.2	310.6	311.8
177.5°	314.4	313.1	312.5	312.5	312.5	311.8	312.5	313.1	312.5	311.8	312.5
180°	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5



TEST NUMBER: P831992

CATALOG NUMBER: S123RDIP-S1165D585U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3	4156.3
2.5°	4023.4	3974.8	3926.2	3891.3	3856.4	3812.9	3769.5	3767.8	3766.0	3733.7	3701.3
5°	3784.8	3700.4	3616.1	3533.4	3450.8	3368.1	3285.5	3266.7	3248.0	3219.9	3191.8
7.5°	3573.5	3438.9	3304.2	3198.6	3092.9	3010.3	2927.6	2871.4	2815.2	2771.7	2728.3
10°	3346.8	3179.8	3012.8	2885.0	2757.2	2667.8	2578.3	2513.5	2448.8	2418.1	2387.4
12.5°	3111.7	2930.2	2748.7	2623.5	2498.2	2390.8	2283.5	2224.7	2165.9	2123.3	2080.7
15°	2895.3	2700.1	2505.0	2372.1	2239.2	2138.6	2038.1	1979.3	1920.5	1877.9	1835.3
17.5°	2685.7	2488.8	2292.0	2157.4	2022.8	1931.6	1840.4	1783.3	1726.2	1699.8	1673.4
20°	2494.8	2296.3	2097.7	1970.8	1843.8	1754.4	1664.9	1634.2	1603.6	1578.8	1554.1
22.5°	2305.6	2114.8	1923.9	1802.1	1680.2	1615.5	1550.7	1526.0	1501.3	1482.6	1463.8
25°	2147.2	1957.2	1767.1	1660.6	1554.1	1503.9	1453.6	1437.4	1421.2	1402.5	1383.7
27.5°	1987.0	1806.3	1625.7	1540.5	1455.3	1414.4	1373.5	1353.1	1332.6	1317.3	1301.9
30°	1845.5	1678.5	1511.5	1440.8	1370.1	1334.3	1298.5	1276.4	1254.2	1239.7	1225.2
32.5°	1709.2	1561.0	1412.7	1352.2	1291.7	1256.8	1221.8	1200.5	1179.2	1162.2	1145.2
35°	1583.1	1454.4	1325.8	1270.4	1215.0	1180.1	1145.2	1123.9	1102.5	1085.5	1068.5
37.5°	1472.3	1355.6	1238.9	1186.9	1134.9	1104.3	1073.6	1051.4	1029.3	1011.4	993.5
40°	1368.4	1265.3	1162.2	1111.9	1061.7	1028.4	995.2	975.6	956.0	939.8	923.6
42.5°	1276.4	1181.8	1087.2	1037.8	988.4	956.8	925.3	902.3	879.3	869.9	860.6
45°	1179.2	1095.7	1012.2	964.5	916.8	883.6	850.3	830.7	811.1	802.6	794.1
47.5°	1094.0	1016.5	939.0	892.1	845.2	815.4	785.6	770.3	754.9	743.0	731.1
50°	1010.5	935.5	860.6	815.4	770.3	744.7	719.1	700.4	681.6	673.1	664.6
52.5°	930.4	862.3	794.1	748.1	702.1	677.4	652.7	636.5	620.3	602.4	584.5
55°	840.1	780.5	720.8	679.9	639.0	613.5	587.9	569.2	550.4	531.7	512.9
57.5°	765.1	706.3	647.6	610.9	574.3	549.6	524.9	504.4	484.0	468.6	453.3
60°	683.3	632.2	581.1	545.3	509.5	485.7	461.8	442.2	422.6	414.9	407.3
62.5°	606.7	558.9	511.2	479.7	448.2	425.2	402.2	389.4	376.6	371.5	366.4
65°	528.3	487.4	446.5	417.5	388.5	368.9	349.3	343.4	337.4	333.2	328.9
67.5°	455.0	420.1	385.1	359.6	334.0	320.4	306.7	299.9	293.1	288.0	282.9
70°	388.5	357.9	327.2	305.0	282.9	270.1	257.3	251.4	245.4	236.0	226.6
72.5°	317.0	293.1	269.2	252.2	235.2	224.1	213.0	201.1	189.2	180.6	172.1
75°	262.4	238.6	214.7	198.5	182.3	169.6	156.8	152.5	148.3	145.7	143.1
77.5°	201.1	180.6	160.2	147.4	134.6	128.7	122.7	120.1	117.6	116.7	115.9
80°	144.8	127.8	110.8	103.9	97.1	95.4	93.7	92.0	90.3	89.5	88.6
82.5°	90.3	81.8	73.3	71.6	69.9	69.0	68.2	67.3	66.5	65.6	64.8
85°	52.8	49.4	46.0	45.2	44.3	43.5	42.6	42.6	42.6	42.6	42.6
87.5°	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	21.3	20.4
90°	7.0	8.2	10.1	12.0	13.9	15.8	15.2	15.8	16.4	17.1	18.3
92.5°	32.3	43.6	63.9	97.4	130.3	117.7	87.9	62.6	48.7	42.4	38.0
95°	57.6	82.2	136.0	230.2	334.0	375.1	304.3	227.7	154.3	120.8	98.0
97.5°	66.4	93.6	146.8	256.2	430.8	576.9	596.5	523.1	394.7	311.2	239.1
100°	75.9	100.6	144.9	238.5	404.8	599.0	723.6	745.8	694.5	620.5	530.7
102.5°	86.7	108.8	147.4	223.3	366.9	557.9	730.0	819.8	830.5	795.1	746.4
105°	98.7	118.3	152.4	217.6	337.1	508.6	690.1	822.3	885.6	897.6	881.1
107.5°	112.0	130.3	160.7	216.3	315.6	464.9	633.2	784.4	883.7	933.0	950.1
110°	125.2	143.0	171.4	219.5	304.3	428.9	580.0	724.9	841.3	921.0	965.3



TEST NUMBER: P831992

CATALOG NUMBER: S123RDIP-S1165D585U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	139.2	156.2	182.2	225.8	297.9	404.8	533.9	666.1	785.6	877.3	937.4
115°	153.1	170.2	194.2	232.8	297.3	389.0	498.4	615.5	725.5	818.5	887.5
117.5°	167.0	182.8	206.8	241.6	297.9	378.3	475.0	576.2	673.7	759.1	830.5
120°	180.3	196.1	218.9	251.8	300.5	371.3	457.3	546.5	631.9	707.8	771.7
122.5°	192.3	209.4	231.5	261.2	304.9	366.9	442.8	523.1	598.4	667.3	725.5
125°	204.3	221.4	243.5	271.4	309.3	363.1	430.8	502.9	571.8	632.5	683.1
127.5°	215.7	232.8	254.3	279.6	314.4	361.2	419.4	484.5	547.2	602.8	649.6
130°	225.8	242.9	263.8	287.8	319.4	359.3	410.5	467.5	524.4	575.6	618.6
132.5°	235.3	251.8	272.0	295.4	323.2	358.7	402.3	451.6	502.9	549.7	590.2
135°	243.5	260.6	280.2	301.7	327.0	358.0	395.3	437.7	482.6	523.7	559.8
137.5°	251.1	266.9	285.9	306.8	329.6	356.8	389.0	424.4	462.4	499.1	531.3
140°	257.4	273.3	291.6	310.6	332.1	356.1	383.3	413.1	445.3	475.7	502.9
142.5°	263.8	278.3	296.0	314.4	334.0	354.9	378.3	402.3	428.9	454.2	476.9
145°	268.8	283.4	299.8	316.9	334.6	353.6	373.8	394.1	414.9	435.2	453.5
147.5°	275.2	287.8	303.0	318.8	334.6	351.7	369.4	387.1	404.2	421.3	434.6
150°	280.2	291.6	306.2	319.4	334.6	349.2	365.0	379.5	394.1	407.4	419.4
152.5°	285.3	296.0	308.0	320.7	332.7	346.0	359.9	372.6	384.6	396.0	405.5
155°	291.0	299.8	310.6	320.7	331.5	342.2	354.9	365.6	375.7	385.2	392.8
157.5°	296.0	303.0	311.8	321.3	329.6	339.0	349.2	358.0	366.9	374.5	380.8
160°	299.8	306.2	313.7	321.3	328.3	335.2	343.5	351.7	358.7	365.0	369.4
162.5°	303.0	308.0	314.4	320.7	325.8	331.5	337.8	344.1	349.8	355.5	359.3
165°	305.5	309.9	315.0	319.4	323.2	327.7	332.7	337.8	341.6	346.0	349.2
167.5°	308.0	311.2	315.0	318.8	320.7	323.9	327.7	332.1	335.2	337.8	340.3
170°	309.9	311.2	314.4	316.9	318.2	320.1	323.2	326.4	328.3	330.8	332.1
172.5°	311.2	311.8	314.4	316.3	316.3	316.9	318.8	321.3	322.6	324.5	325.1
175°	311.8	312.5	313.7	315.0	314.4	314.4	315.6	316.9	317.5	318.8	318.8
177.5°	312.5	312.5	313.1	314.4	313.1	312.5	313.1	313.7	314.4	315.0	315.0
180°	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5	312.5



TEST NUMBER: P831992

CATALOG NUMBER: S123RDIP-S1165D585U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	4156.3	4156.3	4156.3	4156.3
2.5°	3692.8	3684.3	3680.8	3677.4
5°	3165.4	3138.9	3133.0	3127.0
7.5°	2717.2	2706.1	2669.5	2632.8
10°	2353.4	2319.3	2303.9	2288.6
12.5°	2049.2	2017.6	2012.5	2007.4
15°	1813.2	1791.0	1783.3	1775.7
17.5°	1658.1	1642.7	1633.4	1624.0
20°	1543.1	1532.0	1525.2	1518.3
22.5°	1455.3	1446.8	1441.7	1436.6
25°	1370.9	1358.2	1353.9	1349.6
27.5°	1290.9	1279.8	1275.5	1271.3
30°	1215.9	1206.5	1200.5	1194.6
32.5°	1134.1	1123.0	1119.6	1116.2
35°	1061.7	1054.8	1051.4	1048.0
37.5°	985.0	976.4	971.3	966.2
40°	919.4	915.1	912.5	910.0
42.5°	852.9	845.2	844.4	843.5
45°	786.4	778.8	777.1	775.4
47.5°	724.2	717.4	716.6	715.7
50°	655.2	645.9	639.0	632.2
52.5°	576.0	567.5	561.5	555.5
55°	503.6	494.2	489.1	484.0
57.5°	449.0	444.8	442.2	439.7
60°	404.7	402.2	400.5	398.8
62.5°	363.8	361.3	361.3	361.3
65°	326.3	323.8	321.2	318.7
67.5°	277.8	272.7	271.8	271.0
70°	219.0	211.3	210.5	209.6
72.5°	171.3	170.4	168.7	167.0
75°	141.4	139.7	139.7	139.7
77.5°	114.2	112.5	112.5	112.5
80°	87.8	86.9	87.8	88.6
82.5°	64.8	64.8	63.9	63.1
85°	41.8	40.9	40.9	40.9
87.5°	20.4	20.4	20.4	20.4
90°	17.7	18.3	19.0	18.3
92.5°	36.7	34.2	34.8	33.5
95°	86.0	80.3	75.9	73.4
97.5°	196.7	172.7	157.5	150.5
100°	466.8	420.6	396.0	396.6
102.5°	700.2	666.1	646.5	628.1
105°	852.0	828.0	807.8	804.6
107.5°	946.3	934.9	926.7	919.7
110°	983.0	988.0	986.8	985.5



TEST NUMBER: P831992

CATALOG NUMBER: S123RDIP-S1165D585U850-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	973.5	991.8	998.2	998.8
115°	934.9	962.7	975.4	978.5
117.5°	879.9	910.9	929.8	934.3
120°	821.7	857.1	872.3	876.1
122.5°	768.5	799.5	816.6	821.7
125°	723.6	751.5	767.3	771.7
127.5°	686.3	710.3	724.9	728.7
130°	652.2	674.9	688.2	693.3
132.5°	621.2	643.9	655.3	658.5
135°	590.8	609.8	621.2	625.6
137.5°	557.9	577.5	587.0	590.8
140°	526.9	544.6	554.7	554.1
142.5°	496.5	511.7	520.6	520.0
145°	469.3	482.6	487.7	489.0
147.5°	447.2	456.7	461.8	462.4
150°	428.9	435.8	439.6	439.6
152.5°	412.4	418.7	420.6	420.6
155°	398.5	403.6	404.8	405.5
157.5°	385.9	389.6	390.9	390.9
160°	373.8	377.6	377.6	377.0
162.5°	361.8	365.0	365.0	364.3
165°	351.7	354.2	353.6	353.6
167.5°	341.6	343.5	342.8	342.8
170°	332.7	334.0	333.4	333.4
172.5°	325.1	326.4	325.1	324.5
175°	318.8	319.4	318.8	318.2
177.5°	314.4	315.0	313.7	313.7
180°	312.5	312.5	312.5	312.5

TEST NUMBER: P831992

CATALOG NUMBER: S123RDIP-S1165D585U850-4F0-1E-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	15.67	16.66	16.44	17.45	18.40	20.33	21.32	21.11	22.11	23.07
	3H	16.90	17.79	17.69	18.59	19.57	21.84	22.73	22.63	23.53	24.52
	4H	17.29	18.12	18.10	18.93	19.93	22.34	23.17	23.15	23.98	24.98
	6H	17.58	18.35	18.40	19.16	20.17	22.66	23.43	23.48	24.24	25.25
	8H	17.67	18.40	18.50	19.23	20.25	22.74	23.47	23.57	24.31	25.32
	12H	17.73	18.42	18.56	19.25	20.29	22.78	23.48	23.61	24.30	25.34
4H	2H	16.41	17.24	17.22	18.05	19.05	20.35	21.18	21.16	21.99	22.99
	3H	17.79	18.48	18.62	19.33	20.34	22.02	22.71	22.84	23.55	24.57
	4H	18.26	18.88	19.09	19.72	20.76	22.63	23.26	23.47	24.10	25.14
	6H	18.63	19.17	19.48	20.03	21.08	23.08	23.62	23.93	24.48	25.53
	8H	18.76	19.26	19.61	20.12	21.18	23.21	23.72	24.07	24.57	25.63
	12H	18.84	19.29	19.71	20.17	21.24	23.28	23.73	24.15	24.61	25.68
8H	4H	18.58	19.08	19.43	19.94	21.00	22.61	23.11	23.46	23.97	25.03
	6H	19.05	19.46	19.93	20.37	21.43	23.11	23.53	23.99	24.43	25.49
	8H	19.24	19.61	20.14	20.51	21.58	23.30	23.66	24.19	24.56	25.64
	12H	19.39	19.71	20.28	20.60	21.73	23.42	23.74	24.31	24.63	25.76
12H	4H	18.60	19.05	19.47	19.93	20.99	22.57	23.02	23.44	23.90	24.96
	6H	19.11	19.48	20.00	20.37	21.45	23.09	23.45	23.98	24.35	25.43
	8H	19.33	19.66	20.23	20.54	21.68	23.29	23.61	24.18	24.50	25.63