

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: P832008

Luminaire Tested: S123RDIP-S1165D805U830-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832008  
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-S1165D805U830-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 805 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

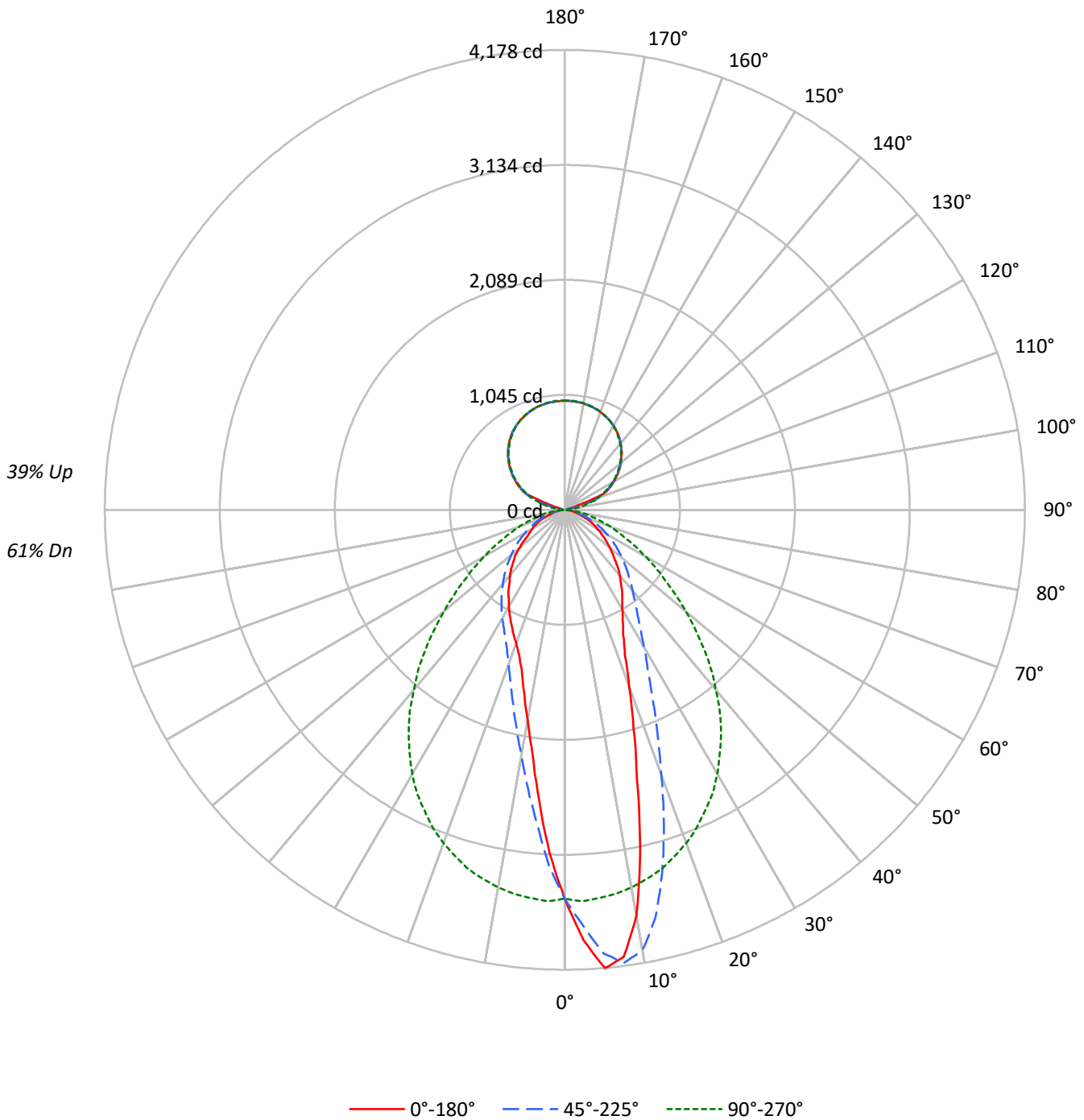
Lumens per Lamp: N/A  
Luminaire Lumens: 7709.0 lumens  
Efficiency: N/A  
Efficacy: 122.8 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 62.8  
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: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

### Luminous Intensity Polar Plot





TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	66	66	66	61	
1	101	97	94	90	95	91	88	85	80	78	75	69	68	66	60	59	58	58	58	58	53	
2	93	86	80	75	87	81	76	72	71	67	64	62	59	57	54	52	50	50	50	50	46	
3	86	77	70	64	80	72	66	61	64	59	55	56	52	50	49	46	44	44	44	44	40	
4	79	69	61	56	74	65	58	53	58	52	48	51	47	44	44	41	39	39	39	39	36	
5	73	62	54	49	68	59	52	47	52	47	43	46	42	39	41	37	35	35	35	35	32	
6	68	56	48	43	63	53	46	41	48	42	38	42	38	35	37	34	31	31	31	31	29	
7	63	51	44	38	59	49	42	37	44	38	34	39	35	31	35	31	28	28	28	28	26	
8	59	47	40	35	55	45	38	33	40	35	31	36	32	28	32	29	26	26	26	26	24	
9	55	43	36	31	52	41	35	30	37	32	28	34	29	26	30	27	24	24	24	24	22	
10	52	40	33	29	49	38	32	28	35	29	26	31	27	24	28	25	22	22	22	22	20	

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

	0°	45°	90°	135°	180°
0°	38022	38022	38022	38022	38022
5°	45148	43707	38262	30930	28717
10°	40904	44395	38071	24782	21260
15°	28163	38066	37670	20255	16817
20°	19593	29306	36913	17079	14781
25°	14930	22335	35813	15180	13624
30°	12997	17857	34436	14095	12619
35°	11933	15063	32487	13180	11704
40°	10887	13451	29936	12282	10867
45°	9832	12303	27184	11432	10032
50°	8925	11350	23938	10598	8997
55°	8071	10423	20819	9785	7719
60°	7233	9479	18083	8887	7296
65°	6676	8410	15567	7987	6897
70°	5423	7270	13583	7226	5605
75°	4758	5781	11503	5993	4941
80°	4308	4891	9428	5027	4668
85°	3940	4298	7151	4557	4298

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 28684 cd/sqm



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	322.0	4.2
10°-20°	745.0	9.7
20°-30°	854.8	11.1
30°-40°	842.6	10.9
40°-50°	743.0	9.6
50°-60°	571.6	7.4
60°-70°	375.8	4.9
70°-80°	182.5	2.4
80°-90°	48.0	0.6
90°-100°	35.0	0.5
100°-110°	169.0	2.2
110°-120°	414.4	5.4
120°-130°	526.0	6.8
130°-140°	562.0	7.3
140°-150°	525.5	6.8
150°-160°	423.9	5.5
160°-170°	273.5	3.5
170°-180°	94.3	1.2
0°-30°	1921.9	24.9
0°-40°	2764.4	35.9
0°-60°	4079.1	52.9
0°-90°	4685.5	60.8
90°-120°	618.4	8.0
90°-150°	2231.9	29.0
90°-180°	3024.0	39.2
0°-180°	7709.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3532	3532	3532	3532	3532	
5°	4178	4045	3541	2863	2658	382
15°	2527	3416	3380	1818	1509	713
25°	1257	1881	3015	1278	1147	594
35°	908	1146	2472	1003	891	566
45°	646	808	1786	751	659	501
55°	430	555	1109	521	411	386
65°	262	330	611	314	271	257
75°	114	139	277	144	119	123
85°	32	35	58	37	35	34
90°	22	18	1	18	22	11
95°	28	23	45	23	28	23
105°	32	161	220	161	32	68
115°	433	423	412	423	433	408
125°	592	590	581	590	592	529
135°	730	730	723	730	730	563
145°	842	841	834	841	842	526
155°	917	918	919	918	917	423
165°	967	966	969	966	967	273
175°	988	989	992	989	988	94
180°	992	992	992	992	992	



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4
2.5°	3914.8	3902.5	3890.2	3886.6	3882.9	3871.3	3859.8	3833.7	3807.6	3780.8	3754.0
5°	4178.4	4179.8	4181.3	4177.7	4174.0	4158.8	4143.6	4111.8	4079.9	4045.1	4010.4
7.5°	4097.3	4120.5	4143.6	4148.0	4152.3	4163.9	4175.5	4168.2	4161.0	4148.0	4134.9
10°	3742.4	3741.0	3739.5	3765.6	3791.7	3869.2	3946.7	3986.5	4026.3	4061.8	4097.3
12.5°	3163.1	3165.3	3167.5	3252.9	3338.4	3411.5	3484.6	3586.0	3687.4	3796.8	3906.1
15°	2527.3	2562.8	2598.3	2674.3	2750.3	2860.4	2970.5	3106.6	3242.8	3415.9	3588.9
17.5°	2075.4	2090.6	2105.8	2179.0	2252.1	2356.4	2460.7	2614.9	2769.2	2992.2	3215.3
20°	1710.5	1724.2	1738.0	1790.8	1843.7	1943.6	2043.6	2190.6	2337.6	2558.4	2779.3
22.5°	1428.0	1454.8	1481.6	1517.1	1552.6	1625.0	1697.4	1847.3	1997.2	2198.5	2399.9
25°	1257.1	1269.4	1281.8	1312.2	1342.6	1412.1	1481.6	1580.8	1680.0	1880.6	2081.2
27.5°	1141.3	1144.9	1148.5	1171.0	1193.4	1238.3	1283.2	1375.2	1467.1	1632.3	1797.4
30°	1045.7	1052.2	1058.7	1076.1	1093.5	1126.1	1158.7	1223.8	1289.0	1436.7	1584.5
32.5°	971.8	975.4	979.1	993.5	1008.0	1031.9	1055.8	1107.2	1158.7	1271.6	1384.6
35°	908.1	908.8	909.5	920.4	931.3	954.4	977.6	1020.3	1063.1	1146.3	1229.6
37.5°	835.7	840.7	845.8	853.8	861.7	882.0	902.3	937.1	971.8	1040.6	1109.4
40°	774.8	779.2	783.5	793.0	802.4	818.3	834.2	866.1	898.0	957.3	1016.7
42.5°	714.0	716.9	719.8	729.2	738.6	758.2	777.7	803.1	828.4	877.7	926.9
45°	645.9	653.2	660.4	670.6	680.7	697.4	714.0	740.1	766.2	808.2	850.2
47.5°	589.5	593.1	596.7	605.4	614.1	634.4	654.6	677.8	701.0	740.1	779.2
50°	533.0	534.4	535.9	543.8	551.8	569.9	588.0	614.8	641.6	677.8	714.0
52.5°	479.4	483.0	486.6	494.6	502.6	514.9	527.2	554.7	582.2	617.7	653.2
55°	430.1	432.3	434.5	440.3	446.1	460.6	475.0	498.9	522.8	555.4	588.0
57.5°	383.8	386.7	389.6	393.9	398.3	411.3	424.4	445.4	466.4	498.9	531.5
60°	336.0	339.6	343.3	348.3	353.4	363.5	373.7	392.5	411.3	440.3	469.3
62.5°	301.2	302.0	302.7	307.0	311.4	318.6	325.9	341.1	356.3	385.3	414.2
65°	262.1	264.3	266.5	268.7	270.8	276.6	282.4	295.5	308.5	330.2	351.9
67.5°	221.6	223.8	225.9	229.6	233.2	238.2	243.3	252.0	260.7	281.0	301.2
70°	172.3	172.3	172.3	178.1	183.9	192.6	201.3	207.8	214.4	231.0	247.7
72.5°	140.5	141.2	141.9	142.7	143.4	148.5	153.5	164.4	175.2	185.4	195.5
75°	114.4	115.1	115.9	116.6	117.3	118.8	120.2	123.8	127.5	139.0	150.6
77.5°	91.2	92.0	92.7	93.4	94.1	95.6	97.0	98.5	99.9	104.3	108.6
80°	69.5	70.2	71.0	71.7	72.4	73.1	73.9	75.3	76.8	78.9	81.1
82.5°	50.7	50.7	50.7	50.7	50.7	52.1	53.6	53.6	53.6	55.0	56.5
85°	31.9	31.9	31.9	32.6	33.3	33.3	33.3	34.0	34.8	34.8	34.8
87.5°	14.5	13.8	13.0	13.8	14.5	14.5	14.5	15.2	15.9	15.9	15.9
90°	22.1	21.8	21.5	21.1	20.8	20.3	19.6	19.0	18.3	17.7	15.6
92.5°	25.1	24.9	24.7	24.6	24.4	23.7	22.6	21.5	20.3	19.2	17.7
95°	28.0	28.0	28.0	28.0	28.0	27.4	26.3	25.1	24.0	22.8	21.0
97.5°	30.2	30.0	29.9	29.7	29.6	28.8	27.5	26.2	24.9	23.6	31.9
100°	30.9	30.8	30.6	30.5	30.3	29.6	28.2	26.9	25.6	24.3	49.9
102.5°	31.7	31.4	31.0	30.7	30.4	32.9	38.3	43.7	49.1	54.5	83.0
105°	32.4	32.1	31.8	31.4	31.1	45.4	74.4	103.4	132.4	161.4	176.1
107.5°	76.6	98.1	119.5	141.0	162.4	185.8	211.0	236.2	261.4	286.6	284.2
110°	202.6	226.1	249.5	272.9	296.3	310.7	316.1	321.5	326.9	332.3	330.5



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	383.9	384.2	384.6	384.9	385.2	384.6	383.2	381.7	380.2	378.8	377.0
115°	433.3	432.6	432.0	431.3	430.7	429.5	427.9	426.2	424.6	423.0	421.5
117.5°	473.1	472.9	472.7	472.6	472.4	471.7	470.4	469.1	467.8	466.4	465.6
120°	514.3	514.3	514.3	514.3	514.3	513.7	512.4	511.1	509.8	508.4	508.0
122.5°	554.9	554.7	554.5	554.4	554.2	553.7	552.9	552.1	551.3	550.4	549.8
125°	592.4	592.1	591.8	591.5	591.1	590.8	590.5	590.2	589.8	589.5	588.8
127.5°	629.3	629.6	629.9	630.3	630.6	630.5	630.0	629.5	629.0	628.6	627.7
130°	664.7	665.0	665.3	665.6	666.0	665.8	665.2	664.5	663.8	663.2	662.5
132.5°	697.1	697.6	698.1	698.6	699.0	699.0	698.3	697.7	697.0	696.3	695.9
135°	730.2	730.7	731.2	731.7	732.2	732.2	731.7	731.2	730.7	730.2	729.6
137.5°	761.9	762.3	762.6	762.9	763.2	763.0	762.2	761.4	760.5	759.7	759.4
140°	789.9	790.3	790.6	790.9	791.2	791.1	790.4	789.8	789.1	788.5	788.0
142.5°	815.7	816.2	816.7	817.2	817.7	817.7	817.2	816.7	816.2	815.7	815.2
145°	842.2	842.2	842.2	842.2	842.2	842.1	841.8	841.4	841.1	840.8	840.4
147.5°	861.4	862.2	863.0	863.9	864.7	864.9	864.6	864.3	863.9	863.6	863.3
150°	883.5	884.0	884.5	885.0	885.5	885.6	885.2	884.9	884.6	884.2	883.9
152.5°	901.2	902.0	902.8	903.7	904.5	904.6	903.9	903.2	902.6	901.9	901.8
155°	917.4	918.4	919.4	920.4	921.3	921.4	920.6	919.8	919.0	918.1	918.0
157.5°	931.4	932.7	934.0	935.3	936.6	936.8	935.8	934.8	933.9	932.9	933.0
160°	944.7	945.8	947.0	948.1	949.3	949.3	948.4	947.4	946.4	945.4	945.6
162.5°	957.2	958.2	959.2	960.1	961.1	961.0	959.9	958.8	957.6	956.5	956.6
165°	966.8	967.9	969.1	970.2	971.4	971.3	970.0	968.7	967.4	966.0	966.2
167.5°	974.1	975.5	976.8	978.1	979.4	979.4	978.1	976.8	975.5	974.1	974.1
170°	980.8	982.1	983.4	984.7	986.0	986.0	984.7	983.4	982.1	980.8	980.8
172.5°	984.5	985.9	987.4	988.9	990.4	990.4	989.1	987.8	986.5	985.2	985.0
175°	988.1	989.5	990.8	992.1	993.4	993.5	992.3	991.2	990.0	988.9	988.7
177.5°	988.9	990.5	992.2	993.8	995.4	995.6	994.3	993.0	991.7	990.4	990.2
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4
2.5°	3750.4	3746.8	3712.0	3677.3	3643.2	3609.2	3583.9	3558.5	3515.8	3473.1	3446.3
5°	3982.9	3955.3	3900.3	3845.3	3762.7	3680.2	3610.6	3541.1	3452.8	3364.4	3290.6
7.5°	4112.5	4090.0	4023.4	3956.8	3847.4	3738.1	3629.5	3520.9	3390.5	3260.2	3148.6
10°	4116.1	4134.9	4079.9	4024.9	3901.8	3778.7	3630.9	3483.2	3308.0	3132.7	2988.6
12.5°	3987.2	4068.3	4056.7	4045.1	3919.9	3794.6	3615.0	3435.4	3220.3	3005.3	2824.9
15°	3746.1	3903.2	3949.6	3995.9	3892.3	3788.8	3584.6	3380.4	3127.6	2874.9	2667.8
17.5°	3435.4	3655.5	3777.9	3900.3	3825.0	3749.7	3525.9	3302.2	3017.6	2733.0	2507.8
20°	3067.5	3355.7	3547.6	3739.5	3712.0	3684.5	3453.5	3222.5	2915.5	2608.4	2364.4
22.5°	2704.0	3008.1	3273.2	3538.2	3566.5	3594.7	3361.5	3128.4	2792.4	2456.3	2208.0
25°	2390.4	2699.7	3015.4	3331.1	3394.8	3458.6	3237.0	3015.4	2667.1	2318.8	2071.8
27.5°	2091.4	2385.4	2733.0	3080.6	3196.4	3312.3	3109.5	2906.8	2544.0	2181.2	1934.9
30°	1847.3	2110.2	2465.0	2819.9	2981.4	3142.8	2956.7	2770.6	2410.7	2050.8	1809.7
32.5°	1619.9	1855.3	2211.6	2567.9	2755.4	2943.0	2782.2	2621.4	2275.3	1929.2	1690.9
35°	1440.3	1651.1	1983.5	2315.9	2525.9	2735.9	2604.1	2472.3	2134.1	1795.9	1570.7
37.5°	1286.1	1462.8	1774.9	2087.0	2310.1	2533.1	2423.0	2313.0	1995.1	1677.1	1464.2
40°	1158.7	1300.6	1591.0	1881.4	2100.1	2318.8	2224.6	2130.5	1845.9	1561.3	1362.1
42.5°	1049.3	1171.7	1432.4	1693.1	1893.7	2094.3	2032.0	1969.7	1711.9	1454.1	1269.4
45°	953.0	1055.8	1285.4	1514.9	1699.6	1884.3	1835.0	1785.8	1563.5	1341.1	1171.7
47.5°	867.5	955.9	1160.8	1365.8	1531.6	1697.4	1651.8	1606.2	1422.2	1238.3	1084.1
50°	789.3	864.6	1035.5	1206.4	1355.6	1504.8	1467.1	1429.5	1277.4	1125.3	992.1
52.5°	715.5	777.7	931.3	1084.8	1205.0	1325.2	1296.2	1267.3	1150.0	1032.6	911.7
55°	645.2	702.4	832.1	961.7	1064.5	1167.3	1138.4	1109.4	1018.2	926.9	820.5
57.5°	581.5	631.5	736.5	841.5	923.3	1005.1	991.4	977.6	901.6	825.5	737.9
60°	514.2	559.0	649.6	740.1	806.0	871.9	856.0	840.0	785.7	731.4	656.1
62.5°	454.0	493.9	566.3	638.7	692.3	745.9	734.3	722.7	681.4	640.2	577.9
65°	391.0	430.1	488.8	547.5	589.5	631.5	621.3	611.2	580.1	548.9	498.9
67.5°	333.8	366.4	417.1	467.8	496.0	524.3	518.5	512.7	488.8	464.9	425.8
70°	275.9	304.1	346.1	388.1	407.7	427.3	429.4	431.6	409.9	388.1	359.2
72.5°	218.0	240.4	279.5	318.6	333.8	349.0	348.3	347.6	334.6	321.5	295.5
75°	167.3	183.9	214.4	244.8	257.8	270.8	273.7	276.6	264.3	252.0	237.5
77.5°	120.2	131.8	155.0	178.1	192.6	207.1	208.6	210.0	204.2	198.4	184.7
80°	84.7	88.3	102.8	117.3	132.5	147.7	149.9	152.1	146.3	140.5	131.8
82.5°	58.7	60.8	65.9	71.0	83.3	95.6	98.5	101.4	98.5	95.6	86.2
85°	35.5	36.2	38.4	40.6	46.3	52.1	55.0	57.9	56.5	55.0	50.0
87.5°	15.9	15.9	16.7	17.4	18.8	20.3	23.9	27.5	25.3	23.2	21.0
90°	13.4	11.3	9.2	7.3	5.6	4.0	2.4	0.7	2.4	4.0	5.6
92.5°	16.2	14.7	13.3	13.0	14.0	15.0	16.0	16.9	16.0	15.0	14.0
95°	19.2	17.4	15.6	18.1	24.8	31.5	38.2	44.9	38.2	31.5	24.8
97.5°	40.3	48.6	57.0	63.5	68.0	72.6	77.2	81.8	77.2	72.6	68.0
100°	75.4	101.0	126.5	137.6	134.4	131.1	127.8	124.5	127.8	131.1	134.4
102.5°	111.5	140.0	168.5	181.7	179.6	177.4	175.3	173.2	175.3	177.4	179.6
105°	190.9	205.6	220.3	226.8	225.0	223.2	221.4	219.6	221.4	223.2	225.0
107.5°	281.7	279.3	276.8	274.9	273.4	271.9	270.4	269.0	270.4	271.9	273.4
110°	328.7	326.9	325.1	323.6	322.3	320.9	319.6	318.3	319.6	320.9	322.3





TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	375.2	373.3	371.5	370.1	368.9	367.8	366.6	365.5	366.6	367.8	368.9
115°	420.0	418.5	417.1	415.8	414.9	413.9	412.9	411.9	412.9	413.9	414.9
117.5°	464.8	464.0	463.2	462.2	461.0	459.9	458.7	457.6	458.7	459.9	461.0
120°	507.5	507.0	506.5	505.5	504.0	502.5	501.1	499.6	501.1	502.5	504.0
122.5°	549.1	548.5	547.8	546.9	545.8	544.6	543.5	542.3	543.5	544.6	545.8
125°	588.2	587.5	586.9	585.9	584.6	583.3	582.0	580.7	582.0	583.3	584.6
127.5°	626.9	626.1	625.3	624.2	622.9	621.6	620.3	619.0	620.3	621.6	622.9
130°	661.9	661.2	660.6	659.6	658.3	657.0	655.7	654.3	655.7	657.0	658.3
132.5°	695.4	694.9	694.4	693.5	692.2	690.9	689.6	688.2	689.6	690.9	692.2
135°	728.9	728.3	727.6	726.8	725.8	724.8	723.9	722.9	723.9	724.8	725.8
137.5°	759.1	758.7	758.4	757.6	756.3	755.0	753.7	752.3	753.7	755.0	756.3
140°	787.5	787.0	786.5	785.8	784.8	783.8	782.8	781.8	782.8	783.8	784.8
142.5°	814.7	814.2	813.8	813.0	812.0	811.1	810.1	809.1	810.1	811.1	812.0
145°	840.1	839.8	839.5	838.7	837.6	836.4	835.3	834.1	835.3	836.4	837.6
147.5°	863.0	862.6	862.3	861.7	860.9	860.1	859.3	858.5	859.3	860.1	860.9
150°	883.6	883.3	882.9	882.5	882.0	881.5	881.1	880.6	881.1	881.5	882.0
152.5°	901.6	901.4	901.3	901.1	901.0	900.8	900.6	900.5	900.6	900.8	901.0
155°	917.8	917.7	917.5	917.6	917.9	918.2	918.6	918.9	918.6	918.2	917.9
157.5°	933.2	933.4	933.5	933.6	933.6	933.6	933.6	933.6	933.6	933.6	933.6
160°	945.7	945.9	946.1	946.2	946.4	946.6	946.7	946.9	946.7	946.6	946.4
162.5°	956.8	957.0	957.1	957.4	957.9	958.4	958.9	959.4	958.9	958.4	957.9
165°	966.4	966.5	966.7	967.0	967.5	968.0	968.5	969.0	968.5	968.0	967.5
167.5°	974.1	974.1	974.1	974.5	975.1	975.8	976.4	977.1	976.4	975.8	975.1
170°	980.8	980.8	980.8	981.1	981.8	982.4	983.1	983.7	983.1	982.4	981.8
172.5°	984.9	984.7	984.5	984.9	985.7	986.5	987.3	988.1	987.3	986.5	985.7
175°	988.6	988.4	988.2	988.6	989.4	990.2	991.0	991.8	991.0	990.2	989.4
177.5°	990.0	989.9	989.7	990.0	990.9	991.7	992.5	993.3	992.5	991.7	990.9
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4	3532.4
2.5°	3419.5	3378.2	3336.9	3307.2	3277.5	3240.6	3203.7	3202.2	3200.8	3173.3	3145.7
5°	3216.7	3145.0	3073.3	3003.1	2932.8	2862.6	2792.4	2776.4	2760.5	2736.6	2712.7
7.5°	3037.1	2922.7	2808.3	2718.5	2628.7	2558.4	2488.2	2440.4	2392.6	2355.7	2318.8
10°	2844.5	2702.6	2560.6	2452.0	2343.4	2267.3	2191.3	2136.3	2081.2	2055.2	2029.1
12.5°	2644.6	2490.4	2336.1	2229.7	2123.2	2032.0	1940.7	1890.8	1840.8	1804.6	1768.4
15°	2460.7	2294.9	2129.0	2016.1	1903.1	1817.6	1732.2	1682.2	1632.3	1596.0	1559.8
17.5°	2282.5	2115.3	1948.0	1833.6	1719.1	1641.7	1564.2	1515.7	1467.1	1444.7	1422.2
20°	2120.3	1951.6	1782.9	1675.0	1567.1	1491.0	1415.0	1388.9	1362.9	1341.9	1320.9
22.5°	1959.6	1797.4	1635.1	1531.6	1428.0	1373.0	1318.0	1297.0	1276.0	1260.0	1244.1
25°	1824.9	1663.4	1501.9	1411.4	1320.9	1278.1	1235.4	1221.7	1207.9	1192.0	1176.0
27.5°	1688.7	1535.2	1381.7	1309.3	1236.9	1202.1	1167.3	1150.0	1132.6	1119.5	1106.5
30°	1568.5	1426.6	1284.7	1224.6	1164.4	1134.0	1103.6	1084.8	1066.0	1053.6	1041.3
32.5°	1452.7	1326.7	1200.7	1149.2	1097.8	1068.1	1038.4	1020.3	1002.2	987.8	973.3
35°	1345.5	1236.1	1126.8	1079.7	1032.6	1003.0	973.3	955.2	937.1	922.6	908.1
37.5°	1251.3	1152.1	1052.9	1008.8	964.6	938.5	912.4	893.6	874.8	859.6	844.4
40°	1163.0	1075.4	987.8	945.0	902.3	874.1	845.8	829.2	812.5	798.7	785.0
42.5°	1084.8	1004.4	924.0	882.0	840.0	813.2	786.4	766.9	747.3	739.4	731.4
45°	1002.2	931.3	860.3	819.7	779.2	751.0	722.7	706.1	689.4	682.2	674.9
47.5°	929.8	863.9	798.0	758.2	718.4	693.0	667.7	654.6	641.6	631.5	621.3
50°	858.9	795.1	731.4	693.0	654.6	632.9	611.2	595.3	579.3	572.1	564.8
52.5°	790.8	732.8	674.9	635.8	596.7	575.7	554.7	540.9	527.2	512.0	496.8
55°	714.0	663.3	612.6	577.9	543.1	521.4	499.7	483.7	467.8	451.9	435.9
57.5°	650.3	600.3	550.4	519.2	488.1	467.1	446.1	428.7	411.3	398.3	385.3
60°	580.8	537.3	493.9	463.5	433.0	412.8	392.5	375.8	359.2	352.7	346.1
62.5°	515.6	475.0	434.5	407.7	380.9	361.4	341.8	330.9	320.1	315.7	311.4
65°	449.0	414.2	379.5	354.8	330.2	313.6	296.9	291.8	286.8	283.1	279.5
67.5°	386.7	357.0	327.3	305.6	283.9	272.3	260.7	254.9	249.1	244.8	240.4
70°	330.2	304.1	278.1	259.2	240.4	229.6	218.7	213.6	208.6	200.6	192.6
72.5°	269.4	249.1	228.8	214.4	199.9	190.5	181.0	170.9	160.8	153.5	146.3
75°	223.0	202.8	182.5	168.7	155.0	144.1	133.2	129.6	126.0	123.8	121.7
77.5°	170.9	153.5	136.1	125.3	114.4	109.3	104.3	102.1	99.9	99.2	98.5
80°	123.1	108.6	94.1	88.3	82.6	81.1	79.7	78.2	76.8	76.0	75.3
82.5°	76.8	69.5	62.3	60.8	59.4	58.7	57.9	57.2	56.5	55.8	55.0
85°	44.9	42.0	39.1	38.4	37.7	36.9	36.2	36.2	36.2	36.2	36.2
87.5°	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.1	17.4
90°	7.3	9.2	11.3	13.4	15.6	17.7	18.3	19.0	19.6	20.3	20.8
92.5°	13.0	13.3	14.7	16.2	17.7	19.2	20.3	21.5	22.6	23.7	24.4
95°	18.1	15.6	17.4	19.2	21.0	22.8	24.0	25.1	26.3	27.4	28.0
97.5°	63.5	57.0	48.6	40.3	31.9	23.6	24.9	26.2	27.5	28.8	29.6
100°	137.6	126.5	101.0	75.4	49.9	24.3	25.6	26.9	28.2	29.6	30.3
102.5°	181.7	168.5	140.0	111.5	83.0	54.5	49.1	43.7	38.3	32.9	30.4
105°	226.8	220.3	205.6	190.9	176.1	161.4	132.4	103.4	74.4	45.4	31.1
107.5°	274.9	276.8	279.3	281.7	284.2	286.6	261.4	236.2	211.0	185.8	162.4
110°	323.6	325.1	326.9	328.7	330.5	332.3	326.9	321.5	316.1	310.7	296.3



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	370.1	371.5	373.3	375.2	377.0	378.8	380.2	381.7	383.2	384.6	385.2
115°	415.8	417.1	418.5	420.0	421.5	423.0	424.6	426.2	427.9	429.5	430.7
117.5°	462.2	463.2	464.0	464.8	465.6	466.4	467.8	469.1	470.4	471.7	472.4
120°	505.5	506.5	507.0	507.5	508.0	508.4	509.8	511.1	512.4	513.7	514.3
122.5°	546.9	547.8	548.5	549.1	549.8	550.4	551.3	552.1	552.9	553.7	554.2
125°	585.9	586.9	587.5	588.2	588.8	589.5	589.8	590.2	590.5	590.8	591.1
127.5°	624.2	625.3	626.1	626.9	627.7	628.6	629.0	629.5	630.0	630.5	630.6
130°	659.6	660.6	661.2	661.9	662.5	663.2	663.8	664.5	665.2	665.8	666.0
132.5°	693.5	694.4	694.9	695.4	695.9	696.3	697.0	697.7	698.3	699.0	699.0
135°	726.8	727.6	728.3	728.9	729.6	730.2	730.7	731.2	731.7	732.2	732.2
137.5°	757.6	758.4	758.7	759.1	759.4	759.7	760.5	761.4	762.2	763.0	763.2
140°	785.8	786.5	787.0	787.5	788.0	788.5	789.1	789.8	790.4	791.1	791.2
142.5°	813.0	813.8	814.2	814.7	815.2	815.7	816.2	816.7	817.2	817.7	817.7
145°	838.7	839.5	839.8	840.1	840.4	840.8	841.1	841.4	841.8	842.1	842.2
147.5°	861.7	862.3	862.6	863.0	863.3	863.6	863.9	864.3	864.6	864.9	864.7
150°	882.5	882.9	883.3	883.6	883.9	884.2	884.6	884.9	885.2	885.6	885.5
152.5°	901.1	901.3	901.4	901.6	901.8	901.9	902.6	903.2	903.9	904.6	904.5
155°	917.6	917.5	917.7	917.8	918.0	918.1	919.0	919.8	920.6	921.4	921.3
157.5°	933.6	933.5	933.4	933.2	933.0	932.9	933.9	934.8	935.8	936.8	936.6
160°	946.2	946.1	945.9	945.7	945.6	945.4	946.4	947.4	948.4	949.3	949.3
162.5°	957.4	957.1	957.0	956.8	956.6	956.5	957.6	958.8	959.9	961.0	961.1
165°	967.0	966.7	966.5	966.4	966.2	966.0	967.4	968.7	970.0	971.3	971.4
167.5°	974.5	974.1	974.1	974.1	974.1	974.1	975.5	976.8	978.1	979.4	979.4
170°	981.1	980.8	980.8	980.8	980.8	980.8	982.1	983.4	984.7	986.0	986.0
172.5°	984.9	984.5	984.7	984.9	985.0	985.2	986.5	987.8	989.1	990.4	990.4
175°	988.6	988.2	988.4	988.6	988.7	988.9	990.0	991.2	992.3	993.5	993.4
177.5°	990.0	989.7	989.9	990.0	990.2	990.4	991.7	993.0	994.3	995.6	995.4
180°	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8	991.8



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	3532.4	3532.4	3532.4	3532.4
2.5°	3138.5	3131.3	3128.4	3125.5
5°	2690.2	2667.8	2662.7	2657.7
7.5°	2309.3	2299.9	2268.8	2237.6
10°	2000.1	1971.2	1958.1	1945.1
12.5°	1741.6	1714.8	1710.5	1706.1
15°	1541.0	1522.2	1515.7	1509.1
17.5°	1409.2	1396.2	1388.2	1380.2
20°	1311.4	1302.0	1296.2	1290.4
22.5°	1236.9	1229.6	1225.3	1220.9
25°	1165.2	1154.3	1150.7	1147.1
27.5°	1097.1	1087.7	1084.1	1080.4
30°	1033.4	1025.4	1020.3	1015.3
32.5°	963.9	954.4	951.5	948.6
35°	902.3	896.5	893.6	890.7
37.5°	837.1	829.9	825.5	821.2
40°	781.4	777.7	775.6	773.4
42.5°	724.9	718.4	717.6	716.9
45°	668.4	661.9	660.4	659.0
47.5°	615.5	609.7	609.0	608.3
50°	556.9	548.9	543.1	537.3
52.5°	489.5	482.3	477.2	472.2
55°	428.0	420.0	415.7	411.3
57.5°	381.6	378.0	375.8	373.7
60°	344.0	341.8	340.4	338.9
62.5°	309.2	307.0	307.0	307.0
65°	277.4	275.2	273.0	270.8
67.5°	236.1	231.7	231.0	230.3
70°	186.1	179.6	178.9	178.1
72.5°	145.6	144.8	143.4	141.9
75°	120.2	118.8	118.8	118.8
77.5°	97.0	95.6	95.6	95.6
80°	74.6	73.9	74.6	75.3
82.5°	55.0	55.0	54.3	53.6
85°	35.5	34.8	34.8	34.8
87.5°	17.4	17.4	17.4	17.4
90°	21.1	21.5	21.8	22.1
92.5°	24.6	24.7	24.9	25.1
95°	28.0	28.0	28.0	28.0
97.5°	29.7	29.9	30.0	30.2
100°	30.5	30.6	30.8	30.9
102.5°	30.7	31.0	31.4	31.7
105°	31.4	31.8	32.1	32.4
107.5°	141.0	119.5	98.1	76.6
110°	272.9	249.5	226.1	202.6



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	384.9	384.6	384.2	383.9
115°	431.3	432.0	432.6	433.3
117.5°	472.6	472.7	472.9	473.1
120°	514.3	514.3	514.3	514.3
122.5°	554.4	554.5	554.7	554.9
125°	591.5	591.8	592.1	592.4
127.5°	630.3	629.9	629.6	629.3
130°	665.6	665.3	665.0	664.7
132.5°	698.6	698.1	697.6	697.1
135°	731.7	731.2	730.7	730.2
137.5°	762.9	762.6	762.3	761.9
140°	790.9	790.6	790.3	789.9
142.5°	817.2	816.7	816.2	815.7
145°	842.2	842.2	842.2	842.2
147.5°	863.9	863.0	862.2	861.4
150°	885.0	884.5	884.0	883.5
152.5°	903.7	902.8	902.0	901.2
155°	920.4	919.4	918.4	917.4
157.5°	935.3	934.0	932.7	931.4
160°	948.1	947.0	945.8	944.7
162.5°	960.1	959.2	958.2	957.2
165°	970.2	969.1	967.9	966.8
167.5°	978.1	976.8	975.5	974.1
170°	984.7	983.4	982.1	980.8
172.5°	988.9	987.4	985.9	984.5
175°	992.1	990.8	989.5	988.1
177.5°	993.8	992.2	990.5	988.9
180°	991.8	991.8	991.8	991.8



TEST NUMBER: P832008

CATALOG NUMBER: S123RDIP-S1165D805U830-4F0-1E-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	14.35	15.24	15.22	16.13	17.24	19.01	19.91	19.88	20.79	21.90
	3H	15.57	16.37	16.46	17.27	18.41	20.51	21.32	21.40	22.21	23.35
	4H	15.96	16.71	16.86	17.61	18.76	21.01	21.76	21.91	22.66	23.81
	6H	16.24	16.94	17.15	17.84	19.00	21.32	22.02	22.23	22.92	24.09
	8H	16.33	16.99	17.25	17.91	19.08	21.40	22.06	22.32	22.99	24.15
	12H	16.38	17.01	17.31	17.93	19.11	21.44	22.07	22.36	22.98	24.17
4H	2H	15.08	15.83	15.98	16.73	17.88	19.01	19.77	19.92	20.67	21.82
	3H	16.45	17.08	17.37	18.01	19.17	20.68	21.30	21.59	22.23	23.40
	4H	16.91	17.48	17.83	18.41	19.60	21.29	21.86	22.21	22.78	23.97
	6H	17.28	17.77	18.22	18.72	19.91	21.73	22.22	22.67	23.17	24.36
	8H	17.41	17.87	18.35	18.81	20.01	21.86	22.32	22.80	23.26	24.46
	12H	17.49	17.90	18.44	18.86	20.07	21.92	22.34	22.88	23.30	24.51
8H	4H	17.23	17.69	18.17	18.63	19.83	21.26	21.72	22.20	22.66	23.86
	6H	17.69	18.07	18.66	19.06	20.26	21.76	22.13	22.72	23.12	24.32
	8H	17.89	18.22	18.86	19.20	20.42	21.94	22.27	22.92	23.25	24.47
	12H	18.03	18.32	19.01	19.29	20.56	22.06	22.35	23.04	23.32	24.59
12H	4H	17.24	17.65	18.20	18.62	19.82	21.21	21.62	22.17	22.58	23.79
	6H	17.75	18.09	18.73	19.06	20.28	21.73	22.06	22.71	23.04	24.26
	8H	17.97	18.27	18.95	19.23	20.51	21.93	22.22	22.90	23.19	24.46