

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: P831940

Luminaire Tested: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831940
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-S1165D1195U927-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 1195 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

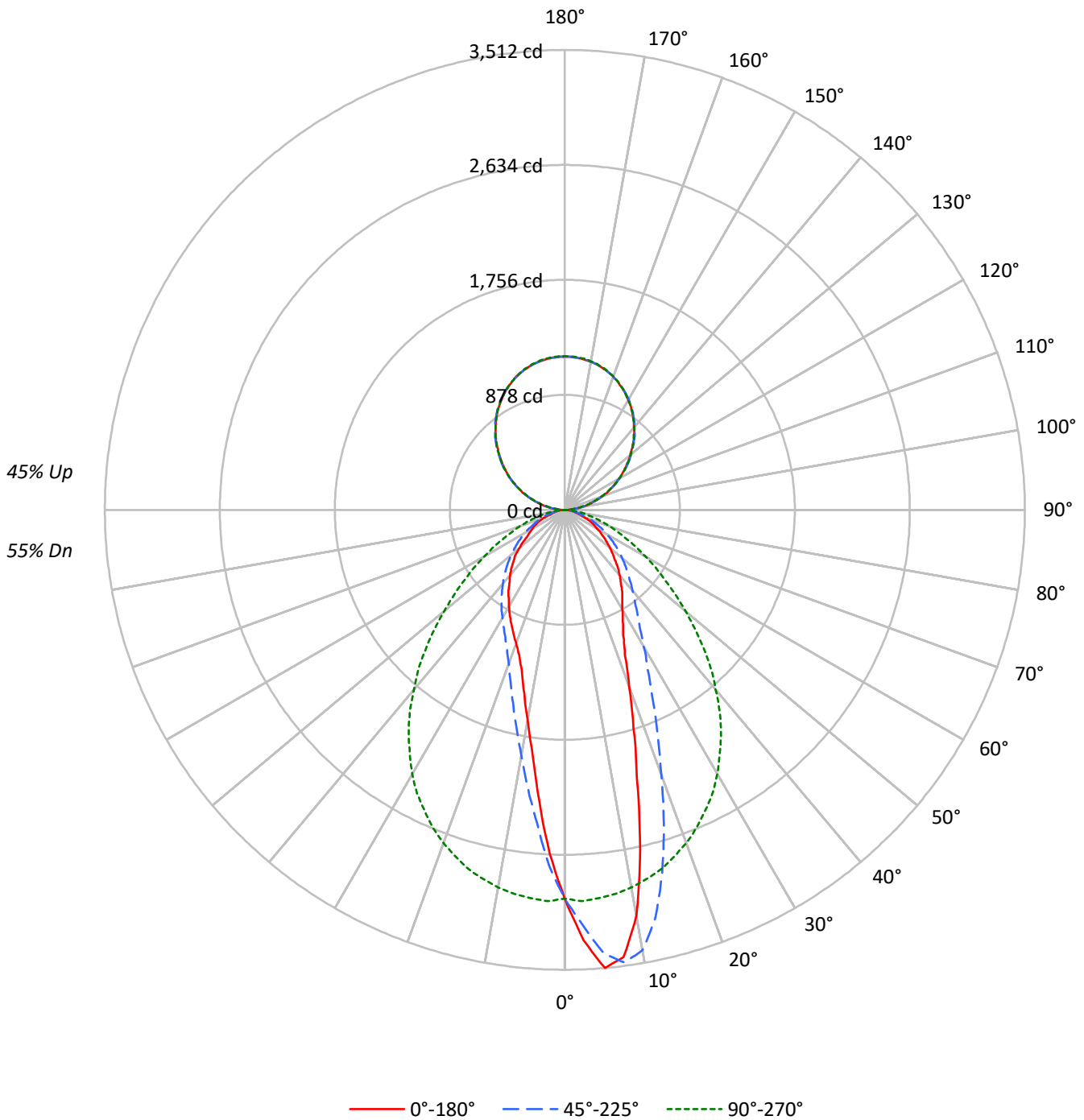
Lumens per Lamp: N/A
Luminaire Lumens: 7185.3 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 73.2
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: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55				
1	100	96	92	89	93	89	86	83	77	74	72	65	64	62	55	54	53	48				
2	92	85	79	74	85	79	74	70	68	65	61	58	56	54	49	48	46	42				
3	84	75	68	63	78	70	64	60	61	57	53	53	49	46	45	42	40	36				
4	78	67	60	54	72	63	57	51	55	50	46	48	44	41	41	38	36	32				
5	72	61	53	47	67	57	50	45	50	45	41	43	39	36	37	34	32	29				
6	66	55	47	42	62	52	45	40	46	40	36	40	36	32	34	31	29	26				
7	62	50	43	37	58	47	40	36	42	36	32	37	32	29	32	28	26	24				
8	58	46	39	33	54	43	37	32	38	33	29	34	30	26	29	26	24	22				
9	54	42	35	30	50	40	33	29	36	30	27	31	27	24	28	24	22	20				
10	51	39	32	28	47	37	31	26	33	28	24	29	25	22	26	23	20	18				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	31957	31957	31957	31957	31957
5°	37945	36735	32158	25996	24135
10°	34379	37313	31997	20828	17868
15°	23670	31992	31660	17024	14135
20°	16467	24631	31024	14355	12424
25°	12549	18772	30100	12758	11450
30°	10924	15008	28942	11846	10606
35°	10029	12661	27304	11077	9837
40°	9150	11306	25160	10322	9133
45°	8264	10339	22847	9608	8432
50°	7502	9540	20118	8907	7562
55°	6784	8760	17498	8223	6488
60°	6079	7965	15199	7468	6131
65°	5611	7068	13084	6711	5797
70°	4560	6112	11415	6071	4711
75°	4001	4862	9669	5036	4151
80°	3620	4110	7922	4228	3924
85°	3310	3606	6015	3829	3606

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 24108 cd/sqm



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	270.6	3.8
10°-20°	626.2	8.7
20°-30°	718.5	10.0
30°-40°	708.2	9.9
40°-50°	624.5	8.7
50°-60°	480.5	6.7
60°-70°	315.9	4.4
70°-80°	153.4	2.1
80°-90°	41.2	0.6
90°-100°	75.4	1.0
100°-110°	228.3	3.2
110°-120°	388.6	5.4
120°-130°	511.3	7.1
130°-140°	574.7	8.0
140°-150°	565.0	7.9
150°-160°	475.7	6.6
160°-170°	316.7	4.4
170°-180°	110.9	1.5
0°-30°	1615.3	22.5
0°-40°	2323.4	32.3
0°-60°	3428.4	47.7
0°-90°	3938.8	54.8
90°-120°	692.4	9.6
90°-150°	2343.3	32.6
90°-180°	3247.0	45.2
0°-180°	7185.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2969	2969	2969	2969	2969	
5°	3512	3400	2976	2406	2234	321
15°	2124	2871	2841	1528	1268	600
25°	1057	1581	2534	1074	964	499
35°	763	964	2078	843	749	476
45°	543	679	1501	631	554	421
55°	362	467	932	438	346	324
65°	220	278	514	264	228	216
75°	96	117	232	121	100	104
85°	27	29	49	31	29	28
90°	28	22	1	22	28	15
95°	72	68	54	68	72	72
105°	219	217	207	217	219	232
115°	392	392	391	392	392	388
125°	566	573	572	573	566	506
135°	742	747	743	747	742	571
145°	901	906	901	906	901	563
155°	1030	1033	1032	1033	1030	475
165°	1120	1121	1124	1121	1120	316
175°	1164	1165	1169	1165	1164	111
180°	1172	1172	1172	1172	1172	



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9
2.5°	3290.3	3279.9	3269.6	3266.5	3263.5	3253.8	3244.0	3222.1	3200.2	3177.7	3155.2
5°	3511.8	3513.0	3514.3	3511.2	3508.2	3495.4	3482.6	3455.8	3429.0	3399.8	3370.6
7.5°	3443.7	3463.1	3482.6	3486.3	3489.9	3499.6	3509.4	3503.3	3497.2	3486.3	3475.3
10°	3145.4	3144.2	3143.0	3164.9	3186.8	3251.9	3317.1	3350.5	3384.0	3413.8	3443.7
12.5°	2658.5	2660.3	2662.2	2734.0	2805.8	2867.3	2928.7	3014.0	3099.2	3191.1	3283.0
15°	2124.1	2154.0	2183.8	2247.7	2311.6	2404.1	2496.6	2611.0	2725.5	2870.9	3016.4
17.5°	1744.3	1757.1	1769.9	1831.4	1892.9	1980.5	2068.1	2197.8	2327.4	2514.9	2702.3
20°	1437.6	1449.2	1460.7	1505.2	1549.6	1633.6	1717.6	1841.1	1964.7	2150.3	2335.9
22.5°	1200.2	1222.7	1245.3	1275.1	1304.9	1365.8	1426.6	1552.6	1678.6	1847.8	2017.0
25°	1056.6	1066.9	1077.3	1102.8	1128.4	1186.8	1245.3	1328.6	1412.0	1580.6	1749.2
27.5°	959.2	962.3	965.3	984.2	1003.0	1040.8	1078.5	1155.8	1233.1	1371.9	1510.6
30°	878.9	884.3	889.8	904.4	919.0	946.4	973.8	1028.6	1083.4	1207.5	1331.7
32.5°	816.8	819.8	822.9	835.0	847.2	867.3	887.4	930.6	973.8	1068.8	1163.7
35°	763.2	763.8	764.4	773.6	782.7	802.2	821.7	857.6	893.5	963.5	1033.5
37.5°	702.4	706.6	710.9	717.6	724.3	741.3	758.4	787.6	816.8	874.6	932.4
40°	651.2	654.9	658.5	666.5	674.4	687.8	701.1	727.9	754.7	804.6	854.5
42.5°	600.1	602.5	605.0	612.9	620.8	637.2	653.7	675.0	696.3	737.7	779.1
45°	542.9	549.0	555.1	563.6	572.1	586.1	600.1	622.0	643.9	679.2	714.5
47.5°	495.4	498.5	501.5	508.8	516.1	533.2	550.2	569.7	589.2	622.0	654.9
50°	448.0	449.2	450.4	457.1	463.8	479.0	494.2	516.7	539.3	569.7	600.1
52.5°	402.9	406.0	409.0	415.7	422.4	432.7	443.1	466.2	489.3	519.2	549.0
55°	361.5	363.4	365.2	370.0	374.9	387.1	399.3	419.3	439.4	466.8	494.2
57.5°	322.6	325.0	327.4	331.1	334.7	345.7	356.7	374.3	392.0	419.3	446.7
60°	282.4	285.4	288.5	292.8	297.0	305.5	314.1	329.9	345.7	370.0	394.4
62.5°	253.2	253.8	254.4	258.1	261.7	267.8	273.9	286.7	299.4	323.8	348.1
65°	220.3	222.2	224.0	225.8	227.6	232.5	237.4	248.3	259.3	277.5	295.8
67.5°	186.2	188.1	189.9	192.9	196.0	200.2	204.5	211.8	219.1	236.2	253.2
70°	144.9	144.9	144.9	149.7	154.6	161.9	169.2	174.7	180.2	194.2	208.2
72.5°	118.1	118.7	119.3	119.9	120.5	124.8	129.0	138.2	147.3	155.8	164.3
75°	96.2	96.8	97.4	98.0	98.6	99.8	101.0	104.1	107.1	116.9	126.6
77.5°	76.7	77.3	77.9	78.5	79.1	80.3	81.6	82.8	84.0	87.6	91.3
80°	58.4	59.0	59.6	60.3	60.9	61.5	62.1	63.3	64.5	66.3	68.2
82.5°	42.6	42.6	42.6	42.6	42.6	43.8	45.0	45.0	45.0	46.3	47.5
85°	26.8	26.8	26.8	27.4	28.0	28.0	28.0	28.6	29.2	29.2	29.2
87.5°	12.2	11.6	11.0	11.6	12.2	12.2	12.2	12.8	13.4	13.4	13.4
90°	27.6	27.2	26.8	26.4	26.0	25.4	24.5	23.7	22.9	22.1	19.4
92.5°	39.6	40.0	40.4	40.8	41.2	41.1	40.5	39.9	39.3	38.7	37.4
95°	71.8	71.8	71.8	71.8	71.8	71.4	70.6	69.7	68.9	68.1	66.5
97.5°	103.1	103.3	103.5	103.7	103.9	103.5	102.5	101.5	100.4	99.4	98.2
100°	139.9	139.5	139.1	138.7	138.3	137.8	137.1	136.5	135.9	135.3	134.3
102.5°	177.6	177.8	178.1	178.3	178.5	178.3	177.6	177.0	176.4	175.8	174.4
105°	219.1	218.7	218.2	217.8	217.4	217.2	217.2	217.2	217.2	217.2	215.4
107.5°	261.4	261.6	261.8	262.0	262.2	262.0	261.4	260.8	260.2	259.6	258.7
110°	304.7	305.1	305.5	305.9	306.3	306.1	305.3	304.5	303.6	302.8	302.4



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	350.7	350.7	350.7	350.7	350.7	350.2	349.1	348.1	347.1	346.1	346.1
115°	392.1	392.3	392.5	392.7	392.9	392.9	392.7	392.5	392.3	392.1	392.5
117.5°	434.4	435.1	435.7	436.3	436.9	437.2	437.2	437.2	437.2	437.2	437.6
120°	479.5	479.9	480.4	480.8	481.2	481.5	481.7	481.9	482.1	482.3	483.3
122.5°	522.8	523.4	524.0	524.6	525.3	525.9	526.5	527.1	527.7	528.3	528.7
125°	566.1	566.9	567.7	568.5	569.3	570.1	571.0	571.8	572.6	573.4	573.8
127.5°	609.3	610.1	611.0	611.8	612.6	613.6	614.8	616.1	617.3	618.5	618.9
130°	651.7	653.1	654.5	656.0	657.4	658.5	659.3	660.1	661.0	661.8	662.4
132.5°	695.8	696.9	697.9	698.9	699.9	701.0	702.0	703.0	704.0	705.0	705.5
135°	741.9	742.3	742.7	743.1	743.5	744.1	744.9	745.7	746.6	747.4	747.6
137.5°	782.4	783.0	783.6	784.2	784.8	785.6	786.7	787.7	788.7	789.7	789.1
140°	821.9	823.4	824.8	826.2	827.7	828.5	828.7	828.9	829.1	829.3	829.1
142.5°	862.4	863.5	864.5	865.5	866.5	867.1	867.3	867.5	867.8	868.0	867.5
145°	901.1	901.9	902.7	903.5	904.4	904.9	905.1	905.3	905.5	905.7	905.1
147.5°	936.1	937.3	938.5	939.7	941.0	941.6	941.6	941.6	941.6	941.6	941.0
150°	969.2	970.4	971.7	972.9	974.1	974.7	974.7	974.7	974.7	974.7	974.3
152.5°	1001.4	1002.4	1003.5	1004.5	1005.5	1005.8	1005.4	1005.0	1004.6	1004.2	1004.0
155°	1030.0	1031.4	1032.8	1034.2	1035.7	1036.0	1035.2	1034.3	1033.5	1032.7	1032.5
157.5°	1056.6	1057.9	1059.1	1060.3	1061.6	1061.8	1060.9	1060.1	1059.3	1058.5	1058.3
160°	1082.4	1083.2	1084.1	1084.9	1085.7	1085.6	1084.6	1083.5	1082.5	1081.5	1081.5
162.5°	1101.7	1103.2	1104.6	1106.0	1107.5	1107.7	1106.7	1105.6	1104.6	1103.6	1103.4
165°	1120.2	1121.6	1123.0	1124.4	1125.9	1126.0	1124.8	1123.5	1122.3	1121.1	1121.1
167.5°	1136.7	1137.9	1139.2	1140.4	1141.6	1141.6	1140.4	1139.2	1137.9	1136.7	1136.5
170°	1148.7	1150.1	1151.5	1153.0	1154.4	1154.4	1153.0	1151.5	1150.1	1148.7	1148.7
172.5°	1157.9	1159.3	1160.8	1162.2	1163.6	1163.7	1162.5	1161.3	1160.0	1158.8	1158.8
175°	1164.3	1165.8	1167.2	1168.6	1170.1	1170.2	1168.9	1167.7	1166.5	1165.3	1165.3
177.5°	1168.0	1169.4	1170.9	1172.3	1173.7	1173.8	1172.6	1171.4	1170.2	1168.9	1168.9
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9
2.5°	3152.1	3149.1	3119.9	3090.6	3062.0	3033.4	3012.1	2990.8	2954.9	2919.0	2896.5
5°	3347.5	3324.4	3278.1	3231.8	3162.5	3093.1	3034.7	2976.2	2902.0	2827.7	2765.6
7.5°	3456.4	3437.6	3381.6	3325.6	3233.7	3141.8	3050.5	2959.2	2849.6	2740.1	2646.3
10°	3459.5	3475.3	3429.0	3382.8	3279.3	3175.9	3051.7	2927.5	2780.2	2633.0	2511.8
12.5°	3351.1	3419.3	3409.6	3399.8	3294.5	3189.2	3038.3	2887.4	2706.6	2525.8	2374.3
15°	3148.5	3280.5	3319.5	3358.4	3271.4	3184.4	3012.7	2841.1	2628.7	2416.3	2242.2
17.5°	2887.4	3072.4	3175.2	3278.1	3214.8	3151.5	2963.4	2775.4	2536.2	2297.0	2107.7
20°	2578.2	2820.4	2981.7	3143.0	3119.9	3096.7	2902.6	2708.4	2450.4	2192.3	1987.2
22.5°	2272.6	2528.3	2751.0	2973.8	2997.5	3021.3	2825.3	2629.3	2346.9	2064.5	1855.7
25°	2009.1	2269.0	2534.4	2799.7	2853.3	2906.8	2720.6	2534.4	2241.6	1948.8	1741.3
27.5°	1757.7	2004.8	2297.0	2589.1	2686.5	2783.9	2613.5	2443.1	2138.1	1833.2	1626.3
30°	1552.6	1773.6	2071.8	2370.0	2505.7	2641.5	2485.1	2328.6	2026.1	1723.7	1521.0
32.5°	1361.5	1559.3	1858.8	2158.2	2315.9	2473.5	2338.4	2203.3	1912.3	1621.4	1421.2
35°	1210.6	1387.7	1667.1	1946.4	2122.9	2299.4	2188.6	2077.9	1793.6	1509.4	1320.1
37.5°	1080.9	1229.4	1491.8	1754.1	1941.5	2129.0	2036.5	1944.0	1676.8	1409.6	1230.7
40°	973.8	1093.1	1337.2	1581.2	1765.0	1948.8	1869.7	1790.6	1551.4	1312.2	1144.8
42.5°	881.9	984.8	1203.9	1423.0	1591.6	1760.2	1707.8	1655.5	1438.8	1222.1	1066.9
45°	801.0	887.4	1080.3	1273.3	1428.5	1583.7	1542.3	1500.9	1314.0	1127.2	984.8
47.5°	729.1	803.4	975.6	1147.9	1287.3	1426.6	1388.3	1350.0	1195.4	1040.8	911.1
50°	663.4	726.7	870.3	1014.0	1139.4	1264.7	1233.1	1201.4	1073.6	945.8	833.8
52.5°	601.3	653.7	782.7	911.7	1012.8	1113.8	1089.5	1065.1	966.5	867.9	766.3
55°	542.3	590.4	699.3	808.3	894.7	981.1	956.8	932.4	855.7	779.1	689.6
57.5°	488.7	530.7	619.0	707.2	776.0	844.8	833.2	821.7	757.8	693.8	620.2
60°	432.1	469.9	545.9	622.0	677.4	732.8	719.4	706.0	660.4	614.7	551.4
62.5°	381.6	415.1	476.0	536.8	581.9	626.9	617.2	607.4	572.7	538.0	485.7
65°	328.7	361.5	410.8	460.1	495.4	530.7	522.2	513.7	487.5	461.3	419.3
67.5°	280.6	308.0	350.6	393.2	416.9	440.7	435.8	430.9	410.8	390.7	357.9
70°	231.9	255.6	290.9	326.2	342.7	359.1	360.9	362.7	344.5	326.2	301.9
72.5°	183.2	202.1	234.9	267.8	280.6	293.4	292.8	292.1	281.2	270.2	248.3
75°	140.6	154.6	180.2	205.7	216.7	227.6	230.1	232.5	222.2	211.8	199.6
77.5°	101.0	110.8	130.2	149.7	161.9	174.1	175.3	176.5	171.6	166.8	155.2
80°	71.2	74.3	86.4	98.6	111.4	124.2	126.0	127.8	122.9	118.1	110.8
82.5°	49.3	51.1	55.4	59.6	70.0	80.3	82.8	85.2	82.8	80.3	72.4
85°	29.8	30.4	32.3	34.1	39.0	43.8	46.3	48.7	47.5	46.3	42.0
87.5°	13.4	13.4	14.0	14.6	15.8	17.0	20.1	23.1	21.3	19.5	17.7
90°	16.8	14.1	11.5	9.1	7.1	5.0	3.0	0.9	3.0	5.0	7.1
92.5°	36.2	35.0	33.7	32.5	31.3	30.1	28.8	27.6	28.8	30.1	31.3
95°	64.8	63.2	61.6	60.0	58.6	57.2	55.7	54.3	55.7	57.2	58.6
97.5°	97.0	95.7	94.5	93.4	92.3	91.3	90.3	89.3	90.3	91.3	92.3
100°	133.3	132.2	131.2	130.1	128.9	127.6	126.4	125.2	126.4	127.6	128.9
102.5°	172.9	171.5	170.1	169.1	168.4	167.8	167.2	166.6	167.2	167.8	168.4
105°	213.5	211.7	209.9	208.7	208.3	207.9	207.5	207.1	207.5	207.9	208.3
107.5°	257.9	257.1	256.3	255.8	255.6	255.4	255.2	255.0	255.2	255.4	255.6
110°	302.0	301.6	301.2	300.8	300.4	300.0	299.5	299.1	299.5	300.0	300.4



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	346.1	346.1	346.1	346.0	345.8	345.6	345.4	345.2	345.4	345.6	345.8
115°	392.9	393.3	393.7	393.6	393.0	392.4	391.8	391.2	391.8	392.4	393.0
117.5°	438.0	438.4	438.8	438.9	438.7	438.5	438.3	438.1	438.3	438.5	438.7
120°	484.3	485.4	486.4	486.3	485.1	483.8	482.6	481.4	482.6	483.8	485.1
122.5°	529.1	529.5	530.0	529.8	528.9	528.1	527.3	526.5	527.3	528.1	528.9
125°	574.2	574.6	575.1	575.0	574.3	573.7	573.1	572.5	573.1	573.7	574.3
127.5°	619.3	619.7	620.2	619.7	618.5	617.3	616.1	614.8	616.1	617.3	618.5
130°	663.0	663.6	664.2	663.7	662.1	660.5	658.8	657.2	658.8	660.5	662.1
132.5°	705.9	706.3	706.7	706.1	704.4	702.8	701.2	699.5	701.2	702.8	704.4
135°	747.8	748.0	748.2	747.7	746.5	745.2	744.0	742.8	744.0	745.2	746.5
137.5°	788.5	787.9	787.3	786.4	785.4	784.4	783.4	782.4	783.4	784.4	785.4
140°	828.9	828.7	828.5	827.9	826.8	825.8	824.8	823.8	824.8	825.8	826.8
142.5°	867.1	866.7	866.3	865.6	864.6	863.6	862.5	861.5	862.5	863.6	864.6
145°	904.5	903.9	903.2	902.7	902.3	901.9	901.5	901.1	901.5	901.9	902.3
147.5°	940.4	939.7	939.1	938.4	937.6	936.8	936.0	935.1	936.0	936.8	937.6
150°	973.9	973.5	973.1	972.7	972.3	971.9	971.5	971.0	971.5	971.9	972.3
152.5°	1003.8	1003.6	1003.4	1003.0	1002.3	1001.7	1001.1	1000.5	1001.1	1001.7	1002.3
155°	1032.3	1032.1	1031.9	1031.8	1031.8	1031.8	1031.8	1031.8	1031.8	1031.8	1031.8
157.5°	1058.1	1057.9	1057.7	1057.7	1057.9	1058.1	1058.3	1058.5	1058.3	1058.1	1057.9
160°	1081.5	1081.5	1081.5	1081.7	1082.1	1082.5	1082.9	1083.3	1082.9	1082.5	1082.1
162.5°	1103.2	1103.0	1102.8	1103.0	1103.6	1104.2	1104.8	1105.4	1104.8	1104.2	1103.6
165°	1121.1	1121.1	1121.1	1121.4	1122.0	1122.6	1123.2	1123.8	1123.2	1122.6	1122.0
167.5°	1136.3	1136.1	1135.9	1136.2	1137.0	1137.8	1138.7	1139.5	1138.7	1137.8	1137.0
170°	1148.7	1148.7	1148.7	1149.1	1149.9	1150.7	1151.5	1152.4	1151.5	1150.7	1149.9
172.5°	1158.8	1158.8	1158.8	1159.2	1160.0	1160.9	1161.7	1162.5	1161.7	1160.9	1160.0
175°	1165.3	1165.3	1165.3	1165.7	1166.5	1167.3	1168.1	1168.9	1168.1	1167.3	1166.5
177.5°	1168.9	1168.9	1168.9	1169.3	1170.2	1171.0	1171.8	1172.6	1171.8	1171.0	1170.2
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9	2968.9
2.5°	2874.0	2839.3	2804.6	2779.6	2754.7	2723.6	2692.6	2691.4	2690.2	2667.0	2643.9
5°	2703.6	2643.3	2583.0	2524.0	2465.0	2405.9	2346.9	2333.5	2320.1	2300.0	2279.9
7.5°	2552.6	2456.4	2360.3	2284.8	2209.3	2150.3	2091.3	2051.1	2010.9	1979.9	1948.8
10°	2390.7	2271.4	2152.1	2060.8	1969.5	1905.6	1841.7	1795.5	1749.2	1727.3	1705.4
12.5°	2222.7	2093.1	1963.5	1874.0	1784.5	1707.8	1631.1	1589.1	1547.1	1516.7	1486.3
15°	2068.1	1928.8	1789.4	1694.4	1599.5	1527.7	1455.9	1413.9	1371.9	1341.4	1311.0
17.5°	1918.4	1777.8	1637.2	1541.1	1444.9	1379.8	1314.7	1273.9	1233.1	1214.2	1195.4
20°	1782.1	1640.3	1498.5	1407.8	1317.1	1253.2	1189.3	1167.4	1145.5	1127.8	1110.1
22.5°	1647.0	1510.6	1374.3	1287.3	1200.2	1154.0	1107.7	1090.1	1072.4	1059.0	1045.6
25°	1533.8	1398.0	1262.3	1186.2	1110.1	1074.2	1038.3	1026.8	1015.2	1001.8	988.4
27.5°	1419.3	1290.3	1161.3	1100.4	1039.5	1010.3	981.1	966.5	951.9	940.9	930.0
30°	1318.3	1199.0	1079.7	1029.2	978.7	953.1	927.6	911.7	895.9	885.6	875.2
32.5°	1220.9	1115.0	1009.1	965.9	922.7	897.7	872.8	857.6	842.4	830.2	818.0
35°	1130.8	1038.9	947.0	907.5	867.9	843.0	818.0	802.8	787.6	775.4	763.2
37.5°	1051.7	968.3	885.0	847.8	810.7	788.8	766.9	751.1	735.2	722.4	709.7
40°	977.5	903.8	830.2	794.3	758.4	734.6	710.9	696.9	682.9	671.3	659.8
42.5°	911.7	844.2	776.6	741.3	706.0	683.5	661.0	644.5	628.1	621.4	614.7
45°	842.4	782.7	723.1	689.0	654.9	631.2	607.4	593.4	579.4	573.3	567.2
47.5°	781.5	726.1	670.7	637.2	603.8	582.5	561.2	550.2	539.3	530.7	522.2
50°	721.8	668.3	614.7	582.5	550.2	531.9	513.7	500.3	486.9	480.8	474.7
52.5°	664.6	615.9	567.2	534.4	501.5	483.9	466.2	454.7	443.1	430.3	417.5
55°	600.1	557.5	514.9	485.7	456.5	438.2	420.0	406.6	393.2	379.8	366.4
57.5°	546.6	504.6	462.6	436.4	410.2	392.6	374.9	360.3	345.7	334.7	323.8
60°	488.1	451.6	415.1	389.5	364.0	346.9	329.9	315.9	301.9	296.4	290.9
62.5°	433.3	399.3	365.2	342.7	320.1	303.7	287.3	278.1	269.0	265.4	261.7
65°	377.4	348.1	318.9	298.2	277.5	263.5	249.5	245.3	241.0	238.0	234.9
67.5°	325.0	300.1	275.1	256.8	238.6	228.8	219.1	214.2	209.4	205.7	202.1
70°	277.5	255.6	233.7	217.9	202.1	192.9	183.8	179.5	175.3	168.6	161.9
72.5°	226.4	209.4	192.3	180.2	168.0	160.1	152.2	143.6	135.1	129.0	122.9
75°	187.5	170.4	153.4	141.8	130.2	121.1	112.0	108.9	105.9	104.1	102.3
77.5°	143.6	129.0	114.4	105.3	96.2	91.9	87.6	85.8	84.0	83.4	82.8
80°	103.5	91.3	79.1	74.3	69.4	68.2	66.9	65.7	64.5	63.9	63.3
82.5°	64.5	58.4	52.3	51.1	49.9	49.3	48.7	48.1	47.5	46.9	46.3
85°	37.7	35.3	32.9	32.3	31.6	31.0	30.4	30.4	30.4	30.4	30.4
87.5°	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.2	14.6
90°	9.1	11.5	14.1	16.8	19.4	22.1	22.9	23.7	24.5	25.4	26.0
92.5°	32.5	33.7	35.0	36.2	37.4	38.7	39.3	39.9	40.5	41.1	41.2
95°	60.0	61.6	63.2	64.8	66.5	68.1	68.9	69.7	70.6	71.4	71.8
97.5°	93.4	94.5	95.7	97.0	98.2	99.4	100.4	101.5	102.5	103.5	103.9
100°	130.1	131.2	132.2	133.3	134.3	135.3	135.9	136.5	137.1	137.8	138.3
102.5°	169.1	170.1	171.5	172.9	174.4	175.8	176.4	177.0	177.6	178.3	178.5
105°	208.7	209.9	211.7	213.5	215.4	217.2	217.2	217.2	217.2	217.2	217.4
107.5°	255.8	256.3	257.1	257.9	258.7	259.6	260.2	260.8	261.4	262.0	262.2
110°	300.8	301.2	301.6	302.0	302.4	302.8	303.6	304.5	305.3	306.1	306.3



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	346.0	346.1	346.1	346.1	346.1	346.1	347.1	348.1	349.1	350.2	350.7
115°	393.6	393.7	393.3	392.9	392.5	392.1	392.3	392.5	392.7	392.9	392.9
117.5°	438.9	438.8	438.4	438.0	437.6	437.2	437.2	437.2	437.2	437.2	436.9
120°	486.3	486.4	485.4	484.3	483.3	482.3	482.1	481.9	481.7	481.5	481.2
122.5°	529.8	530.0	529.5	529.1	528.7	528.3	527.7	527.1	526.5	525.9	525.3
125°	575.0	575.1	574.6	574.2	573.8	573.4	572.6	571.8	571.0	570.1	569.3
127.5°	619.7	620.2	619.7	619.3	618.9	618.5	617.3	616.1	614.8	613.6	612.6
130°	663.7	664.2	663.6	663.0	662.4	661.8	661.0	660.1	659.3	658.5	657.4
132.5°	706.1	706.7	706.3	705.9	705.5	705.0	704.0	703.0	702.0	701.0	699.9
135°	747.7	748.2	748.0	747.8	747.6	747.4	746.6	745.7	744.9	744.1	743.5
137.5°	786.4	787.3	787.9	788.5	789.1	789.7	788.7	787.7	786.7	785.6	784.8
140°	827.9	828.5	828.7	828.9	829.1	829.3	829.1	828.9	828.7	828.5	827.7
142.5°	865.6	866.3	866.7	867.1	867.5	868.0	867.8	867.5	867.3	867.1	866.5
145°	902.7	903.2	903.9	904.5	905.1	905.7	905.5	905.3	905.1	904.9	904.4
147.5°	938.4	939.1	939.7	940.4	941.0	941.6	941.6	941.6	941.6	941.6	941.0
150°	972.7	973.1	973.5	973.9	974.3	974.7	974.7	974.7	974.7	974.7	974.1
152.5°	1003.0	1003.4	1003.6	1003.8	1004.0	1004.2	1004.6	1005.0	1005.4	1005.8	1005.5
155°	1031.8	1031.9	1032.1	1032.3	1032.5	1032.7	1033.5	1034.3	1035.2	1036.0	1035.7
157.5°	1057.7	1057.7	1057.9	1058.1	1058.3	1058.5	1059.3	1060.1	1060.9	1061.8	1061.6
160°	1081.7	1081.5	1081.5	1081.5	1081.5	1081.5	1082.5	1083.5	1084.6	1085.6	1085.7
162.5°	1103.0	1102.8	1103.0	1103.2	1103.4	1103.6	1104.6	1105.6	1106.7	1107.7	1107.5
165°	1121.4	1121.1	1121.1	1121.1	1121.1	1121.1	1122.3	1123.5	1124.8	1126.0	1125.9
167.5°	1136.2	1135.9	1136.1	1136.3	1136.5	1136.7	1137.9	1139.2	1140.4	1141.6	1141.6
170°	1149.1	1148.7	1148.7	1148.7	1148.7	1148.7	1150.1	1151.5	1153.0	1154.4	1154.4
172.5°	1159.2	1158.8	1158.8	1158.8	1158.8	1158.8	1160.0	1161.3	1162.5	1163.7	1163.6
175°	1165.7	1165.3	1165.3	1165.3	1165.3	1165.3	1166.5	1167.7	1168.9	1170.2	1170.1
177.5°	1169.3	1168.9	1168.9	1168.9	1168.9	1168.9	1170.2	1171.4	1172.6	1173.8	1173.7
180°	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7	1171.7



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2968.9	2968.9	2968.9	2968.9
2.5°	2637.8	2631.7	2629.3	2626.9
5°	2261.1	2242.2	2237.9	2233.7
7.5°	1940.9	1933.0	1906.9	1880.7
10°	1681.0	1656.7	1645.7	1634.8
12.5°	1463.8	1441.2	1437.6	1433.9
15°	1295.2	1279.3	1273.9	1268.4
17.5°	1184.4	1173.4	1166.8	1160.1
20°	1102.2	1094.3	1089.5	1084.6
22.5°	1039.5	1033.5	1029.8	1026.2
25°	979.3	970.2	967.1	964.1
27.5°	922.1	914.2	911.1	908.1
30°	868.5	861.8	857.6	853.3
32.5°	810.1	802.2	799.7	797.3
35°	758.4	753.5	751.1	748.6
37.5°	703.6	697.5	693.8	690.2
40°	656.7	653.7	651.8	650.0
42.5°	609.2	603.8	603.2	602.5
45°	561.8	556.3	555.1	553.9
47.5°	517.3	512.5	511.9	511.3
50°	468.0	461.3	456.5	451.6
52.5°	411.4	405.4	401.1	396.8
55°	359.7	353.0	349.4	345.7
57.5°	320.8	317.7	315.9	314.1
60°	289.1	287.3	286.1	284.8
62.5°	259.9	258.1	258.1	258.1
65°	233.1	231.3	229.5	227.6
67.5°	198.4	194.8	194.2	193.5
70°	156.4	150.9	150.3	149.7
72.5°	122.3	121.7	120.5	119.3
75°	101.0	99.8	99.8	99.8
77.5°	81.6	80.3	80.3	80.3
80°	62.7	62.1	62.7	63.3
82.5°	46.3	46.3	45.6	45.0
85°	29.8	29.2	29.2	29.2
87.5°	14.6	14.6	14.6	14.6
90°	26.4	26.8	27.2	27.6
92.5°	40.8	40.4	40.0	39.6
95°	71.8	71.8	71.8	71.8
97.5°	103.7	103.5	103.3	103.1
100°	138.7	139.1	139.5	139.9
102.5°	178.3	178.1	177.8	177.6
105°	217.8	218.2	218.7	219.1
107.5°	262.0	261.8	261.6	261.4
110°	305.9	305.5	305.1	304.7



TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	350.7	350.7	350.7	350.7
115°	392.7	392.5	392.3	392.1
117.5°	436.3	435.7	435.1	434.4
120°	480.8	480.4	479.9	479.5
122.5°	524.6	524.0	523.4	522.8
125°	568.5	567.7	566.9	566.1
127.5°	611.8	611.0	610.1	609.3
130°	656.0	654.5	653.1	651.7
132.5°	698.9	697.9	696.9	695.8
135°	743.1	742.7	742.3	741.9
137.5°	784.2	783.6	783.0	782.4
140°	826.2	824.8	823.4	821.9
142.5°	865.5	864.5	863.5	862.4
145°	903.5	902.7	901.9	901.1
147.5°	939.7	938.5	937.3	936.1
150°	972.9	971.7	970.4	969.2
152.5°	1004.5	1003.5	1002.4	1001.4
155°	1034.2	1032.8	1031.4	1030.0
157.5°	1060.3	1059.1	1057.9	1056.6
160°	1084.9	1084.1	1083.2	1082.4
162.5°	1106.0	1104.6	1103.2	1101.7
165°	1124.4	1123.0	1121.6	1120.2
167.5°	1140.4	1139.2	1137.9	1136.7
170°	1153.0	1151.5	1150.1	1148.7
172.5°	1162.2	1160.8	1159.3	1157.9
175°	1168.6	1167.2	1165.8	1164.3
177.5°	1172.3	1170.9	1169.4	1168.0
180°	1171.7	1171.7	1171.7	1171.7

TEST NUMBER: P831940

CATALOG NUMBER: S123RDIP-S1165D1195U927-4F0-1E-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	13.22	14.07	14.15	15.01	16.21	17.89	18.73	18.82	19.67	20.88
	3H	14.45	15.20	15.39	16.15	17.38	19.39	20.14	20.33	21.09	22.32
	4H	14.83	15.54	15.78	16.49	17.73	19.88	20.59	20.83	21.54	22.78
	6H	15.11	15.77	16.08	16.72	17.97	20.19	20.85	21.16	21.80	23.06
	8H	15.20	15.82	16.17	16.80	18.04	20.27	20.90	21.24	21.87	23.12
	12H	15.25	15.84	16.23	16.81	18.08	20.30	20.90	21.28	21.86	23.14
4H	2H	13.95	14.66	14.91	15.61	16.85	17.89	18.60	18.84	19.55	20.79
	3H	15.32	15.91	16.29	16.89	18.14	19.54	20.14	20.51	21.12	22.37
	4H	15.78	16.32	16.75	17.29	18.57	20.15	20.69	21.13	21.67	22.94
	6H	16.14	16.61	17.13	17.61	18.88	20.59	21.05	21.58	22.05	23.33
	8H	16.27	16.70	17.26	17.69	18.98	20.72	21.16	21.71	22.15	23.44
	12H	16.35	16.74	17.35	17.74	19.04	20.78	21.17	21.79	22.18	23.48
8H	4H	16.09	16.52	17.08	17.51	18.80	20.12	20.55	21.11	21.54	22.83
	6H	16.56	16.91	17.57	17.95	19.23	20.62	20.97	21.63	22.01	23.29
	8H	16.75	17.06	17.77	18.08	19.39	20.80	21.12	21.83	22.14	23.44
	12H	16.89	17.17	17.92	18.18	19.53	20.92	21.20	21.95	22.21	23.56
12H	4H	16.10	16.49	17.11	17.50	18.79	20.07	20.46	21.08	21.47	22.76
	6H	16.61	16.93	17.64	17.95	19.26	20.59	20.91	21.61	21.93	23.23
	8H	16.83	17.11	17.86	18.12	19.48	20.79	21.06	21.81	22.08	23.43