

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: P831284

Luminaire Tested: S123DIP-S1165D585U940-4F0-1E-UDD-G4

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831284
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-17)
Test Lab: INNOVATION CENTER
Issue Date: 05/03/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DIP-S1165D585U940-4F0-1E-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

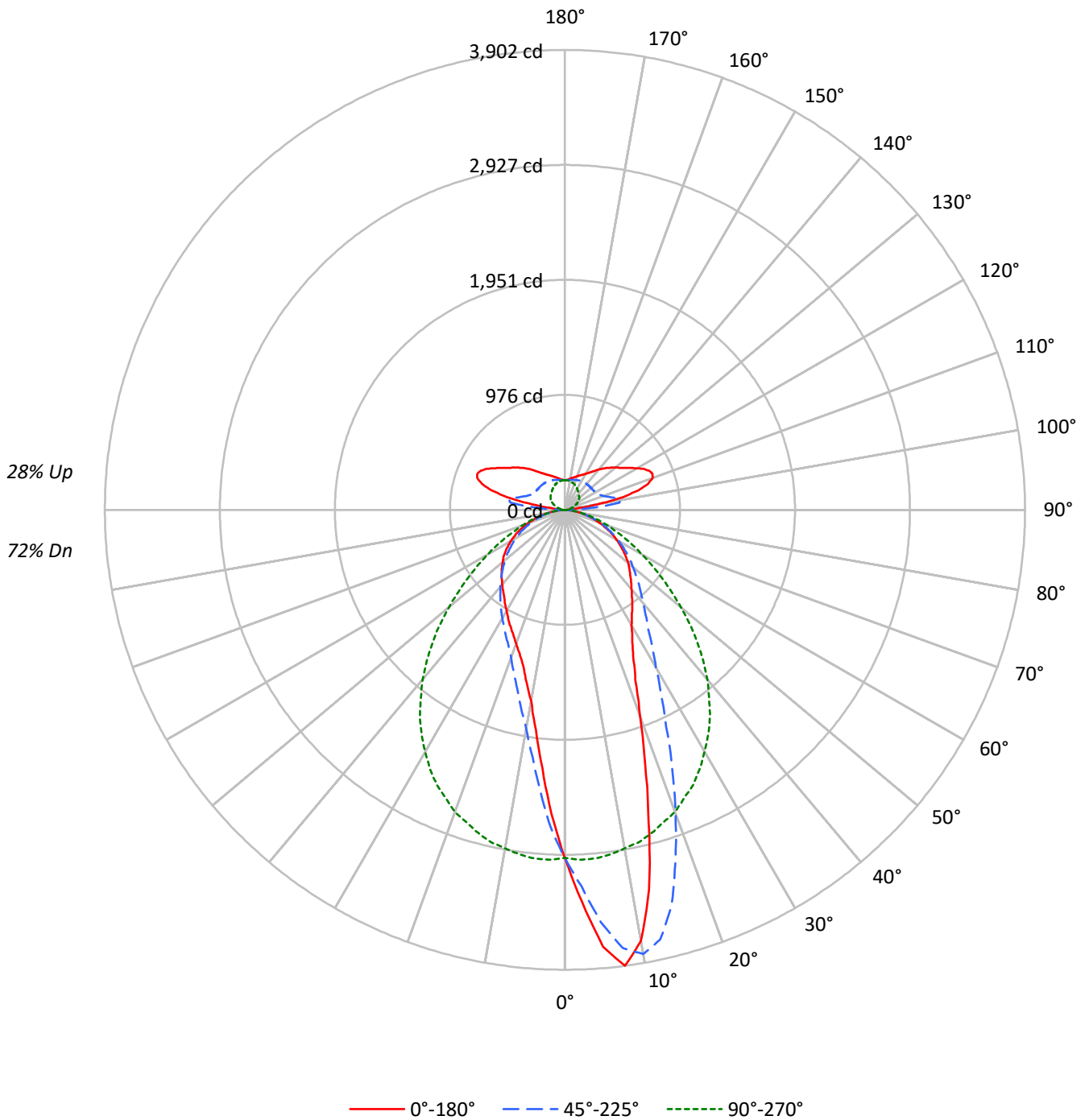
Lumens per Lamp: N/A
Luminaire Lumens: 6639.3 lumens
Efficiency: N/A
Efficacy: 115.7 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

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

TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

Luminous Intensity Polar Plot





TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

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	85	85	85	76	76	76	72				72
1	103	99	95	92	98	94	91	88	85	82	80	76	74	73	68	67	66	62				62
2	95	88	82	77	90	83	78	73	75	71	68	68	65	62	61	59	56	53				53
3	87	78	71	65	82	74	68	63	67	62	58	61	57	53	55	52	49	46				46
4	80	70	62	56	76	66	59	54	61	55	50	55	50	47	50	46	43	40				40
5	74	63	55	49	70	60	53	47	55	49	44	50	45	41	45	42	38	36				36
6	69	57	49	43	65	55	47	42	50	44	39	46	41	37	42	38	34	32				32
7	64	52	44	39	61	50	43	38	46	40	35	42	37	33	38	34	31	29				29
8	60	48	40	35	57	46	39	34	42	36	32	39	34	30	36	32	28	26				26
9	56	44	37	32	53	42	35	31	39	33	29	36	31	28	33	29	26	24				24
10	53	41	34	29	50	39	33	28	36	31	27	34	29	25	31	27	24	22				22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	31792	31792	31792	31792	31792
5°	40207	37948	32076	25849	23754
10°	40596	41825	31863	20605	18006
15°	30577	38832	31646	17450	15228
20°	21305	31423	31242	15260	13832
25°	16245	24164	30553	14039	12973
30°	14054	19198	29453	13176	12282
35°	13039	16209	28185	12553	11796
40°	12344	14540	26402	11959	11632
45°	11934	13457	24138	11496	11558
50°	11729	12599	21460	11074	11499
55°	11292	11973	18828	10674	11549
60°	10887	11300	16228	10297	11360
65°	10229	10664	13998	9897	11135
70°	9448	9857	11906	9231	10480
75°	8551	8833	10202	8580	9578
80°	7054	7730	8071	7476	8071
85°	5582	6262	5928	6348	6434

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 27560 cd/sqm



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	279.2	4.2
10°-20°	694.7	10.5
20°-30°	822.5	12.4
30°-40°	827.0	12.5
40°-50°	758.8	11.4
50°-60°	626.3	9.4
60°-70°	443.0	6.7
70°-80°	236.5	3.6
80°-90°	61.4	0.9
90°-100°	136.3	2.1
100°-110°	399.2	6.0
110°-120°	389.8	5.9
120°-130°	310.4	4.7
130°-140°	244.9	3.7
140°-150°	182.7	2.8
150°-160°	127.4	1.9
160°-170°	74.8	1.1
170°-180°	24.3	0.4
0°-30°	1796.4	27.1
0°-40°	2623.4	39.5
0°-60°	4008.4	60.4
0°-90°	4749.3	71.5
90°-120°	925.3	13.9
90°-150°	1663.4	25.1
90°-180°	1890.0	28.5
0°-180°	6639.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2954	2954	2954	2954	2954	
5°	3721	3512	2969	2392	2198	355
15°	2744	3485	2840	1566	1366	758
25°	1368	2035	2572	1182	1092	646
35°	992	1234	2145	955	898	624
45°	784	884	1586	755	759	607
55°	602	638	1003	569	615	538
65°	402	419	550	389	437	399
75°	206	212	245	206	230	216
85°	45	51	48	51	52	50
90°	15	13	1	13	15	11
95°	59	302	17	302	59	96
105°	647	409	59	409	647	645
115°	787	313	104	313	787	767
125°	620	292	145	292	620	562
135°	503	288	170	288	503	390
145°	393	284	194	284	393	250
155°	326	275	220	275	326	152
165°	284	264	241	264	284	81
175°	256	253	251	253	256	25
180°	251	251	251	251	251	



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6
2.5°	3329.1	3325.7	3322.2	3305.1	3288.0	3279.8	3271.5	3246.9	3222.2	3194.8	3167.4
5°	3721.1	3730.7	3740.3	3729.3	3718.3	3684.8	3651.2	3606.6	3562.1	3512.1	3462.0
7.5°	3902.0	3907.5	3913.0	3906.1	3899.2	3890.3	3881.4	3841.7	3801.9	3750.5	3699.1
10°	3714.2	3726.6	3738.9	3765.6	3792.3	3822.5	3852.6	3847.2	3841.7	3826.6	3811.5
12.5°	3301.7	3316.8	3331.8	3385.3	3438.7	3507.3	3575.8	3634.7	3693.7	3734.8	3775.9
15°	2743.9	2785.7	2827.5	2876.1	2924.8	3025.5	3126.3	3250.3	3374.3	3484.7	3595.0
17.5°	2260.1	2275.8	2291.6	2343.7	2395.7	2522.5	2649.3	2792.5	2935.7	3118.7	3301.7
20°	1859.9	1874.2	1888.6	1957.2	2025.7	2125.1	2224.4	2385.5	2546.5	2743.2	2939.9
22.5°	1562.4	1585.1	1607.7	1646.0	1684.4	1779.7	1874.9	2018.2	2161.4	2378.6	2595.8
25°	1367.8	1384.3	1400.7	1424.0	1447.3	1523.4	1599.4	1717.3	1835.2	2034.6	2234.0
27.5°	1234.9	1241.7	1248.6	1271.9	1295.2	1344.5	1393.9	1495.3	1596.7	1766.0	1935.2
30°	1130.7	1135.5	1140.3	1160.9	1181.4	1215.0	1248.6	1321.9	1395.2	1544.6	1694.0
32.5°	1058.1	1061.5	1064.9	1080.7	1096.4	1120.4	1144.4	1197.9	1251.3	1374.7	1498.0
35°	992.3	994.3	996.4	1008.0	1019.7	1037.5	1055.3	1095.8	1136.2	1233.5	1330.8
37.5°	934.7	937.5	940.2	947.1	953.9	969.7	985.4	1017.6	1049.9	1124.5	1199.2
40°	878.5	883.3	888.1	892.9	897.7	910.7	923.8	948.4	973.1	1034.8	1096.4
42.5°	830.6	835.4	840.2	842.2	844.3	851.8	859.3	882.0	904.6	950.5	996.4
45°	784.0	786.0	788.1	790.1	792.2	798.4	804.5	824.4	844.3	884.0	923.8
47.5°	741.5	741.5	741.5	742.8	744.2	749.7	755.2	769.6	784.0	814.8	845.6
50°	700.4	700.4	700.4	698.3	696.2	699.7	703.1	714.1	725.0	752.4	779.8
52.5°	651.0	651.0	651.0	651.7	652.4	652.4	652.4	662.0	671.6	696.2	720.9
55°	601.7	604.4	607.2	605.1	603.0	604.4	605.8	612.0	618.1	638.0	657.9
57.5°	552.3	553.7	555.1	554.4	553.7	554.4	555.1	560.6	566.0	581.1	596.2
60°	505.7	505.7	505.7	504.4	503.0	504.4	505.7	508.5	511.2	524.9	538.6
62.5°	453.7	454.3	455.0	455.7	456.4	455.0	453.7	457.1	460.5	470.8	481.1
65°	401.6	402.3	402.9	405.0	407.1	405.7	404.3	407.7	411.2	418.7	426.2
67.5°	355.0	353.6	352.2	352.9	353.6	355.7	357.7	358.4	359.1	367.3	375.5
70°	300.2	301.5	302.9	302.2	301.5	302.2	302.9	305.0	307.0	313.2	319.3
72.5°	250.8	251.5	252.2	252.2	252.2	253.6	254.9	257.0	259.0	262.5	265.9
75°	205.6	205.6	205.6	207.0	208.3	209.0	209.7	209.7	209.7	212.4	215.2
77.5°	156.2	159.7	163.1	162.4	161.7	163.1	164.5	166.5	168.6	169.9	171.3
80°	113.8	113.8	113.8	114.4	115.1	117.2	119.2	120.6	122.0	124.7	127.5
82.5°	72.6	73.3	74.0	76.1	78.1	79.5	80.9	82.9	85.0	85.0	85.0
85°	45.2	43.9	42.5	43.9	45.2	46.6	48.0	48.7	49.3	50.7	52.1
87.5°	21.9	21.9	21.9	21.9	21.9	22.6	23.3	23.3	23.3	23.3	23.3
90°	14.7	15.3	14.7	14.2	14.7	13.7	13.2	12.7	12.2	12.7	11.2
92.5°	27.0	28.0	27.5	29.5	30.5	34.1	39.2	50.4	70.7	94.6	104.8
95°	59.0	61.0	64.6	69.2	78.8	97.1	124.1	183.1	244.6	301.6	268.5
97.5°	121.0	126.6	138.9	158.2	192.3	250.2	317.4	420.6	479.6	463.9	346.4
100°	318.9	318.4	338.2	375.4	426.7	498.9	558.5	599.6	581.8	481.7	325.5
102.5°	505.0	519.8	535.6	563.0	600.2	639.3	667.8	659.2	586.9	448.6	295.0
105°	646.9	649.5	665.8	685.1	708.5	721.7	712.1	661.2	554.9	408.9	271.1
107.5°	739.5	745.1	751.7	760.9	763.9	750.2	710.5	630.7	509.1	373.8	253.8
110°	792.4	793.4	794.4	790.4	776.1	740.5	676.4	582.9	466.4	344.8	244.6



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	803.1	802.6	797.5	782.7	753.8	705.4	631.7	535.6	429.3	325.5	239.6
115°	786.8	784.3	774.1	751.7	713.6	658.1	583.4	494.9	400.8	312.8	239.0
117.5°	751.2	747.7	732.4	707.5	667.8	610.3	541.7	463.3	382.0	304.1	239.6
120°	704.4	701.4	689.2	660.7	620.5	569.1	508.1	439.4	367.7	298.6	241.6
122.5°	660.7	656.6	642.9	618.0	583.4	536.6	481.1	420.6	356.0	295.0	245.1
125°	620.5	616.9	604.2	581.8	549.3	508.6	459.8	404.3	346.4	291.9	248.7
127.5°	585.9	582.9	571.2	551.8	522.3	484.7	439.9	389.6	337.2	290.4	252.8
130°	557.4	553.4	542.7	524.4	497.4	462.8	421.6	375.9	330.1	288.9	256.8
132.5°	529.5	526.9	517.8	499.5	474.5	442.0	404.3	363.1	323.5	288.4	259.9
135°	503.0	499.5	490.3	475.0	450.1	421.1	388.1	352.0	317.9	287.9	263.0
137.5°	475.0	472.0	464.4	448.6	427.2	401.3	371.8	341.3	312.8	286.9	265.0
140°	445.5	446.0	437.9	423.7	404.3	382.5	358.1	332.1	308.2	286.3	267.0
142.5°	418.1	418.6	411.5	399.3	383.5	365.2	344.8	323.5	304.1	285.3	268.5
145°	393.2	392.1	388.1	377.4	364.7	349.9	333.6	316.9	300.6	284.3	269.1
147.5°	371.8	371.3	367.2	359.6	349.4	338.7	325.0	311.3	297.0	282.8	269.1
150°	353.5	353.5	350.4	344.8	337.2	327.5	316.9	305.2	293.5	280.8	269.1
152.5°	338.2	338.2	336.7	331.6	326.0	318.4	309.2	299.6	289.4	278.2	267.5
155°	326.0	325.5	324.5	320.4	315.8	309.7	302.1	294.0	285.3	275.2	266.5
157.5°	314.3	314.3	313.3	310.3	306.2	301.1	295.0	287.9	280.8	272.6	265.0
160°	303.1	303.6	303.6	300.6	297.0	293.5	288.4	282.8	276.2	269.6	264.0
162.5°	293.0	293.5	293.5	290.9	288.9	285.8	281.3	276.7	271.6	266.5	261.9
165°	284.3	284.3	284.8	282.8	280.8	278.2	274.6	271.6	267.5	263.5	259.9
167.5°	275.7	275.7	276.2	274.6	273.6	271.6	269.6	267.0	263.5	260.4	257.9
170°	268.0	268.0	268.5	267.5	267.0	266.0	264.0	262.4	259.9	257.4	255.8
172.5°	260.9	261.4	262.4	261.4	261.4	260.9	259.4	258.4	256.3	254.8	254.3
175°	255.8	256.3	256.8	256.3	256.3	256.3	255.3	254.8	253.8	252.8	252.8
177.5°	252.3	252.3	253.3	252.8	253.3	253.3	252.8	252.3	251.8	251.3	251.8
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6
2.5°	3159.1	3150.9	3120.8	3090.6	3056.4	3022.1	2996.7	2971.4	2933.7	2896.0	2865.2
5°	3423.7	3385.3	3321.6	3257.8	3171.5	3085.1	3026.9	2968.6	2890.5	2812.4	2750.0
7.5°	3633.4	3567.6	3478.5	3389.4	3276.3	3163.3	3056.4	2949.4	2830.2	2711.0	2613.7
10°	3767.0	3722.4	3619.7	3516.9	3365.4	3214.0	3064.6	2915.2	2761.7	2608.2	2479.3
12.5°	3780.0	3784.1	3689.6	3595.0	3423.7	3252.3	3070.7	2889.1	2695.9	2502.6	2352.6
15°	3665.6	3736.2	3684.1	3632.0	3459.3	3286.6	3063.2	2839.8	2617.1	2394.4	2221.0
17.5°	3453.1	3604.6	3612.1	3619.7	3447.0	3274.3	3026.9	2779.5	2527.3	2275.1	2092.8
20°	3163.3	3386.7	3463.4	3540.2	3399.7	3259.2	2993.3	2727.4	2445.1	2162.7	1971.6
22.5°	2867.2	3138.6	3279.1	3419.6	3315.4	3211.2	2928.2	2645.2	2347.1	2049.0	1855.1
25°	2530.1	2826.1	3042.0	3257.8	3194.1	3130.4	2851.5	2572.5	2255.3	1938.0	1739.9
27.5°	2236.1	2536.9	2797.3	3057.7	3044.0	3030.3	2753.5	2476.6	2151.8	1827.0	1635.8
30°	1974.3	2254.6	2545.8	2837.1	2870.6	2904.2	2637.0	2369.7	2044.2	1718.7	1534.3
32.5°	1742.7	1987.3	2299.8	2612.3	2678.1	2743.9	2502.6	2261.4	1939.3	1617.3	1439.8
35°	1552.8	1774.9	2087.4	2399.9	2482.1	2564.3	2354.6	2144.9	1831.1	1517.2	1347.9
37.5°	1385.0	1570.7	1875.6	2180.6	2281.3	2382.0	2194.3	2006.5	1712.5	1418.5	1263.0
40°	1245.8	1395.2	1675.5	1955.8	2072.3	2188.8	2033.9	1879.0	1600.1	1321.2	1178.0
42.5°	1129.3	1262.3	1516.5	1770.8	1882.5	1994.2	1863.3	1732.4	1484.3	1236.2	1105.4
45°	1030.0	1136.2	1367.1	1598.1	1704.3	1810.5	1698.1	1585.7	1367.1	1148.5	1026.6
47.5°	936.8	1027.9	1225.3	1422.6	1517.2	1611.8	1524.1	1436.3	1251.3	1066.3	956.0
50°	853.2	926.5	1099.2	1271.9	1354.1	1436.3	1358.9	1281.5	1129.3	977.2	881.3
52.5°	780.5	840.2	984.7	1129.3	1199.9	1270.5	1204.0	1137.6	1017.0	896.3	812.7
55°	708.6	759.3	884.7	1010.1	1058.1	1106.0	1054.6	1003.3	905.9	808.6	738.0
57.5°	641.4	686.7	789.4	892.2	929.2	966.2	919.6	873.0	799.7	726.4	667.5
60°	575.6	612.6	698.3	784.0	806.6	829.2	791.5	753.8	702.4	651.0	598.3
62.5°	514.6	548.2	612.0	675.7	690.8	705.8	677.1	648.3	609.2	570.2	529.0
65°	451.6	477.0	529.0	581.1	590.7	600.3	575.0	549.6	520.1	490.7	460.5
67.5°	393.4	411.2	453.7	496.1	496.8	497.5	477.0	456.4	440.0	423.5	399.5
70°	336.5	353.6	381.7	409.8	410.5	411.2	394.7	378.3	365.9	353.6	335.8
72.5°	278.2	290.6	311.8	333.0	331.7	330.3	320.0	309.7	300.2	290.6	277.5
75°	225.5	235.7	250.1	264.5	260.4	256.3	250.8	245.3	237.1	228.9	220.7
77.5°	177.5	183.7	191.9	200.1	197.4	194.6	189.8	185.0	178.9	172.7	169.3
80°	130.2	132.9	138.4	143.9	142.5	141.2	135.7	130.2	128.8	127.5	122.7
82.5°	88.4	91.8	93.2	94.6	93.9	93.2	89.1	85.0	83.6	82.2	81.5
85°	52.8	53.5	54.1	54.8	52.8	50.7	49.3	48.0	48.0	48.0	47.3
87.5°	24.0	24.7	24.7	24.7	24.0	23.3	21.9	20.6	21.2	21.9	21.9
90°	9.7	8.1	6.6	5.6	4.6	3.1	2.0	1.0	2.0	3.1	4.6
92.5°	78.3	51.4	35.1	25.9	20.9	16.3	11.2	7.6	11.2	16.3	20.9
95°	185.1	109.4	66.1	46.3	33.1	24.4	18.8	17.3	18.8	24.4	33.1
97.5°	206.0	118.0	75.3	53.4	40.2	32.6	28.0	27.5	28.0	32.6	40.2
100°	191.7	116.5	80.9	61.0	48.8	41.7	38.1	37.6	38.1	41.7	48.8
102.5°	179.5	118.5	87.5	69.7	59.0	52.4	49.3	48.3	49.3	52.4	59.0
105°	175.0	122.6	95.1	79.3	69.7	63.6	60.5	59.0	60.5	63.6	69.7
107.5°	173.9	129.2	104.8	90.0	80.9	74.8	71.7	70.2	71.7	74.8	80.9
110°	176.5	137.8	114.9	100.7	92.1	86.5	83.9	82.4	83.9	86.5	92.1



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	181.6	146.5	125.6	111.9	103.2	97.7	95.1	93.6	95.1	97.7	103.2
115°	187.2	156.1	136.8	123.1	114.4	109.4	106.3	104.3	106.3	109.4	114.4
117.5°	194.3	166.3	147.0	134.3	124.6	120.0	117.5	114.9	117.5	120.0	124.6
120°	202.4	176.0	157.7	145.0	135.3	130.2	127.7	126.1	127.7	130.2	135.3
122.5°	210.1	186.2	168.3	154.6	145.5	139.9	137.3	135.8	137.3	139.9	145.5
125°	218.2	195.8	178.0	164.3	154.6	149.0	146.0	145.0	146.0	149.0	154.6
127.5°	224.8	204.5	187.2	173.4	162.8	157.2	153.6	152.1	153.6	157.2	162.8
130°	231.4	212.1	195.3	181.6	170.9	164.8	160.2	158.7	160.2	164.8	170.9
132.5°	237.5	218.7	202.4	189.2	178.5	170.9	165.8	163.8	165.8	170.9	178.5
135°	242.6	225.3	209.5	195.8	185.1	177.5	171.9	169.9	171.9	177.5	185.1
137.5°	246.7	229.9	214.6	201.9	191.2	183.1	177.5	175.5	177.5	183.1	191.2
140°	249.7	234.5	219.7	207.0	196.8	188.7	183.6	181.1	183.6	188.7	196.8
142.5°	252.8	238.0	223.8	212.1	201.9	194.8	189.2	187.2	189.2	194.8	201.9
145°	254.8	241.1	227.9	216.2	207.5	199.9	195.3	193.8	195.3	199.9	207.5
147.5°	256.3	243.6	231.4	221.2	212.6	206.0	201.4	200.4	201.4	206.0	212.6
150°	256.8	246.2	234.5	225.3	218.2	211.6	207.5	207.0	207.5	211.6	218.2
152.5°	257.9	247.7	238.0	229.4	223.3	217.7	213.6	213.6	213.6	217.7	223.3
155°	257.9	249.7	241.1	234.0	228.4	223.3	220.2	220.2	220.2	223.3	228.4
157.5°	258.4	250.7	243.6	238.0	232.9	228.4	225.8	225.3	225.8	228.4	232.9
160°	258.4	252.3	246.2	241.1	237.5	233.5	231.4	231.4	231.4	233.5	237.5
162.5°	257.9	252.8	247.7	243.6	240.6	237.5	236.0	236.0	236.0	237.5	240.6
165°	256.8	253.3	249.2	245.7	243.6	241.1	240.1	240.6	240.1	241.1	243.6
167.5°	256.3	253.3	250.2	247.7	246.2	244.1	243.6	244.1	243.6	244.1	246.2
170°	254.8	252.8	250.2	249.2	248.2	246.7	246.2	247.2	246.2	246.7	248.2
172.5°	254.3	252.8	250.7	250.2	249.7	248.7	248.7	249.2	248.7	248.7	249.7
175°	253.3	252.3	251.3	250.7	250.7	249.7	250.2	250.7	250.2	249.7	250.7
177.5°	252.8	251.8	251.3	251.3	251.3	250.7	251.3	251.8	251.3	250.7	251.3
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6	2953.6
2.5°	2834.3	2807.6	2780.9	2760.3	2739.8	2704.8	2669.9	2661.6	2653.4	2641.8	2630.1
5°	2687.7	2621.9	2556.1	2497.2	2438.2	2392.3	2346.4	2316.2	2286.1	2264.2	2242.2
7.5°	2516.4	2417.7	2319.0	2249.1	2179.2	2112.7	2046.2	2025.0	2003.8	1975.0	1946.2
10°	2350.5	2241.6	2132.6	2041.5	1950.3	1885.2	1820.1	1794.1	1768.0	1731.7	1695.4
12.5°	2202.5	2083.3	1964.0	1872.2	1780.4	1717.3	1654.3	1616.6	1578.9	1558.3	1537.8
15°	2047.6	1920.2	1792.7	1707.7	1622.7	1565.9	1509.0	1476.1	1443.2	1423.3	1403.5
17.5°	1910.6	1784.5	1658.4	1576.8	1495.3	1443.2	1391.1	1362.3	1333.6	1318.5	1303.4
20°	1780.4	1657.0	1533.7	1454.2	1374.7	1332.2	1289.7	1271.2	1252.7	1240.4	1228.0
22.5°	1661.1	1539.8	1418.5	1350.7	1282.8	1248.6	1214.3	1201.3	1188.3	1178.0	1167.7
25°	1541.9	1433.6	1325.3	1267.8	1210.2	1182.1	1154.0	1141.0	1128.0	1117.7	1107.4
27.5°	1444.6	1341.1	1237.6	1188.3	1138.9	1117.0	1095.1	1084.8	1074.5	1064.9	1055.3
30°	1350.0	1257.5	1165.0	1122.5	1080.0	1060.1	1040.3	1030.0	1019.7	1010.8	1001.9
32.5°	1262.3	1182.8	1103.3	1064.2	1025.2	1008.7	992.3	980.0	967.6	960.8	953.9
35°	1178.7	1107.4	1036.1	1003.9	971.7	955.3	938.8	928.6	918.3	912.8	907.3
37.5°	1107.4	1043.7	980.0	949.1	918.3	902.5	886.8	877.8	868.9	866.9	864.8
40°	1034.8	980.0	925.1	895.0	864.8	851.1	837.4	831.9	826.4	825.1	823.7
42.5°	974.5	921.0	867.6	840.2	812.7	801.1	789.4	786.7	784.0	786.0	788.1
45°	904.6	860.0	815.5	790.1	764.8	755.2	745.6	743.5	741.5	745.6	749.7
47.5°	845.6	804.5	763.4	739.4	715.4	708.6	701.7	701.0	700.4	705.8	711.3
50°	785.3	745.6	705.8	686.7	667.5	661.3	655.1	657.2	659.2	668.1	677.1
52.5°	729.1	692.1	655.1	637.3	619.5	615.4	611.3	616.1	620.9	630.5	640.1
55°	667.5	633.9	600.3	586.6	572.9	568.8	564.7	574.3	583.9	592.8	601.7
57.5°	608.5	579.1	549.6	537.3	524.9	524.2	523.6	532.5	541.4	551.0	560.6
60°	545.5	520.8	496.1	486.5	477.0	478.3	479.7	490.0	500.3	507.8	515.3
62.5°	487.9	467.4	446.8	437.9	429.0	432.4	435.8	446.1	456.4	465.3	474.2
65°	430.4	413.2	396.1	389.9	383.8	388.6	393.4	402.3	411.2	417.3	423.5
67.5°	375.5	361.1	346.8	342.0	337.2	342.0	346.8	355.7	364.6	370.7	376.9
70°	318.0	306.3	294.7	291.2	287.8	293.3	298.8	306.3	313.9	320.0	326.2
72.5°	264.5	255.6	246.7	246.0	245.3	250.1	254.9	262.5	270.0	274.1	278.2
75°	212.4	207.6	202.8	202.2	201.5	206.3	211.1	215.2	219.3	222.7	226.1
77.5°	165.8	161.7	157.6	158.3	159.0	162.4	165.8	169.9	174.1	176.1	178.2
80°	117.9	116.5	115.1	116.5	117.9	120.6	123.4	126.1	128.8	130.2	131.6
82.5°	80.9	79.5	78.1	80.2	82.2	84.3	86.3	88.4	90.5	91.1	91.8
85°	46.6	48.7	50.7	50.7	50.7	51.4	52.1	52.8	53.5	52.8	52.1
87.5°	21.9	22.6	23.3	23.3	23.3	24.0	24.7	24.7	24.7	24.0	23.3
90°	5.6	6.6	8.1	9.7	11.2	12.7	12.2	12.7	13.2	13.7	14.7
92.5°	25.9	35.1	51.4	78.3	104.8	94.6	70.7	50.4	39.2	34.1	30.5
95°	46.3	66.1	109.4	185.1	268.5	301.6	244.6	183.1	124.1	97.1	78.8
97.5°	53.4	75.3	118.0	206.0	346.4	463.9	479.6	420.6	317.4	250.2	192.3
100°	61.0	80.9	116.5	191.7	325.5	481.7	581.8	599.6	558.5	498.9	426.7
102.5°	69.7	87.5	118.5	179.5	295.0	448.6	586.9	659.2	667.8	639.3	600.2
105°	79.3	95.1	122.6	175.0	271.1	408.9	554.9	661.2	712.1	721.7	708.5
107.5°	90.0	104.8	129.2	173.9	253.8	373.8	509.1	630.7	710.5	750.2	763.9
110°	100.7	114.9	137.8	176.5	244.6	344.8	466.4	582.9	676.4	740.5	776.1



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	111.9	125.6	146.5	181.6	239.6	325.5	429.3	535.6	631.7	705.4	753.8
115°	123.1	136.8	156.1	187.2	239.0	312.8	400.8	494.9	583.4	658.1	713.6
117.5°	134.3	147.0	166.3	194.3	239.6	304.1	382.0	463.3	541.7	610.3	667.8
120°	145.0	157.7	176.0	202.4	241.6	298.6	367.7	439.4	508.1	569.1	620.5
122.5°	154.6	168.3	186.2	210.1	245.1	295.0	356.0	420.6	481.1	536.6	583.4
125°	164.3	178.0	195.8	218.2	248.7	291.9	346.4	404.3	459.8	508.6	549.3
127.5°	173.4	187.2	204.5	224.8	252.8	290.4	337.2	389.6	439.9	484.7	522.3
130°	181.6	195.3	212.1	231.4	256.8	288.9	330.1	375.9	421.6	462.8	497.4
132.5°	189.2	202.4	218.7	237.5	259.9	288.4	323.5	363.1	404.3	442.0	474.5
135°	195.8	209.5	225.3	242.6	263.0	287.9	317.9	352.0	388.1	421.1	450.1
137.5°	201.9	214.6	229.9	246.7	265.0	286.9	312.8	341.3	371.8	401.3	427.2
140°	207.0	219.7	234.5	249.7	267.0	286.3	308.2	332.1	358.1	382.5	404.3
142.5°	212.1	223.8	238.0	252.8	268.5	285.3	304.1	323.5	344.8	365.2	383.5
145°	216.2	227.9	241.1	254.8	269.1	284.3	300.6	316.9	333.6	349.9	364.7
147.5°	221.2	231.4	243.6	256.3	269.1	282.8	297.0	311.3	325.0	338.7	349.4
150°	225.3	234.5	246.2	256.8	269.1	280.8	293.5	305.2	316.9	327.5	337.2
152.5°	229.4	238.0	247.7	257.9	267.5	278.2	289.4	299.6	309.2	318.4	326.0
155°	234.0	241.1	249.7	257.9	266.5	275.2	285.3	294.0	302.1	309.7	315.8
157.5°	238.0	243.6	250.7	258.4	265.0	272.6	280.8	287.9	295.0	301.1	306.2
160°	241.1	246.2	252.3	258.4	264.0	269.6	276.2	282.8	288.4	293.5	297.0
162.5°	243.6	247.7	252.8	257.9	261.9	266.5	271.6	276.7	281.3	285.8	288.9
165°	245.7	249.2	253.3	256.8	259.9	263.5	267.5	271.6	274.6	278.2	280.8
167.5°	247.7	250.2	253.3	256.3	257.9	260.4	263.5	267.0	269.6	271.6	273.6
170°	249.2	250.2	252.8	254.8	255.8	257.4	259.9	262.4	264.0	266.0	267.0
172.5°	250.2	250.7	252.8	254.3	254.3	254.8	256.3	258.4	259.4	260.9	261.4
175°	250.7	251.3	252.3	253.3	252.8	252.8	253.8	254.8	255.3	256.3	256.3
177.5°	251.3	251.3	251.8	252.8	251.8	251.3	251.8	252.3	252.8	253.3	253.3
180°	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3	251.3



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	2953.6	2953.6	2953.6	2953.6
2.5°	2625.3	2620.5	2601.3	2582.1
5°	2225.8	2209.3	2203.9	2198.4
7.5°	1944.8	1943.5	1914.7	1885.9
10°	1697.4	1699.5	1673.5	1647.4
12.5°	1520.6	1503.5	1501.5	1499.4
15°	1387.7	1371.9	1369.2	1366.5
17.5°	1293.8	1284.2	1281.5	1278.7
20°	1222.5	1217.1	1212.3	1207.5
22.5°	1160.9	1154.0	1149.9	1145.8
25°	1101.2	1095.1	1093.7	1092.3
27.5°	1047.8	1040.3	1040.3	1040.3
30°	997.1	992.3	990.2	988.2
32.5°	949.8	945.7	945.7	945.7
35°	905.3	903.2	900.5	897.7
37.5°	864.8	864.8	863.5	862.1
40°	825.8	827.8	827.8	827.8
42.5°	790.1	792.2	792.2	792.2
45°	753.1	756.6	757.9	759.3
47.5°	716.8	722.3	723.7	725.0
50°	681.2	685.3	686.0	686.7
52.5°	644.8	649.6	653.1	656.5
55°	606.5	611.3	613.3	615.4
57.5°	565.4	570.2	570.8	571.5
60°	520.1	524.9	526.3	527.7
62.5°	477.0	479.7	481.1	482.4
65°	427.6	431.7	434.5	437.2
67.5°	380.3	383.8	383.8	383.8
70°	327.6	328.9	331.0	333.0
72.5°	278.9	279.6	279.6	279.6
75°	227.5	228.9	229.6	230.3
77.5°	178.9	179.5	179.5	179.5
80°	130.9	130.2	130.2	130.2
82.5°	89.8	87.7	87.7	87.7
85°	51.4	50.7	51.4	52.1
87.5°	23.3	23.3	23.3	23.3
90°	14.2	14.7	15.3	14.7
92.5°	29.5	27.5	28.0	27.0
95°	69.2	64.6	61.0	59.0
97.5°	158.2	138.9	126.6	121.0
100°	375.4	338.2	318.4	318.9
102.5°	563.0	535.6	519.8	505.0
105°	685.1	665.8	649.5	646.9
107.5°	760.9	751.7	745.1	739.5
110°	790.4	794.4	793.4	792.4

TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-UDD-G4

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	782.7	797.5	802.6	803.1
115°	751.7	774.1	784.3	786.8
117.5°	707.5	732.4	747.7	751.2
120°	660.7	689.2	701.4	704.4
122.5°	618.0	642.9	656.6	660.7
125°	581.8	604.2	616.9	620.5
127.5°	551.8	571.2	582.9	585.9
130°	524.4	542.7	553.4	557.4
132.5°	499.5	517.8	526.9	529.5
135°	475.0	490.3	499.5	503.0
137.5°	448.6	464.4	472.0	475.0
140°	423.7	437.9	446.0	445.5
142.5°	399.3	411.5	418.6	418.1
145°	377.4	388.1	392.1	393.2
147.5°	359.6	367.2	371.3	371.8
150°	344.8	350.4	353.5	353.5
152.5°	331.6	336.7	338.2	338.2
155°	320.4	324.5	325.5	326.0
157.5°	310.3	313.3	314.3	314.3
160°	300.6	303.6	303.6	303.1
162.5°	290.9	293.5	293.5	293.0
165°	282.8	284.8	284.3	284.3
167.5°	274.6	276.2	275.7	275.7
170°	267.5	268.5	268.0	268.0
172.5°	261.4	262.4	261.4	260.9
175°	256.3	256.8	256.3	255.8
177.5°	252.8	253.3	252.3	252.3
180°	251.3	251.3	251.3	251.3



TEST NUMBER: P831284

CATALOG NUMBER: S123DIP-S1165D585U940-4F0-1E-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	17.40	18.44	18.16	19.21	20.14	19.64	20.67	20.39	21.44	22.37
	3H	19.06	19.99	19.83	20.77	21.73	21.08	22.00	21.84	22.78	23.75
	4H	19.65	20.52	20.43	21.31	22.28	21.53	22.41	22.32	23.20	24.17
	6H	20.03	20.83	20.82	21.63	22.62	21.82	22.62	22.62	23.42	24.41
	8H	20.13	20.89	20.94	21.71	22.70	21.89	22.65	22.69	23.47	24.46
	12H	20.18	20.91	20.99	21.72	22.73	21.91	22.64	22.72	23.45	24.46
4H	2H	18.00	18.87	18.79	19.66	20.63	19.82	20.70	20.61	21.49	22.46
	3H	19.84	20.57	20.64	21.39	22.38	21.46	22.18	22.26	23.01	24.00
	4H	20.55	21.21	21.36	22.03	23.05	22.05	22.71	22.86	23.53	24.55
	6H	21.03	21.60	21.86	22.45	23.47	22.46	23.03	23.29	23.88	24.90
	8H	21.17	21.70	22.01	22.55	23.58	22.57	23.11	23.41	23.95	24.99
	12H	21.24	21.72	22.10	22.59	23.63	22.63	23.11	23.48	23.97	25.01
8H	4H	20.82	21.36	21.66	22.20	23.23	22.16	22.70	23.00	23.54	24.58
	6H	21.42	21.86	22.28	22.74	23.78	22.67	23.11	23.54	24.00	25.03
	8H	21.63	22.02	22.50	22.90	23.95	22.85	23.24	23.73	24.13	25.18
	12H	21.76	22.10	22.64	22.97	24.08	22.96	23.31	23.84	24.18	25.29
12H	4H	20.83	21.31	21.69	22.18	23.22	22.15	22.63	23.00	23.49	24.53
	6H	21.47	21.86	22.35	22.74	23.79	22.69	23.08	23.56	23.96	25.01
	8H	21.71	22.06	22.59	22.93	24.04	22.90	23.24	23.77	24.11	25.22