

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: P831310

Luminaire Tested: S123DIP-S1165D805U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831310  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D805U940-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

**Summary**

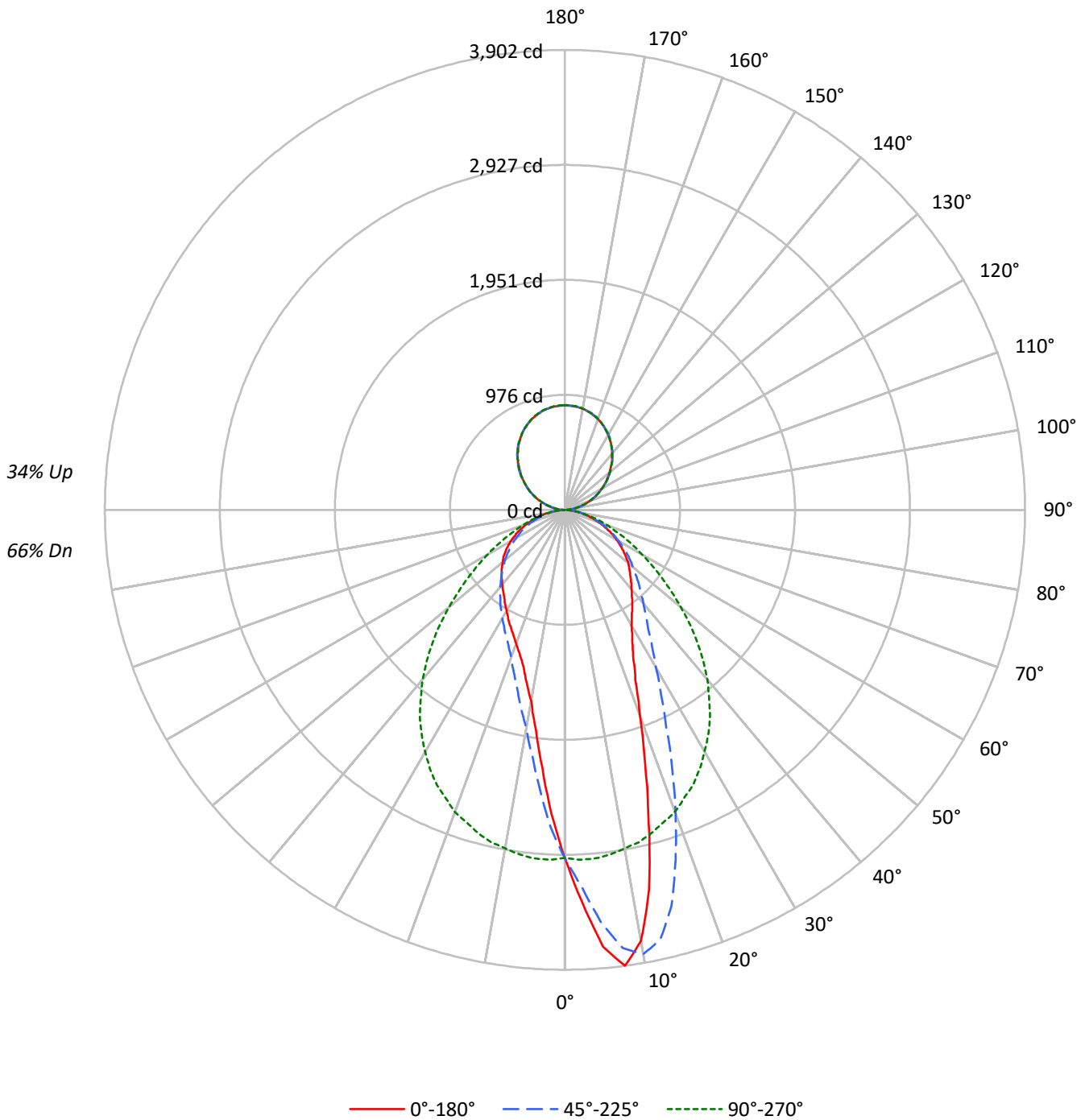
Lumens per Lamp: N/A  
Luminaire Lumens: 7208.9 lumens  
Efficiency: N/A  
Efficacy: 114.8 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 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

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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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66				
1	102	98	94	91	96	92	89	86	82	79	77	72	71	69	64	62	61	57				
2	94	86	80	75	88	82	76	72	73	69	65	64	61	59	57	55	53	49				
3	86	77	70	64	81	73	66	61	65	60	56	58	54	51	51	48	46	42				
4	79	69	61	55	74	65	58	53	58	53	48	52	48	44	46	43	40	37				
5	73	62	54	48	69	59	51	46	53	47	43	47	43	39	42	39	36	33				
6	68	56	48	42	64	53	46	41	48	42	38	43	39	35	39	35	32	29				
7	63	51	43	38	59	49	41	36	44	38	34	40	35	31	36	32	29	27				
8	59	47	39	34	55	45	38	33	41	35	31	37	32	28	33	29	26	24				
9	55	43	36	31	52	41	34	30	38	32	28	34	29	26	31	27	24	22				
10	52	40	33	28	49	38	32	27	35	29	25	32	27	24	29	25	22	20				

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	279.2	3.9
10°-20°	694.7	9.6
20°-30°	822.5	11.4
30°-40°	827.0	11.5
40°-50°	758.8	10.5
50°-60°	626.3	8.7
60°-70°	443.0	6.1
70°-80°	236.5	3.3
80°-90°	61.9	0.9
90°-100°	57.1	0.8
100°-110°	172.9	2.4
110°-120°	294.4	4.1
120°-130°	387.3	5.4
130°-140°	435.3	6.0
140°-150°	428.0	5.9
150°-160°	360.3	5.0
160°-170°	239.9	3.3
170°-180°	84.0	1.2
0°-30°	1796.4	24.9
0°-40°	2623.4	36.4
0°-60°	4008.4	55.6
0°-90°	4749.8	65.9
90°-120°	524.4	7.3
90°-150°	1774.9	24.6
90°-180°	2459.0	34.1
0°-180°	7208.9	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°	21	17	1	17	21	13
95°	54	52	41	52	54	55
105°	166	164	157	164	166	176
115°	297	297	296	297	297	294
125°	429	434	434	434	429	383
135°	562	566	563	566	562	432
145°	682	686	682	686	682	426
155°	780	782	782	782	780	359
165°	848	849	851	849	848	239
175°	882	883	885	883	882	84
180°	888	888	888	888	888	



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**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°	20.9	20.6	20.3	20.0	19.7	19.2	18.6	18.0	17.4	16.7	14.7
92.5°	30.0	30.3	30.6	30.9	31.2	31.1	30.7	30.2	29.7	29.3	28.4
95°	54.4	54.4	54.4	54.4	54.4	54.1	53.5	52.8	52.2	51.6	50.4
97.5°	78.1	78.2	78.4	78.5	78.7	78.4	77.6	76.8	76.1	75.3	74.4
100°	106.0	105.7	105.4	105.0	104.7	104.3	103.9	103.4	102.9	102.5	101.7
102.5°	134.6	134.7	134.9	135.0	135.2	135.0	134.6	134.1	133.6	133.2	132.1
105°	165.9	165.6	165.3	165.0	164.7	164.5	164.5	164.5	164.5	164.5	163.1
107.5°	198.0	198.2	198.3	198.5	198.6	198.5	198.0	197.5	197.1	196.6	196.0
110°	230.8	231.1	231.4	231.7	232.0	231.9	231.2	230.6	230.0	229.4	229.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	265.6	265.6	265.6	265.6	265.6	265.2	264.5	263.7	262.9	262.1	262.1
115°	297.0	297.2	297.3	297.5	297.6	297.6	297.5	297.3	297.2	297.0	297.3
117.5°	329.1	329.5	330.0	330.5	330.9	331.2	331.2	331.2	331.2	331.2	331.5
120°	363.2	363.5	363.8	364.2	364.5	364.7	364.9	365.0	365.2	365.3	366.1
122.5°	396.0	396.5	396.9	397.4	397.9	398.3	398.8	399.3	399.7	400.2	400.5
125°	428.8	429.4	430.0	430.6	431.2	431.9	432.5	433.1	433.7	434.3	434.7
127.5°	461.5	462.2	462.8	463.4	464.0	464.8	465.7	466.6	467.6	468.5	468.8
130°	493.6	494.7	495.8	496.9	497.9	498.8	499.4	500.0	500.7	501.3	501.7
132.5°	527.1	527.8	528.6	529.4	530.2	530.9	531.7	532.5	533.3	534.0	534.3
135°	561.9	562.2	562.5	562.9	563.2	563.6	564.2	564.9	565.5	566.1	566.3
137.5°	592.6	593.1	593.5	594.0	594.5	595.1	595.9	596.6	597.4	598.2	597.7
140°	622.6	623.7	624.7	625.8	626.9	627.5	627.7	627.8	628.0	628.2	628.0
142.5°	653.3	654.0	654.8	655.6	656.4	656.8	657.0	657.1	657.3	657.4	657.1
145°	682.5	683.2	683.8	684.4	685.0	685.4	685.6	685.7	685.9	686.0	685.6
147.5°	709.0	710.0	710.9	711.8	712.7	713.2	713.2	713.2	713.2	713.2	712.7
150°	734.1	735.1	736.0	736.9	737.8	738.3	738.3	738.3	738.3	738.3	738.0
152.5°	758.5	759.3	760.1	760.9	761.6	761.9	761.5	761.2	760.9	760.6	760.5
155°	780.1	781.2	782.3	783.4	784.5	784.7	784.1	783.5	782.9	782.2	782.1
157.5°	800.4	801.3	802.2	803.1	804.1	804.2	803.6	803.0	802.4	801.8	801.6
160°	819.9	820.5	821.1	821.7	822.4	822.3	821.5	820.7	820.0	819.2	819.2
162.5°	834.5	835.6	836.7	837.8	838.9	839.0	838.2	837.5	836.7	835.9	835.8
165°	848.5	849.5	850.6	851.7	852.8	852.9	852.0	851.0	850.1	849.2	849.2
167.5°	861.0	861.9	862.9	863.8	864.7	864.7	863.8	862.9	861.9	861.0	860.9
170°	870.1	871.2	872.2	873.3	874.4	874.4	873.3	872.2	871.2	870.1	870.1
172.5°	877.0	878.1	879.2	880.3	881.4	881.5	880.5	879.6	878.7	877.7	877.7
175°	881.9	883.0	884.1	885.2	886.3	886.3	885.4	884.5	883.6	882.6	882.6
177.5°	884.7	885.8	886.9	888.0	889.1	889.1	888.2	887.3	886.3	885.4	885.4
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



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**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°	12.7	10.7	8.7	6.9	5.3	3.8	2.2	0.7	2.2	3.8	5.3
92.5°	27.4	26.5	25.6	24.6	23.7	22.8	21.8	20.9	21.8	22.8	23.7
95°	49.1	47.9	46.6	45.5	44.4	43.3	42.2	41.1	42.2	43.3	44.4
97.5°	73.4	72.5	71.6	70.7	70.0	69.2	68.4	67.6	68.4	69.2	70.0
100°	100.9	100.2	99.4	98.5	97.6	96.7	95.7	94.8	95.7	96.7	97.6
102.5°	131.0	129.9	128.8	128.0	127.6	127.1	126.7	126.2	126.7	127.1	127.6
105°	161.7	160.4	159.0	158.1	157.8	157.5	157.2	156.9	157.2	157.5	157.8
107.5°	195.4	194.7	194.1	193.7	193.6	193.4	193.3	193.1	193.3	193.4	193.6
110°	228.8	228.4	228.1	227.8	227.5	227.2	226.9	226.6	226.9	227.2	227.5





TEST NUMBER: P831310

CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	262.1	262.1	262.1	262.1	261.9	261.8	261.6	261.4	261.6	261.8	261.9
115°	297.6	297.9	298.2	298.2	297.7	297.2	296.8	296.3	296.8	297.2	297.7
117.5°	331.8	332.1	332.4	332.5	332.3	332.2	332.0	331.9	332.0	332.2	332.3
120°	366.9	367.6	368.4	368.3	367.4	366.5	365.6	364.6	365.6	366.5	367.4
122.5°	400.8	401.1	401.4	401.3	400.6	400.0	399.4	398.8	399.4	400.0	400.6
125°	435.0	435.3	435.6	435.5	435.0	434.6	434.1	433.6	434.1	434.6	435.0
127.5°	469.1	469.4	469.7	469.4	468.5	467.6	466.6	465.7	466.6	467.6	468.5
130°	502.2	502.7	503.1	502.7	501.5	500.3	499.0	497.8	499.0	500.3	501.5
132.5°	534.7	535.0	535.3	534.8	533.6	532.3	531.1	529.9	531.1	532.3	533.6
135°	566.4	566.6	566.7	566.3	565.4	564.5	563.6	562.6	563.6	564.5	565.4
137.5°	597.2	596.8	596.3	595.7	594.9	594.1	593.4	592.6	593.4	594.1	594.9
140°	627.8	627.7	627.5	627.1	626.3	625.5	624.7	624.0	624.7	625.5	626.3
142.5°	656.8	656.5	656.2	655.7	654.9	654.1	653.3	652.6	653.3	654.1	654.9
145°	685.1	684.6	684.2	683.8	683.5	683.2	682.8	682.5	682.8	683.2	683.5
147.5°	712.3	711.8	711.4	710.8	710.2	709.6	709.0	708.3	709.0	709.6	710.2
150°	737.7	737.4	737.1	736.8	736.5	736.1	735.8	735.5	735.8	736.1	736.5
152.5°	760.3	760.2	760.0	759.7	759.2	758.8	758.3	757.8	758.3	758.8	759.2
155°	781.9	781.8	781.6	781.5	781.5	781.5	781.5	781.5	781.5	781.5	781.5
157.5°	801.4	801.3	801.1	801.1	801.3	801.4	801.6	801.8	801.6	801.4	801.3
160°	819.2	819.2	819.2	819.3	819.6	820.0	820.3	820.6	820.3	820.0	819.6
162.5°	835.6	835.5	835.3	835.5	835.9	836.4	836.8	837.3	836.8	836.4	835.9
165°	849.2	849.2	849.2	849.4	849.9	850.3	850.8	851.3	850.8	850.3	849.9
167.5°	860.7	860.5	860.4	860.6	861.2	861.9	862.5	863.1	862.5	861.9	861.2
170°	870.1	870.1	870.1	870.4	871.0	871.6	872.2	872.9	872.2	871.6	871.0
172.5°	877.7	877.7	877.7	878.1	878.7	879.3	879.9	880.5	879.9	879.3	878.7
175°	882.6	882.6	882.6	882.9	883.6	884.2	884.8	885.4	884.8	884.2	883.6
177.5°	885.4	885.4	885.4	885.7	886.3	887.0	887.6	888.2	887.6	887.0	886.3
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



TEST NUMBER: P831310

CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-UDD-G1

**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°	6.9	8.7	10.7	12.7	14.7	16.7	17.4	18.0	18.6	19.2	19.7
92.5°	24.6	25.6	26.5	27.4	28.4	29.3	29.7	30.2	30.7	31.1	31.2
95°	45.5	46.6	47.9	49.1	50.4	51.6	52.2	52.8	53.5	54.1	54.4
97.5°	70.7	71.6	72.5	73.4	74.4	75.3	76.1	76.8	77.6	78.4	78.7
100°	98.5	99.4	100.2	100.9	101.7	102.5	102.9	103.4	103.9	104.3	104.7
102.5°	128.0	128.8	129.9	131.0	132.1	133.2	133.6	134.1	134.6	135.0	135.2
105°	158.1	159.0	160.4	161.7	163.1	164.5	164.5	164.5	164.5	164.5	164.7
107.5°	193.7	194.1	194.7	195.4	196.0	196.6	197.1	197.5	198.0	198.5	198.6
110°	227.8	228.1	228.4	228.8	229.1	229.4	230.0	230.6	231.2	231.9	232.0



TEST NUMBER: P831310

CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	262.1	262.1	262.1	262.1	262.1	262.1	262.9	263.7	264.5	265.2	265.6
115°	298.2	298.2	297.9	297.6	297.3	297.0	297.2	297.3	297.5	297.6	297.6
117.5°	332.5	332.4	332.1	331.8	331.5	331.2	331.2	331.2	331.2	331.2	330.9
120°	368.3	368.4	367.6	366.9	366.1	365.3	365.2	365.0	364.9	364.7	364.5
122.5°	401.3	401.4	401.1	400.8	400.5	400.2	399.7	399.3	398.8	398.3	397.9
125°	435.5	435.6	435.3	435.0	434.7	434.3	433.7	433.1	432.5	431.9	431.2
127.5°	469.4	469.7	469.4	469.1	468.8	468.5	467.6	466.6	465.7	464.8	464.0
130°	502.7	503.1	502.7	502.2	501.7	501.3	500.7	500.0	499.4	498.8	497.9
132.5°	534.8	535.3	535.0	534.7	534.3	534.0	533.3	532.5	531.7	530.9	530.2
135°	566.3	566.7	566.6	566.4	566.3	566.1	565.5	564.9	564.2	563.6	563.2
137.5°	595.7	596.3	596.8	597.2	597.7	598.2	597.4	596.6	595.9	595.1	594.5
140°	627.1	627.5	627.7	627.8	628.0	628.2	628.0	627.8	627.7	627.5	626.9
142.5°	655.7	656.2	656.5	656.8	657.1	657.4	657.3	657.1	657.0	656.8	656.4
145°	683.8	684.2	684.6	685.1	685.6	686.0	685.9	685.7	685.6	685.4	685.0
147.5°	710.8	711.4	711.8	712.3	712.7	713.2	713.2	713.2	713.2	713.2	712.7
150°	736.8	737.1	737.4	737.7	738.0	738.3	738.3	738.3	738.3	738.3	737.8
152.5°	759.7	760.0	760.2	760.3	760.5	760.6	760.9	761.2	761.5	761.9	761.6
155°	781.5	781.6	781.8	781.9	782.1	782.2	782.9	783.5	784.1	784.7	784.5
157.5°	801.1	801.1	801.3	801.4	801.6	801.8	802.4	803.0	803.6	804.2	804.1
160°	819.3	819.2	819.2	819.2	819.2	819.2	820.0	820.7	821.5	822.3	822.4
162.5°	835.5	835.3	835.5	835.6	835.8	835.9	836.7	837.5	838.2	839.0	838.9
165°	849.4	849.2	849.2	849.2	849.2	849.2	850.1	851.0	852.0	852.9	852.8
167.5°	860.6	860.4	860.5	860.7	860.9	861.0	861.9	862.9	863.8	864.7	864.7
170°	870.4	870.1	870.1	870.1	870.1	870.1	871.2	872.2	873.3	874.4	874.4
172.5°	878.1	877.7	877.7	877.7	877.7	877.7	878.7	879.6	880.5	881.5	881.4
175°	882.9	882.6	882.6	882.6	882.6	882.6	883.6	884.5	885.4	886.3	886.3
177.5°	885.7	885.4	885.4	885.4	885.4	885.4	886.3	887.3	888.2	889.1	889.1
180°	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5	887.5



TEST NUMBER: P831310

CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-UDD-G1

**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°	20.0	20.3	20.6	20.9
92.5°	30.9	30.6	30.3	30.0
95°	54.4	54.4	54.4	54.4
97.5°	78.5	78.4	78.2	78.1
100°	105.0	105.4	105.7	106.0
102.5°	135.0	134.9	134.7	134.6
105°	165.0	165.3	165.6	165.9
107.5°	198.5	198.3	198.2	198.0
110°	231.7	231.4	231.1	230.8



TEST NUMBER: P831310

CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	265.6	265.6	265.6	265.6
115°	297.5	297.3	297.2	297.0
117.5°	330.5	330.0	329.5	329.1
120°	364.2	363.8	363.5	363.2
122.5°	397.4	396.9	396.5	396.0
125°	430.6	430.0	429.4	428.8
127.5°	463.4	462.8	462.2	461.5
130°	496.9	495.8	494.7	493.6
132.5°	529.4	528.6	527.8	527.1
135°	562.9	562.5	562.2	561.9
137.5°	594.0	593.5	593.1	592.6
140°	625.8	624.7	623.7	622.6
142.5°	655.6	654.8	654.0	653.3
145°	684.4	683.8	683.2	682.5
147.5°	711.8	710.9	710.0	709.0
150°	736.9	736.0	735.1	734.1
152.5°	760.9	760.1	759.3	758.5
155°	783.4	782.3	781.2	780.1
157.5°	803.1	802.2	801.3	800.4
160°	821.7	821.1	820.5	819.9
162.5°	837.8	836.7	835.6	834.5
165°	851.7	850.6	849.5	848.5
167.5°	863.8	862.9	861.9	861.0
170°	873.3	872.2	871.2	870.1
172.5°	880.3	879.2	878.1	877.0
175°	885.2	884.1	883.0	881.9
177.5°	888.0	886.9	885.8	884.7
180°	887.5	887.5	887.5	887.5



TEST NUMBER: P831310

CATALOG NUMBER: S123DIP-S1165D805U940-4F0-1E-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	16.96	17.93	17.77	18.76	19.79	19.19	20.17	20.01	21.00	22.03
	3H	18.61	19.48	19.44	20.33	21.38	20.63	21.50	21.46	22.34	23.40
	4H	19.19	20.02	20.04	20.87	21.93	21.08	21.90	21.93	22.75	23.82
	6H	19.57	20.33	20.43	21.18	22.27	21.36	22.12	22.22	22.98	24.06
	8H	19.67	20.39	20.54	21.27	22.35	21.43	22.15	22.29	23.02	24.10
	12H	19.72	20.41	20.59	21.27	22.38	21.45	22.14	22.32	23.01	24.11
4H	2H	17.54	18.37	18.40	19.22	20.28	19.37	20.19	20.22	21.04	22.11
	3H	19.38	20.07	20.24	20.95	22.03	21.00	21.68	21.86	22.56	23.65
	4H	20.09	20.71	20.96	21.59	22.70	21.59	22.21	22.46	23.09	24.20
	6H	20.57	21.10	21.46	22.01	23.12	22.00	22.53	22.89	23.44	24.55
	8H	20.71	21.21	21.60	22.10	23.23	22.11	22.61	23.00	23.51	24.64
	12H	20.78	21.23	21.69	22.15	23.28	22.16	22.61	23.07	23.53	24.66
8H	4H	20.36	20.86	21.25	21.76	22.88	21.70	22.20	22.59	23.10	24.22
	6H	20.95	21.37	21.87	22.31	23.43	22.21	22.62	23.13	23.56	24.69
	8H	21.16	21.53	22.09	22.46	23.60	22.39	22.75	23.32	23.69	24.83
	12H	21.29	21.61	22.22	22.54	23.73	22.49	22.82	23.42	23.74	24.93
12H	4H	20.37	20.82	21.28	21.73	22.86	21.68	22.13	22.59	23.05	24.18
	6H	21.00	21.37	21.93	22.30	23.44	22.22	22.59	23.15	23.52	24.66
	8H	21.24	21.57	22.17	22.49	23.68	22.43	22.75	23.36	23.67	24.87