

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: P831122

Luminaire Tested: S123DIP-S1000D365U940-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831122  
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-S1000D365U940-4F0-1E-UDD-G4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: -

**Summary**

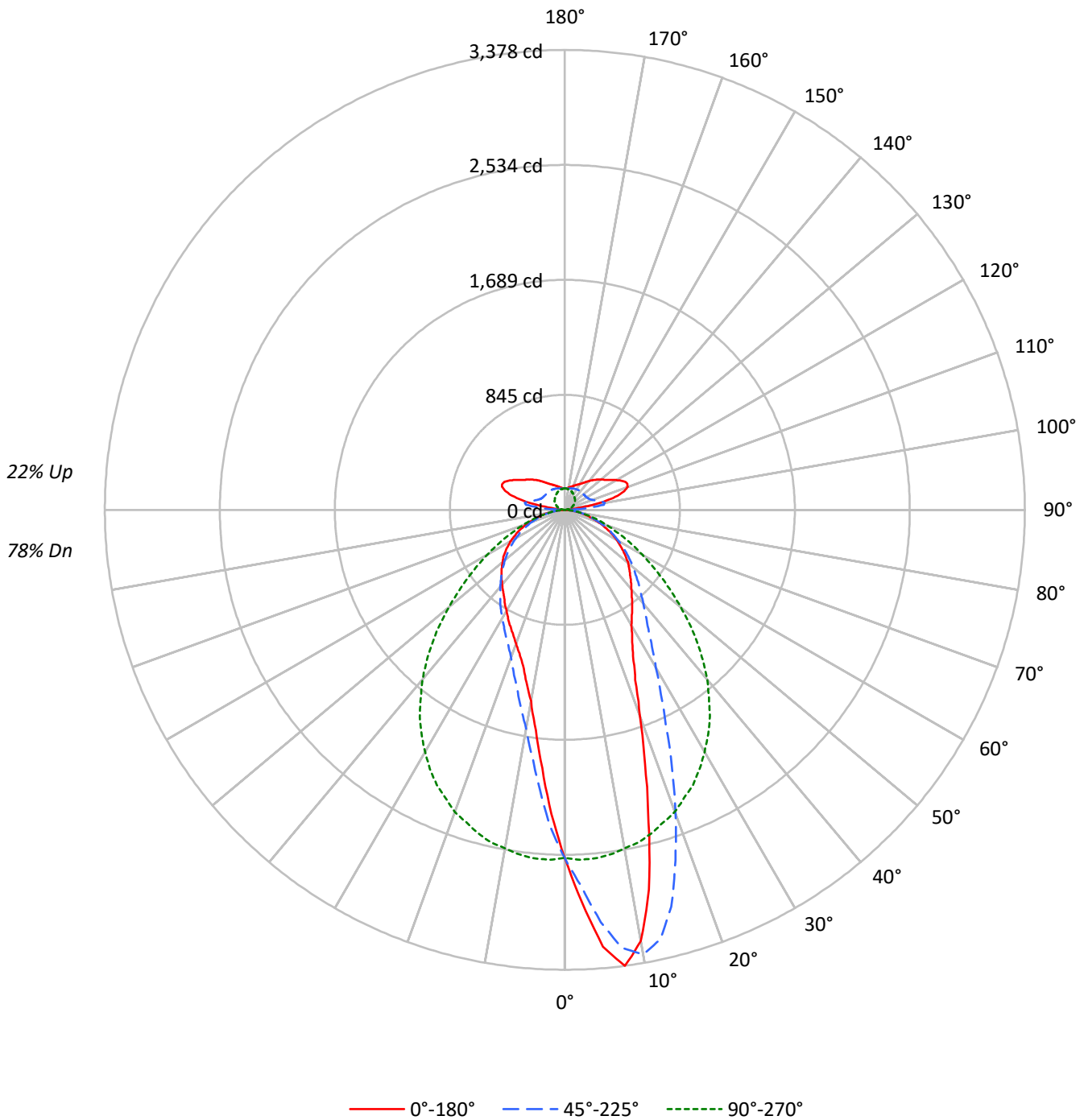
Lumens per Lamp: N/A  
Luminaire Lumens: 5282.8 lumens  
Efficiency: N/A  
Efficacy: 117.1 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 45.1  
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: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

### Luminous Intensity Polar Plot





TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-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	114	114	114	114	109	109	109	109	99	99	99	90	90	90	82	82	82	78				78
1	105	101	97	93	100	96	93	90	88	85	83	80	78	77	73	72	71	67				67
2	96	89	83	78	92	85	80	75	78	74	70	72	68	65	66	63	61	58				58
3	88	79	72	66	84	76	69	64	70	65	60	64	60	57	59	56	53	50				50
4	82	71	63	57	78	68	61	56	63	57	52	58	53	49	54	50	47	44				44
5	75	64	56	50	72	62	54	49	57	51	46	53	48	44	49	45	41	39				39
6	70	58	50	44	67	56	49	43	52	46	41	48	43	39	45	41	37	35				35
7	65	53	45	40	62	51	44	39	48	42	37	45	39	35	42	37	34	31				31
8	61	49	41	36	58	47	40	35	44	38	34	41	36	32	39	34	31	29				29
9	57	45	38	33	55	44	37	32	41	35	31	38	33	29	36	31	28	26				26
10	54	42	35	30	52	41	34	29	38	32	28	36	31	27	34	29	26	24				24

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

	0°	45°	90°	135°	180°
0°	27527	27527	27527	27527	27527
5°	34813	32857	27773	22382	20567
10°	35151	36214	27588	17841	15591
15°	26475	33623	27400	15109	13184
20°	18447	27207	27050	13213	11976
25°	14066	20923	26454	12156	11233
30°	12168	16623	25502	11409	10634
35°	11290	14034	24404	10868	10214
40°	10689	12590	22861	10354	10072
45°	10333	11651	20900	9954	10007
50°	10155	10910	18581	9589	9955
55°	9777	10367	16302	9242	9999
60°	9427	9784	14051	8917	9836
65°	8856	9233	12121	8568	9643
70°	8179	8535	10307	7994	9076
75°	7403	7648	8833	7428	8293
80°	6106	6695	6986	6471	6986
85°	4841	5422	5125	5496	5570

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 23863 cd/sqm



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	241.8	4.6
10°-20°	601.5	11.4
20°-30°	712.2	13.5
30°-40°	716.1	13.6
40°-50°	657.0	12.4
50°-60°	542.2	10.3
60°-70°	383.6	7.3
70°-80°	204.8	3.9
80°-90°	52.8	1.0
90°-100°	84.5	1.6
100°-110°	247.3	4.7
110°-120°	241.5	4.6
120°-130°	192.3	3.6
130°-140°	151.7	2.9
140°-150°	113.2	2.1
150°-160°	78.9	1.5
160°-170°	46.4	0.9
170°-180°	15.1	0.3
0°-30°	1555.4	29.4
0°-40°	2271.5	43.0
0°-60°	3470.7	65.7
0°-90°	4111.9	77.8
90°-120°	573.3	10.9
90°-150°	1030.6	19.5
90°-180°	1171.0	22.2
0°-180°	5282.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2557	2557	2557	2557	2557	
5°	3222	3041	2570	2071	1904	307
15°	2376	3017	2459	1356	1183	656
25°	1184	1762	2227	1024	946	559
35°	859	1068	1857	827	777	540
45°	679	765	1373	654	657	526
55°	521	552	869	492	533	466
65°	348	362	476	336	379	346
75°	178	184	212	179	199	187
85°	39	44	42	44	45	44
90°	9	8	1	8	9	7
95°	37	187	11	187	37	59
105°	401	253	37	253	401	400
115°	488	194	65	194	488	475
125°	384	181	90	181	384	348
135°	312	178	105	178	312	242
145°	244	176	120	176	244	155
155°	202	170	136	170	202	94
165°	176	163	149	163	176	50
175°	158	157	155	157	158	15
180°	156	156	156	156	156	



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3
2.5°	2882.5	2879.5	2876.6	2861.7	2846.9	2839.8	2832.7	2811.3	2789.9	2766.2	2742.5
5°	3221.9	3230.2	3238.5	3229.0	3219.5	3190.5	3161.4	3122.8	3084.2	3040.9	2997.6
7.5°	3378.5	3383.3	3388.0	3382.1	3376.2	3368.5	3360.7	3326.3	3291.9	3247.4	3202.9
10°	3216.0	3226.6	3237.3	3260.5	3283.6	3309.7	3335.8	3331.1	3326.3	3313.3	3300.2
12.5°	2858.8	2871.8	2884.9	2931.2	2977.4	3036.8	3096.1	3147.1	3198.2	3233.8	3269.4
15°	2375.8	2412.0	2448.2	2490.3	2532.4	2619.6	2706.9	2814.3	2921.7	3017.2	3112.7
17.5°	1956.9	1970.5	1984.2	2029.3	2074.4	2184.1	2293.9	2417.9	2541.9	2700.3	2858.8
20°	1610.4	1622.8	1635.3	1694.6	1753.9	1840.0	1926.0	2065.5	2204.9	2375.2	2545.5
22.5°	1352.8	1372.4	1392.0	1425.2	1458.5	1540.9	1623.4	1747.4	1871.4	2059.5	2247.6
25°	1184.3	1198.6	1212.8	1233.0	1253.2	1319.0	1384.9	1486.9	1589.0	1761.7	1934.3
27.5°	1069.2	1075.2	1081.1	1101.3	1121.4	1164.2	1206.9	1294.7	1382.5	1529.1	1675.6
30°	979.0	983.2	987.3	1005.1	1022.9	1052.0	1081.1	1144.6	1208.1	1337.4	1466.8
32.5°	916.1	919.1	922.1	935.7	949.4	970.1	990.9	1037.2	1083.5	1190.3	1297.1
35°	859.2	861.0	862.7	872.8	882.9	898.3	913.8	948.8	983.8	1068.0	1152.3
37.5°	809.3	811.7	814.1	820.0	825.9	839.6	853.2	881.1	909.0	973.7	1038.4
40°	760.7	764.8	769.0	773.1	777.3	788.6	799.8	821.2	842.6	896.0	949.4
42.5°	719.1	723.3	727.4	729.2	731.0	737.5	744.1	763.6	783.2	823.0	862.7
45°	678.8	680.6	682.4	684.1	685.9	691.3	696.6	713.8	731.0	765.4	799.8
47.5°	642.0	642.0	642.0	643.2	644.4	649.1	653.9	666.3	678.8	705.5	732.2
50°	606.4	606.4	606.4	604.6	602.8	605.8	608.8	618.3	627.8	651.5	675.2
52.5°	563.7	563.7	563.7	564.3	564.9	564.9	564.9	573.2	581.5	602.8	624.2
55°	521.0	523.3	525.7	523.9	522.1	523.3	524.5	529.9	535.2	552.4	569.6
57.5°	478.2	479.4	480.6	480.0	479.4	480.0	480.6	485.4	490.1	503.2	516.2
60°	437.9	437.9	437.9	436.7	435.5	436.7	437.9	440.3	442.6	454.5	466.4
62.5°	392.8	393.4	394.0	394.6	395.2	394.0	392.8	395.8	398.7	407.6	416.5
65°	347.7	348.3	348.9	350.7	352.5	351.3	350.1	353.0	356.0	362.5	369.1
67.5°	307.4	306.2	305.0	305.6	306.2	307.9	309.7	310.3	310.9	318.0	325.2
70°	259.9	261.1	262.3	261.7	261.1	261.7	262.3	264.0	265.8	271.2	276.5
72.5°	217.2	217.8	218.4	218.4	218.4	219.5	220.7	222.5	224.3	227.3	230.2
75°	178.0	178.0	178.0	179.2	180.4	181.0	181.6	181.6	181.6	183.9	186.3
77.5°	135.3	138.3	141.2	140.6	140.0	141.2	142.4	144.2	146.0	147.2	148.3
80°	98.5	98.5	98.5	99.1	99.7	101.5	103.2	104.4	105.6	108.0	110.4
82.5°	62.9	63.5	64.1	65.9	67.6	68.8	70.0	71.8	73.6	73.6	73.6
85°	39.2	38.0	36.8	38.0	39.2	40.3	41.5	42.1	42.7	43.9	45.1
87.5°	19.0	19.0	19.0	19.0	19.0	19.6	20.2	20.2	20.2	20.2	20.2
90°	9.1	9.5	9.1	8.8	9.1	8.5	8.2	7.9	7.6	7.9	6.9
92.5°	16.7	17.3	17.0	18.3	18.9	21.1	24.3	31.2	43.8	58.6	64.9
95°	36.6	37.8	40.0	42.9	48.8	60.2	76.9	113.4	151.6	186.9	166.4
97.5°	75.0	78.5	86.0	98.0	119.1	155.0	196.6	260.6	297.2	287.4	214.6
100°	197.6	197.3	209.6	232.6	264.4	309.1	346.0	371.5	360.5	298.4	201.7
102.5°	312.9	322.0	331.8	348.8	371.8	396.1	413.7	408.4	363.6	277.9	182.8
105°	400.8	402.4	412.5	424.5	439.0	447.1	441.2	409.6	343.8	253.4	168.0
107.5°	458.2	461.6	465.7	471.4	473.3	464.8	440.2	390.7	315.4	231.6	157.2
110°	490.9	491.6	492.2	489.7	480.9	458.8	419.1	361.1	289.0	213.6	151.6



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	497.6	497.2	494.1	485.0	467.0	437.1	391.4	331.8	266.0	201.7	148.4
115°	487.5	485.9	479.6	465.7	442.1	407.8	361.4	306.6	248.3	193.8	148.1
117.5°	465.4	463.2	453.8	438.3	413.7	378.1	335.6	287.1	236.7	188.4	148.4
120°	436.4	434.5	427.0	409.3	384.4	352.6	314.8	272.3	227.8	185.0	149.7
122.5°	409.3	406.8	398.3	382.9	361.4	332.4	298.1	260.6	220.6	182.8	151.9
125°	384.4	382.2	374.4	360.5	340.3	315.1	284.9	250.5	214.6	180.9	154.1
127.5°	363.0	361.1	353.9	341.9	323.6	300.3	272.6	241.4	208.9	179.9	156.6
130°	345.4	342.8	336.2	324.9	308.2	286.8	261.2	232.9	204.5	179.0	159.1
132.5°	328.0	326.5	320.8	309.4	294.0	273.8	250.5	225.0	200.4	178.7	161.0
135°	311.6	309.4	303.8	294.3	278.9	260.9	240.4	218.1	196.9	178.4	162.9
137.5°	294.3	292.4	287.7	277.9	264.7	248.6	230.3	211.4	193.8	177.7	164.2
140°	276.0	276.4	271.3	262.5	250.5	237.0	221.8	205.8	191.0	177.4	165.4
142.5°	259.0	259.3	254.9	247.4	237.6	226.3	213.6	200.4	188.4	176.8	166.4
145°	243.6	243.0	240.4	233.8	225.9	216.8	206.7	196.3	186.2	176.1	166.7
147.5°	230.3	230.0	227.5	222.8	216.5	209.9	201.4	192.8	184.0	175.2	166.7
150°	219.0	219.0	217.1	213.6	208.9	202.9	196.3	189.1	181.8	173.9	166.7
152.5°	209.6	209.6	208.6	205.5	202.0	197.3	191.6	185.6	179.3	172.4	165.7
155°	202.0	201.7	201.0	198.5	195.7	191.9	187.2	182.1	176.8	170.5	165.1
157.5°	194.7	194.7	194.1	192.2	189.7	186.5	182.8	178.4	173.9	168.9	164.2
160°	187.8	188.1	188.1	186.2	184.0	181.8	178.7	175.2	171.1	167.0	163.5
162.5°	181.5	181.8	181.8	180.2	179.0	177.1	174.3	171.4	168.3	165.1	162.3
165°	176.1	176.1	176.5	175.2	173.9	172.4	170.2	168.3	165.7	163.2	161.0
167.5°	170.8	170.8	171.1	170.2	169.5	168.3	167.0	165.4	163.2	161.3	159.8
170°	166.1	166.1	166.4	165.7	165.4	164.8	163.5	162.6	161.0	159.4	158.5
172.5°	161.7	162.0	162.6	162.0	162.0	161.7	160.7	160.1	158.8	157.9	157.6
175°	158.5	158.8	159.1	158.8	158.8	158.8	158.2	157.9	157.2	156.6	156.6
177.5°	156.3	156.3	156.9	156.6	156.9	156.9	156.6	156.3	156.0	155.7	156.0
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3
2.5°	2735.4	2728.2	2702.1	2676.0	2646.3	2616.7	2594.7	2572.8	2540.1	2507.5	2480.8
5°	2964.4	2931.2	2876.0	2820.8	2746.0	2671.3	2620.8	2570.4	2502.8	2435.1	2381.1
7.5°	3146.0	3089.0	3011.9	2934.7	2836.8	2738.9	2646.3	2553.8	2450.5	2347.3	2263.0
10°	3261.7	3223.1	3134.1	3045.1	2914.0	2782.8	2653.5	2524.1	2391.2	2258.3	2146.7
12.5°	3272.9	3276.5	3194.6	3112.7	2964.4	2816.0	2658.8	2501.6	2334.2	2166.9	2037.0
15°	3173.8	3235.0	3189.9	3144.8	2995.2	2845.7	2652.3	2458.8	2266.0	2073.2	1923.1
17.5°	2989.9	3121.0	3127.6	3134.1	2984.6	2835.0	2620.8	2406.6	2188.3	1969.9	1812.1
20°	2738.9	2932.3	2998.8	3065.3	2943.6	2822.0	2591.8	2361.5	2117.1	1872.6	1707.1
22.5°	2482.6	2717.6	2839.2	2960.8	2870.6	2780.4	2535.4	2290.3	2032.2	1774.1	1606.2
25°	2190.7	2447.0	2633.9	2820.8	2765.6	2710.4	2468.9	2227.4	1952.7	1678.0	1506.5
27.5°	1936.1	2196.6	2422.1	2647.5	2635.7	2623.8	2384.1	2144.4	1863.1	1581.9	1416.3
30°	1709.4	1952.1	2204.3	2456.5	2485.6	2514.6	2283.2	2051.8	1770.0	1488.1	1328.5
32.5°	1508.9	1720.7	1991.3	2261.9	2318.8	2375.8	2166.9	1958.1	1679.2	1400.3	1246.6
35°	1344.5	1536.8	1807.3	2077.9	2149.1	2220.3	2038.8	1857.2	1585.4	1313.7	1167.1
37.5°	1199.2	1360.0	1624.0	1888.0	1975.3	2062.5	1899.9	1737.3	1482.8	1228.2	1093.5
40°	1078.7	1208.1	1450.7	1693.4	1794.3	1895.2	1761.1	1627.0	1385.5	1144.0	1020.0
42.5°	977.8	1093.0	1313.1	1533.2	1629.9	1726.7	1613.3	1500.0	1285.2	1070.4	957.1
45°	891.8	983.8	1183.7	1383.7	1475.7	1567.6	1470.3	1373.0	1183.7	994.5	888.8
47.5°	811.1	890.0	1060.9	1231.8	1313.7	1395.6	1319.6	1243.7	1083.5	923.3	827.7
50°	738.7	802.2	951.7	1101.3	1172.5	1243.7	1176.6	1109.6	977.8	846.1	763.1
52.5°	675.8	727.4	852.6	977.8	1039.0	1100.1	1042.5	985.0	880.5	776.1	703.7
55°	613.5	657.4	766.0	874.6	916.1	957.7	913.2	868.7	784.4	700.2	639.0
57.5°	555.4	594.5	683.5	772.5	804.6	836.6	796.3	755.9	692.4	629.0	577.9
60°	498.4	530.5	604.6	678.8	698.4	718.0	685.3	652.7	608.2	563.7	518.0
62.5°	445.6	474.7	529.9	585.0	598.1	611.2	586.2	561.3	527.5	493.7	458.1
65°	391.0	413.0	458.1	503.2	511.5	519.8	497.8	475.9	450.4	424.8	398.7
67.5°	340.6	356.0	392.8	429.6	430.2	430.8	413.0	395.2	380.9	366.7	345.9
70°	291.3	306.2	330.5	354.8	355.4	356.0	341.8	327.5	316.8	306.2	290.7
72.5°	240.9	251.6	270.0	288.4	287.2	286.0	277.1	268.2	259.9	251.6	240.3
75°	195.2	204.1	216.6	229.0	225.5	221.9	217.2	212.4	205.3	198.2	191.1
77.5°	153.7	159.0	166.1	173.3	170.9	168.5	164.4	160.2	154.9	149.5	146.6
80°	112.7	115.1	119.9	124.6	123.4	122.2	117.5	112.7	111.6	110.4	106.2
82.5°	76.5	79.5	80.7	81.9	81.3	80.7	77.1	73.6	72.4	71.2	70.6
85°	45.7	46.3	46.9	47.5	45.7	43.9	42.7	41.5	41.5	41.5	40.9
87.5°	20.8	21.4	21.4	21.4	20.8	20.2	19.0	17.8	18.4	19.0	19.0
90°	6.0	5.0	4.1	3.5	2.8	1.9	1.3	0.6	1.3	1.9	2.8
92.5°	48.5	31.8	21.7	16.1	12.9	10.1	6.9	4.7	6.9	10.1	12.9
95°	114.7	67.7	41.0	28.7	20.5	15.1	11.7	10.7	11.7	15.1	20.5
97.5°	127.6	73.1	46.6	33.1	24.9	20.2	17.3	17.0	17.3	20.2	24.9
100°	118.8	72.2	50.1	37.8	30.3	25.8	23.6	23.3	23.6	25.8	30.3
102.5°	111.2	73.4	54.2	43.2	36.6	32.5	30.6	29.9	30.6	32.5	36.6
105°	108.4	75.9	58.9	49.2	43.2	39.4	37.5	36.6	37.5	39.4	43.2
107.5°	107.8	80.0	64.9	55.8	50.1	46.3	44.4	43.5	44.4	46.3	50.1
110°	109.3	85.4	71.2	62.4	57.0	53.6	52.0	51.0	52.0	53.6	57.0





TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	112.5	90.8	77.8	69.3	64.0	60.5	58.9	58.0	58.9	60.5	64.0
115°	116.0	96.7	84.8	76.3	70.9	67.7	65.9	64.6	65.9	67.7	70.9
117.5°	120.4	103.0	91.1	83.2	77.2	74.4	72.8	71.2	72.8	74.4	77.2
120°	125.4	109.0	97.7	89.8	83.8	80.7	79.1	78.1	79.1	80.7	83.8
122.5°	130.1	115.3	104.3	95.8	90.1	86.7	85.1	84.1	85.1	86.7	90.1
125°	135.2	121.3	110.3	101.8	95.8	92.3	90.4	89.8	90.4	92.3	95.8
127.5°	139.3	126.7	116.0	107.5	100.8	97.4	95.2	94.2	95.2	97.4	100.8
130°	143.4	131.4	121.0	112.5	105.9	102.1	99.3	98.3	99.3	102.1	105.9
132.5°	147.2	135.5	125.4	117.2	110.6	105.9	102.7	101.5	102.7	105.9	110.6
135°	150.3	139.6	129.8	121.3	114.7	110.0	106.5	105.2	106.5	110.0	114.7
137.5°	152.8	142.4	133.0	125.1	118.5	113.4	110.0	108.7	110.0	113.4	118.5
140°	154.7	145.3	136.1	128.3	121.9	116.9	113.8	112.2	113.8	116.9	121.9
142.5°	156.6	147.5	138.6	131.4	125.1	120.7	117.2	116.0	117.2	120.7	125.1
145°	157.9	149.4	141.2	133.9	128.6	123.8	121.0	120.1	121.0	123.8	128.6
147.5°	158.8	150.9	143.4	137.1	131.7	127.6	124.8	124.2	124.8	127.6	131.7
150°	159.1	152.5	145.3	139.6	135.2	131.1	128.6	128.3	128.6	131.1	135.2
152.5°	159.8	153.5	147.5	142.1	138.3	134.9	132.3	132.3	132.3	134.9	138.3
155°	159.8	154.7	149.4	145.0	141.5	138.3	136.4	136.4	136.4	138.3	141.5
157.5°	160.1	155.4	150.9	147.5	144.3	141.5	139.9	139.6	139.9	141.5	144.3
160°	160.1	156.3	152.5	149.4	147.2	144.6	143.4	143.4	143.4	144.6	147.2
162.5°	159.8	156.6	153.5	150.9	149.0	147.2	146.2	146.2	146.2	147.2	149.0
165°	159.1	156.9	154.4	152.2	150.9	149.4	148.7	149.0	148.7	149.4	150.9
167.5°	158.8	156.9	155.0	153.5	152.5	151.3	150.9	151.3	150.9	151.3	152.5
170°	157.9	156.6	155.0	154.4	153.8	152.8	152.5	153.1	152.5	152.8	153.8
172.5°	157.6	156.6	155.4	155.0	154.7	154.1	154.1	154.4	154.1	154.1	154.7
175°	156.9	156.3	155.7	155.4	155.4	154.7	155.0	155.4	155.0	154.7	155.4
177.5°	156.6	156.0	155.7	155.7	155.7	155.4	155.7	156.0	155.7	155.4	155.7
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3	2557.3
2.5°	2454.1	2431.0	2407.8	2390.0	2372.2	2342.0	2311.7	2304.6	2297.5	2287.4	2277.3
5°	2327.1	2270.2	2213.2	2162.2	2111.1	2071.4	2031.6	2005.5	1979.4	1960.4	1941.4
7.5°	2178.8	2093.3	2007.9	1947.4	1886.9	1829.3	1771.7	1753.4	1735.0	1710.0	1685.1
10°	2035.2	1940.9	1846.5	1767.6	1688.7	1632.3	1575.9	1553.4	1530.8	1499.4	1468.0
12.5°	1907.0	1803.8	1700.5	1621.0	1541.5	1486.9	1432.4	1399.7	1367.1	1349.3	1331.5
15°	1772.9	1662.6	1552.2	1478.6	1405.1	1355.8	1306.6	1278.1	1249.6	1232.4	1215.2
17.5°	1654.3	1545.1	1435.9	1365.3	1294.7	1249.6	1204.5	1179.6	1154.7	1141.6	1128.6
20°	1541.5	1434.7	1327.9	1259.1	1190.3	1153.5	1116.7	1100.7	1084.6	1074.0	1063.3
22.5°	1438.3	1333.3	1228.2	1169.5	1110.8	1081.1	1051.4	1040.1	1028.9	1020.0	1011.1
25°	1335.0	1241.3	1147.5	1097.7	1047.9	1023.5	999.2	987.9	976.7	967.8	958.9
27.5°	1250.8	1161.2	1071.6	1028.9	986.2	967.2	948.2	939.3	930.4	922.1	913.8
30°	1168.9	1088.8	1008.7	971.9	935.1	917.9	900.7	891.8	882.9	875.2	867.5
32.5°	1093.0	1024.1	955.3	921.5	887.7	873.4	859.2	848.5	837.8	831.9	825.9
35°	1020.6	958.9	897.1	869.3	841.4	827.1	812.9	804.0	795.1	790.3	785.6
37.5°	958.9	903.7	848.5	821.8	795.1	781.4	767.8	760.1	752.4	750.6	748.8
40°	896.0	848.5	801.0	774.9	748.8	736.9	725.1	720.3	715.6	714.4	713.2
42.5°	843.7	797.5	751.2	727.4	703.7	693.6	683.5	681.2	678.8	680.6	682.4
45°	783.2	744.7	706.1	684.1	662.2	653.9	645.6	643.8	642.0	645.6	649.1
47.5°	732.2	696.6	661.0	640.2	619.5	613.5	607.6	607.0	606.4	611.2	615.9
50°	680.0	645.6	611.2	594.5	577.9	572.6	567.2	569.0	570.8	578.5	586.2
52.5°	631.3	599.3	567.2	551.8	536.4	532.8	529.3	533.4	537.6	545.9	554.2
55°	577.9	548.9	519.8	507.9	496.0	492.5	488.9	497.2	505.5	513.2	521.0
57.5°	526.9	501.4	475.9	465.2	454.5	453.9	453.3	461.0	468.7	477.1	485.4
60°	472.3	450.9	429.6	421.3	413.0	414.2	415.3	424.2	433.1	439.7	446.2
62.5°	422.5	404.7	386.9	379.2	371.4	374.4	377.4	386.3	395.2	402.9	410.6
65°	372.6	357.8	343.0	337.6	332.3	336.4	340.6	348.3	356.0	361.4	366.7
67.5°	325.2	312.7	300.2	296.1	291.9	296.1	300.2	307.9	315.7	321.0	326.3
70°	275.3	265.2	255.1	252.2	249.2	254.0	258.7	265.2	271.8	277.1	282.4
72.5°	229.0	221.3	213.6	213.0	212.4	216.6	220.7	227.3	233.8	237.3	240.9
75°	183.9	179.8	175.6	175.0	174.4	178.6	182.8	186.3	189.9	192.8	195.8
77.5°	143.6	140.0	136.5	137.1	137.7	140.6	143.6	147.2	150.7	152.5	154.3
80°	102.1	100.9	99.7	100.9	102.1	104.4	106.8	109.2	111.6	112.7	113.9
82.5°	70.0	68.8	67.6	69.4	71.2	73.0	74.8	76.5	78.3	78.9	79.5
85°	40.3	42.1	43.9	43.9	43.9	44.5	45.1	45.7	46.3	45.7	45.1
87.5°	19.0	19.6	20.2	20.2	20.2	20.8	21.4	21.4	21.4	20.8	20.2
90°	3.5	4.1	5.0	6.0	6.9	7.9	7.6	7.9	8.2	8.5	9.1
92.5°	16.1	21.7	31.8	48.5	64.9	58.6	43.8	31.2	24.3	21.1	18.9
95°	28.7	41.0	67.7	114.7	166.4	186.9	151.6	113.4	76.9	60.2	48.8
97.5°	33.1	46.6	73.1	127.6	214.6	287.4	297.2	260.6	196.6	155.0	119.1
100°	37.8	50.1	72.2	118.8	201.7	298.4	360.5	371.5	346.0	309.1	264.4
102.5°	43.2	54.2	73.4	111.2	182.8	277.9	363.6	408.4	413.7	396.1	371.8
105°	49.2	58.9	75.9	108.4	168.0	253.4	343.8	409.6	441.2	447.1	439.0
107.5°	55.8	64.9	80.0	107.8	157.2	231.6	315.4	390.7	440.2	464.8	473.3
110°	62.4	71.2	85.4	109.3	151.6	213.6	289.0	361.1	419.1	458.8	480.9



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	69.3	77.8	90.8	112.5	148.4	201.7	266.0	331.8	391.4	437.1	467.0
115°	76.3	84.8	96.7	116.0	148.1	193.8	248.3	306.6	361.4	407.8	442.1
117.5°	83.2	91.1	103.0	120.4	148.4	188.4	236.7	287.1	335.6	378.1	413.7
120°	89.8	97.7	109.0	125.4	149.7	185.0	227.8	272.3	314.8	352.6	384.4
122.5°	95.8	104.3	115.3	130.1	151.9	182.8	220.6	260.6	298.1	332.4	361.4
125°	101.8	110.3	121.3	135.2	154.1	180.9	214.6	250.5	284.9	315.1	340.3
127.5°	107.5	116.0	126.7	139.3	156.6	179.9	208.9	241.4	272.6	300.3	323.6
130°	112.5	121.0	131.4	143.4	159.1	179.0	204.5	232.9	261.2	286.8	308.2
132.5°	117.2	125.4	135.5	147.2	161.0	178.7	200.4	225.0	250.5	273.8	294.0
135°	121.3	129.8	139.6	150.3	162.9	178.4	196.9	218.1	240.4	260.9	278.9
137.5°	125.1	133.0	142.4	152.8	164.2	177.7	193.8	211.4	230.3	248.6	264.7
140°	128.3	136.1	145.3	154.7	165.4	177.4	191.0	205.8	221.8	237.0	250.5
142.5°	131.4	138.6	147.5	156.6	166.4	176.8	188.4	200.4	213.6	226.3	237.6
145°	133.9	141.2	149.4	157.9	166.7	176.1	186.2	196.3	206.7	216.8	225.9
147.5°	137.1	143.4	150.9	158.8	166.7	175.2	184.0	192.8	201.4	209.9	216.5
150°	139.6	145.3	152.5	159.1	166.7	173.9	181.8	189.1	196.3	202.9	208.9
152.5°	142.1	147.5	153.5	159.8	165.7	172.4	179.3	185.6	191.6	197.3	202.0
155°	145.0	149.4	154.7	159.8	165.1	170.5	176.8	182.1	187.2	191.9	195.7
157.5°	147.5	150.9	155.4	160.1	164.2	168.9	173.9	178.4	182.8	186.5	189.7
160°	149.4	152.5	156.3	160.1	163.5	167.0	171.1	175.2	178.7	181.8	184.0
162.5°	150.9	153.5	156.6	159.8	162.3	165.1	168.3	171.4	174.3	177.1	179.0
165°	152.2	154.4	156.9	159.1	161.0	163.2	165.7	168.3	170.2	172.4	173.9
167.5°	153.5	155.0	156.9	158.8	159.8	161.3	163.2	165.4	167.0	168.3	169.5
170°	154.4	155.0	156.6	157.9	158.5	159.4	161.0	162.6	163.5	164.8	165.4
172.5°	155.0	155.4	156.6	157.6	157.6	157.9	158.8	160.1	160.7	161.7	162.0
175°	155.4	155.7	156.3	156.9	156.6	156.6	157.2	157.9	158.2	158.8	158.8
177.5°	155.7	155.7	156.0	156.6	156.0	155.7	156.0	156.3	156.6	156.9	156.9
180°	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7	155.7



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	2557.3	2557.3	2557.3	2557.3
2.5°	2273.1	2269.0	2252.4	2235.7
5°	1927.2	1913.0	1908.2	1903.5
7.5°	1683.9	1682.7	1657.8	1632.9
10°	1469.7	1471.5	1449.0	1426.4
12.5°	1316.6	1301.8	1300.0	1298.3
15°	1201.5	1187.9	1185.5	1183.1
17.5°	1120.2	1111.9	1109.6	1107.2
20°	1058.5	1053.8	1049.6	1045.5
22.5°	1005.1	999.2	995.6	992.1
25°	953.5	948.2	947.0	945.8
27.5°	907.2	900.7	900.7	900.7
30°	863.3	859.2	857.4	855.6
32.5°	822.4	818.8	818.8	818.8
35°	783.8	782.0	779.7	777.3
37.5°	748.8	748.8	747.6	746.4
40°	715.0	716.8	716.8	716.8
42.5°	684.1	685.9	685.9	685.9
45°	652.1	655.1	656.2	657.4
47.5°	620.6	625.4	626.6	627.8
50°	589.8	593.4	593.9	594.5
52.5°	558.3	562.5	565.5	568.4
55°	525.1	529.3	531.0	532.8
57.5°	489.5	493.7	494.3	494.9
60°	450.4	454.5	455.7	456.9
62.5°	413.0	415.3	416.5	417.7
65°	370.3	373.8	376.2	378.6
67.5°	329.3	332.3	332.3	332.3
70°	283.6	284.8	286.6	288.4
72.5°	241.5	242.1	242.1	242.1
75°	197.0	198.2	198.8	199.4
77.5°	154.9	155.5	155.5	155.5
80°	113.3	112.7	112.7	112.7
82.5°	77.7	75.9	75.9	75.9
85°	44.5	43.9	44.5	45.1
87.5°	20.2	20.2	20.2	20.2
90°	8.8	9.1	9.5	9.1
92.5°	18.3	17.0	17.3	16.7
95°	42.9	40.0	37.8	36.6
97.5°	98.0	86.0	78.5	75.0
100°	232.6	209.6	197.3	197.6
102.5°	348.8	331.8	322.0	312.9
105°	424.5	412.5	402.4	400.8
107.5°	471.4	465.7	461.6	458.2
110°	489.7	492.2	491.6	490.9



TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	485.0	494.1	497.2	497.6
115°	465.7	479.6	485.9	487.5
117.5°	438.3	453.8	463.2	465.4
120°	409.3	427.0	434.5	436.4
122.5°	382.9	398.3	406.8	409.3
125°	360.5	374.4	382.2	384.4
127.5°	341.9	353.9	361.1	363.0
130°	324.9	336.2	342.8	345.4
132.5°	309.4	320.8	326.5	328.0
135°	294.3	303.8	309.4	311.6
137.5°	277.9	287.7	292.4	294.3
140°	262.5	271.3	276.4	276.0
142.5°	247.4	254.9	259.3	259.0
145°	233.8	240.4	243.0	243.6
147.5°	222.8	227.5	230.0	230.3
150°	213.6	217.1	219.0	219.0
152.5°	205.5	208.6	209.6	209.6
155°	198.5	201.0	201.7	202.0
157.5°	192.2	194.1	194.7	194.7
160°	186.2	188.1	188.1	187.8
162.5°	180.2	181.8	181.8	181.5
165°	175.2	176.5	176.1	176.1
167.5°	170.2	171.1	170.8	170.8
170°	165.7	166.4	166.1	166.1
172.5°	162.0	162.6	162.0	161.7
175°	158.8	159.1	158.8	158.5
177.5°	156.6	156.9	156.3	156.3
180°	155.7	155.7	155.7	155.7

TEST NUMBER: P831122

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-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	17.38	18.50	18.06	19.19	20.00	19.62	20.73	20.30	21.43	22.24
	3H	19.05	20.05	19.74	20.75	21.60	21.06	22.06	21.76	22.76	23.61
	4H	19.63	20.58	20.35	21.29	22.15	21.52	22.46	22.24	23.18	24.04
	6H	20.02	20.89	20.75	21.61	22.48	21.81	22.68	22.54	23.40	24.28
	8H	20.12	20.95	20.86	21.69	22.57	21.88	22.70	22.62	23.45	24.32
	12H	20.17	20.96	20.92	21.70	22.60	21.91	22.69	22.65	23.43	24.33
4H	2H	17.98	18.93	18.70	19.64	20.50	19.81	20.75	20.53	21.47	22.33
	3H	19.84	20.62	20.57	21.37	22.25	21.45	22.23	22.18	22.99	23.86
	4H	20.54	21.25	21.29	22.01	22.91	22.04	22.75	22.79	23.51	24.41
	6H	21.03	21.65	21.80	22.42	23.34	22.46	23.08	23.23	23.85	24.77
	8H	21.17	21.75	21.94	22.52	23.45	22.58	23.15	23.35	23.93	24.85
	12H	21.25	21.77	22.04	22.56	23.50	22.63	23.15	23.42	23.95	24.88
8H	4H	20.83	21.40	21.60	22.18	23.10	22.17	22.74	22.94	23.52	24.44
	6H	21.43	21.90	22.22	22.72	23.64	22.68	23.15	23.48	23.97	24.90
	8H	21.63	22.06	22.45	22.87	23.82	22.86	23.28	23.67	24.10	25.04
	12H	21.77	22.14	22.58	22.95	23.95	22.97	23.34	23.78	24.15	25.15
12H	4H	20.84	21.35	21.63	22.15	23.08	22.15	22.67	22.94	23.47	24.40
	6H	21.48	21.90	22.29	22.72	23.66	22.69	23.12	23.50	23.93	24.88
	8H	21.72	22.09	22.53	22.90	23.90	22.91	23.28	23.72	24.08	25.09