

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: P831121

Luminaire Tested: S123DIP-S1000D365U940-4F0-1E-UDD-G1

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P831121
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-S1000D365U940-4F0-1E-UDD-G1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 1000 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: -

Summary

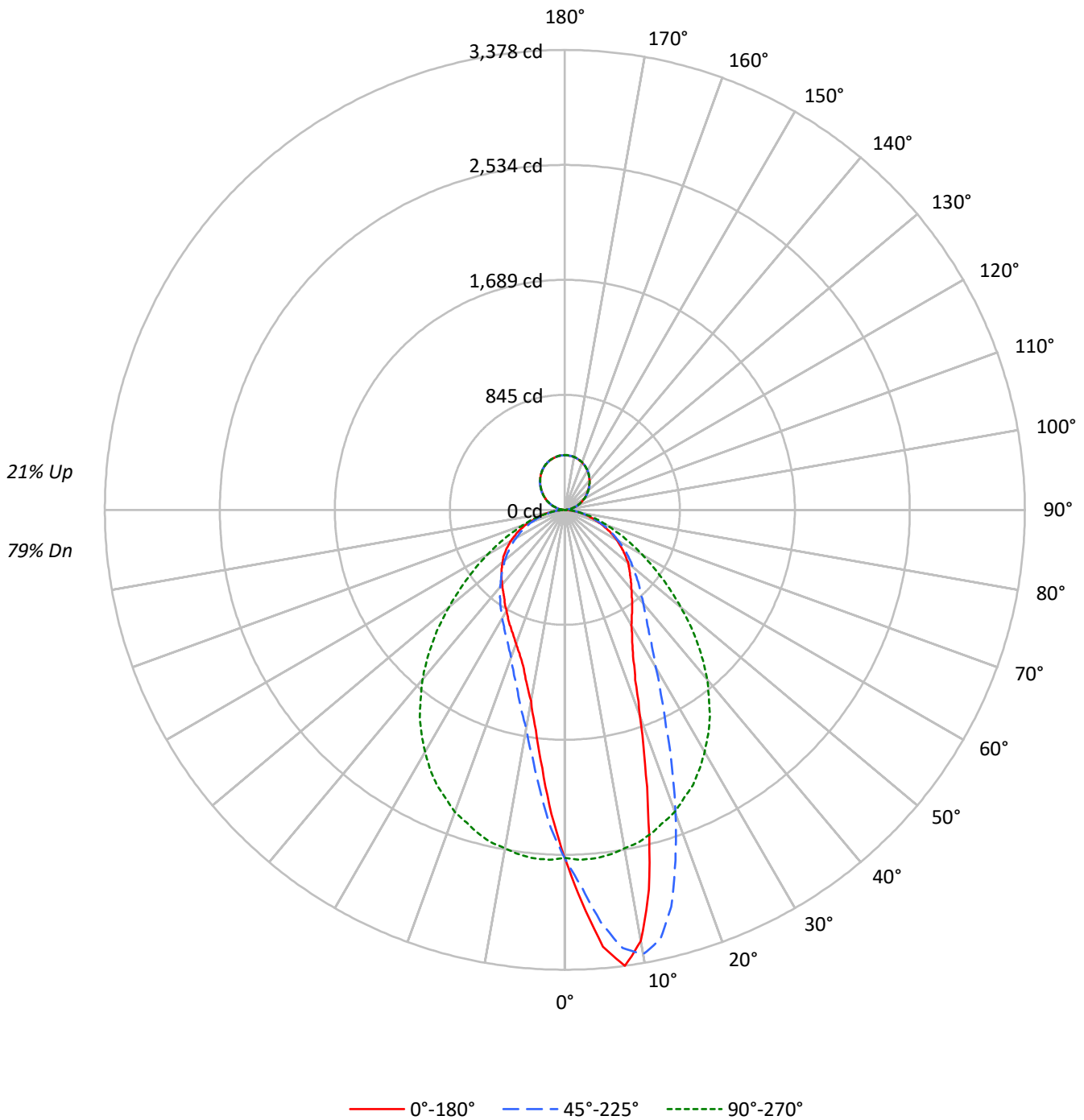
Lumens per Lamp: N/A
Luminaire Lumens: 5223.4 lumens
Efficiency: N/A
Efficacy: 115.8 lumens/watt
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 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

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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	114	114	114	114	109	109	109	109	99	99	99	91	91	91	82	82	82	79				
1	105	101	97	94	100	96	93	90	88	86	83	81	79	77	74	73	71	68				
2	96	89	83	78	92	85	80	75	79	74	71	72	69	66	66	64	61	58				
3	89	79	72	66	84	76	70	64	70	65	61	65	61	57	60	56	53	51				
4	82	71	63	57	78	68	61	56	63	57	53	59	54	50	54	50	47	44				
5	76	64	56	50	72	62	54	49	57	51	46	53	48	44	49	45	42	39				
6	70	58	50	44	67	56	49	43	52	46	41	49	43	39	45	41	38	35				
7	65	53	45	40	63	51	44	39	48	42	37	45	40	36	42	37	34	32				
8	61	49	41	36	59	47	40	35	44	38	34	42	36	32	39	34	31	29				
9	57	45	38	33	55	44	37	32	41	35	31	39	33	30	36	32	28	27				
10	54	42	35	30	52	41	34	29	38	32	28	36	31	27	34	29	26	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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	241.8	4.6
10°-20°	601.5	11.5
20°-30°	712.2	13.6
30°-40°	716.1	13.7
40°-50°	657.0	12.6
50°-60°	542.2	10.4
60°-70°	383.6	7.3
70°-80°	204.8	3.9
80°-90°	52.8	1.0
90°-100°	25.8	0.5
100°-110°	78.2	1.5
110°-120°	133.1	2.5
120°-130°	175.0	3.4
130°-140°	196.8	3.8
140°-150°	193.4	3.7
150°-160°	162.9	3.1
160°-170°	108.4	2.1
170°-180°	38.0	0.7
0°-30°	1555.4	29.8
0°-40°	2271.5	43.5
0°-60°	3470.7	66.4
0°-90°	4111.9	78.7
90°-120°	237.0	4.5
90°-150°	802.3	15.4
90°-180°	1112.0	21.3
0°-180°	5223.4	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°	10	8	0	8	10	7
95°	25	23	19	23	25	25
105°	75	74	71	74	75	79
115°	134	134	134	134	134	133
125°	194	196	196	196	194	173
135°	254	256	254	256	254	195
145°	308	310	308	310	308	193
155°	353	354	353	354	353	162
165°	384	384	385	384	384	108
175°	399	399	400	399	399	38
180°	401	401	401	401	401	



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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°	9.5	9.3	9.2	9.0	8.9	8.7	8.4	8.1	7.8	7.6	6.7
92.5°	13.6	13.7	13.8	14.0	14.1	14.1	13.9	13.7	13.4	13.2	12.8
95°	24.6	24.6	24.6	24.6	24.6	24.4	24.2	23.9	23.6	23.3	22.8
97.5°	35.3	35.4	35.4	35.5	35.6	35.4	35.1	34.7	34.4	34.0	33.6
100°	47.9	47.8	47.6	47.5	47.3	47.2	47.0	46.7	46.5	46.3	46.0
102.5°	60.8	60.9	61.0	61.0	61.1	61.0	60.8	60.6	60.4	60.2	59.7
105°	75.0	74.9	74.7	74.6	74.4	74.4	74.4	74.4	74.4	74.4	73.7
107.5°	89.5	89.6	89.6	89.7	89.8	89.7	89.5	89.3	89.1	88.9	88.6
110°	104.3	104.4	104.6	104.7	104.9	104.8	104.5	104.2	104.0	103.7	103.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.1	120.1	120.1	120.1	120.1	119.9	119.5	119.2	118.8	118.5	118.5
115°	134.2	134.3	134.4	134.5	134.5	134.5	134.5	134.4	134.3	134.2	134.4
117.5°	148.7	148.9	149.2	149.4	149.6	149.7	149.7	149.7	149.7	149.7	149.8
120°	164.2	164.3	164.5	164.6	164.7	164.8	164.9	165.0	165.1	165.1	165.5
122.5°	179.0	179.2	179.4	179.6	179.8	180.0	180.3	180.5	180.7	180.9	181.0
125°	193.8	194.1	194.4	194.6	194.9	195.2	195.5	195.8	196.0	196.3	196.5
127.5°	208.6	208.9	209.2	209.5	209.7	210.1	210.5	210.9	211.3	211.8	211.9
130°	223.1	223.6	224.1	224.6	225.1	225.5	225.7	226.0	226.3	226.6	226.8
132.5°	238.2	238.6	238.9	239.3	239.6	240.0	240.3	240.7	241.0	241.4	241.5
135°	254.0	254.1	254.3	254.4	254.5	254.8	255.0	255.3	255.6	255.9	255.9
137.5°	267.9	268.1	268.3	268.5	268.7	269.0	269.3	269.7	270.0	270.4	270.2
140°	281.4	281.9	282.4	282.9	283.4	283.6	283.7	283.8	283.9	283.9	283.9
142.5°	295.3	295.6	296.0	296.3	296.7	296.9	297.0	297.0	297.1	297.2	297.0
145°	308.5	308.8	309.1	309.3	309.6	309.8	309.9	309.9	310.0	310.1	309.9
147.5°	320.5	320.9	321.3	321.7	322.2	322.4	322.4	322.4	322.4	322.4	322.2
150°	331.8	332.2	332.7	333.1	333.5	333.7	333.7	333.7	333.7	333.7	333.6
152.5°	342.9	343.2	343.6	343.9	344.3	344.4	344.2	344.1	343.9	343.8	343.7
155°	352.6	353.1	353.6	354.1	354.6	354.7	354.4	354.1	353.8	353.6	353.5
157.5°	361.8	362.2	362.6	363.0	363.4	363.5	363.2	363.0	362.7	362.4	362.3
160°	370.6	370.9	371.1	371.4	371.7	371.7	371.3	371.0	370.6	370.3	370.3
162.5°	377.2	377.7	378.2	378.7	379.2	379.2	378.9	378.5	378.2	377.8	377.8
165°	383.5	384.0	384.5	385.0	385.5	385.5	385.1	384.7	384.2	383.8	383.8
167.5°	389.2	389.6	390.0	390.4	390.9	390.9	390.4	390.0	389.6	389.2	389.1
170°	393.3	393.8	394.3	394.7	395.2	395.2	394.7	394.3	393.8	393.3	393.3
172.5°	396.4	396.9	397.4	397.9	398.4	398.4	398.0	397.6	397.2	396.7	396.7
175°	398.6	399.1	399.6	400.1	400.6	400.6	400.2	399.8	399.4	398.9	398.9
177.5°	399.9	400.4	400.9	401.4	401.9	401.9	401.5	401.0	400.6	400.2	400.2
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



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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°	5.7	4.8	3.9	3.1	2.4	1.7	1.0	0.3	1.0	1.7	2.4
92.5°	12.4	12.0	11.6	11.1	10.7	10.3	9.9	9.5	9.9	10.3	10.7
95°	22.2	21.6	21.1	20.6	20.1	19.6	19.1	18.6	19.1	19.6	20.1
97.5°	33.2	32.8	32.4	32.0	31.6	31.3	30.9	30.6	30.9	31.3	31.6
100°	45.6	45.3	44.9	44.5	44.1	43.7	43.3	42.9	43.3	43.7	44.1
102.5°	59.2	58.7	58.2	57.9	57.7	57.5	57.2	57.0	57.2	57.5	57.7
105°	73.1	72.5	71.8	71.5	71.3	71.2	71.0	70.9	71.0	71.2	71.3
107.5°	88.3	88.0	87.7	87.6	87.5	87.4	87.4	87.3	87.4	87.4	87.5
110°	103.4	103.3	103.1	103.0	102.8	102.7	102.6	102.4	102.6	102.7	102.8



TEST NUMBER: P831121

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	118.5	118.5	118.5	118.5	118.4	118.3	118.2	118.2	118.2	118.3	118.4
115°	134.5	134.7	134.8	134.8	134.6	134.3	134.1	133.9	134.1	134.3	134.6
117.5°	150.0	150.1	150.2	150.3	150.2	150.1	150.1	150.0	150.1	150.1	150.2
120°	165.8	166.2	166.5	166.5	166.1	165.6	165.2	164.8	165.2	165.6	166.1
122.5°	181.2	181.3	181.4	181.4	181.1	180.8	180.5	180.3	180.5	180.8	181.1
125°	196.6	196.7	196.9	196.8	196.6	196.4	196.2	196.0	196.2	196.4	196.6
127.5°	212.0	212.2	212.3	212.2	211.8	211.3	210.9	210.5	210.9	211.3	211.8
130°	227.0	227.2	227.4	227.2	226.7	226.1	225.6	225.0	225.6	226.1	226.7
132.5°	241.7	241.8	241.9	241.7	241.2	240.6	240.1	239.5	240.1	240.6	241.2
135°	256.0	256.1	256.2	256.0	255.6	255.1	254.7	254.3	254.7	255.1	255.6
137.5°	270.0	269.7	269.5	269.3	268.9	268.6	268.2	267.9	268.2	268.6	268.9
140°	283.8	283.7	283.6	283.4	283.1	282.7	282.4	282.0	282.4	282.7	283.1
142.5°	296.9	296.7	296.6	296.4	296.0	295.7	295.3	295.0	295.3	295.7	296.0
145°	309.7	309.5	309.2	309.1	308.9	308.8	308.6	308.5	308.6	308.8	308.9
147.5°	322.0	321.7	321.5	321.3	321.0	320.7	320.4	320.2	320.4	320.7	321.0
150°	333.4	333.3	333.2	333.0	332.9	332.7	332.6	332.5	332.6	332.7	332.9
152.5°	343.7	343.6	343.5	343.4	343.2	343.0	342.7	342.5	342.7	343.0	343.2
155°	353.4	353.4	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3	353.3
157.5°	362.3	362.2	362.1	362.1	362.2	362.3	362.3	362.4	362.3	362.3	362.2
160°	370.3	370.3	370.3	370.3	370.5	370.6	370.8	370.9	370.8	370.6	370.5
162.5°	377.7	377.6	377.6	377.6	377.8	378.0	378.3	378.5	378.3	378.0	377.8
165°	383.8	383.8	383.8	383.9	384.1	384.3	384.6	384.8	384.6	384.3	384.1
167.5°	389.0	389.0	388.9	389.0	389.3	389.6	389.8	390.1	389.8	389.6	389.3
170°	393.3	393.3	393.3	393.4	393.7	394.0	394.3	394.5	394.3	394.0	393.7
172.5°	396.7	396.7	396.7	396.9	397.2	397.4	397.7	398.0	397.7	397.4	397.2
175°	398.9	398.9	398.9	399.1	399.4	399.6	399.9	400.2	399.9	399.6	399.4
177.5°	400.2	400.2	400.2	400.3	400.6	400.9	401.2	401.5	401.2	400.9	400.6
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



TEST NUMBER: P831121

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G1

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°	3.1	3.9	4.8	5.7	6.7	7.6	7.8	8.1	8.4	8.7	8.9
92.5°	11.1	11.6	12.0	12.4	12.8	13.2	13.4	13.7	13.9	14.1	14.1
95°	20.6	21.1	21.6	22.2	22.8	23.3	23.6	23.9	24.2	24.4	24.6
97.5°	32.0	32.4	32.8	33.2	33.6	34.0	34.4	34.7	35.1	35.4	35.6
100°	44.5	44.9	45.3	45.6	46.0	46.3	46.5	46.7	47.0	47.2	47.3
102.5°	57.9	58.2	58.7	59.2	59.7	60.2	60.4	60.6	60.8	61.0	61.1
105°	71.5	71.8	72.5	73.1	73.7	74.4	74.4	74.4	74.4	74.4	74.4
107.5°	87.6	87.7	88.0	88.3	88.6	88.9	89.1	89.3	89.5	89.7	89.8
110°	103.0	103.1	103.3	103.4	103.5	103.7	104.0	104.2	104.5	104.8	104.9



TEST NUMBER: P831121

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	118.5	118.5	118.5	118.5	118.5	118.5	118.8	119.2	119.5	119.9	120.1
115°	134.8	134.8	134.7	134.5	134.4	134.2	134.3	134.4	134.5	134.5	134.5
117.5°	150.3	150.2	150.1	150.0	149.8	149.7	149.7	149.7	149.7	149.7	149.6
120°	166.5	166.5	166.2	165.8	165.5	165.1	165.1	165.0	164.9	164.8	164.7
122.5°	181.4	181.4	181.3	181.2	181.0	180.9	180.7	180.5	180.3	180.0	179.8
125°	196.8	196.9	196.7	196.6	196.5	196.3	196.0	195.8	195.5	195.2	194.9
127.5°	212.2	212.3	212.2	212.0	211.9	211.8	211.3	210.9	210.5	210.1	209.7
130°	227.2	227.4	227.2	227.0	226.8	226.6	226.3	226.0	225.7	225.5	225.1
132.5°	241.7	241.9	241.8	241.7	241.5	241.4	241.0	240.7	240.3	240.0	239.6
135°	256.0	256.2	256.1	256.0	255.9	255.9	255.6	255.3	255.0	254.8	254.5
137.5°	269.3	269.5	269.7	270.0	270.2	270.4	270.0	269.7	269.3	269.0	268.7
140°	283.4	283.6	283.7	283.8	283.9	283.9	283.9	283.8	283.7	283.6	283.4
142.5°	296.4	296.6	296.7	296.9	297.0	297.2	297.1	297.0	297.0	296.9	296.7
145°	309.1	309.2	309.5	309.7	309.9	310.1	310.0	309.9	309.9	309.8	309.6
147.5°	321.3	321.5	321.7	322.0	322.2	322.4	322.4	322.4	322.4	322.4	322.2
150°	333.0	333.2	333.3	333.4	333.6	333.7	333.7	333.7	333.7	333.7	333.5
152.5°	343.4	343.5	343.6	343.7	343.7	343.8	343.9	344.1	344.2	344.4	344.3
155°	353.3	353.3	353.4	353.4	353.5	353.6	353.8	354.1	354.4	354.7	354.6
157.5°	362.1	362.1	362.2	362.3	362.3	362.4	362.7	363.0	363.2	363.5	363.4
160°	370.3	370.3	370.3	370.3	370.3	370.3	370.6	371.0	371.3	371.7	371.7
162.5°	377.6	377.6	377.6	377.7	377.8	377.8	378.2	378.5	378.9	379.2	379.2
165°	383.9	383.8	383.8	383.8	383.8	383.8	384.2	384.7	385.1	385.5	385.5
167.5°	389.0	388.9	389.0	389.0	389.1	389.2	389.6	390.0	390.4	390.9	390.9
170°	393.4	393.3	393.3	393.3	393.3	393.3	393.8	394.3	394.7	395.2	395.2
172.5°	396.9	396.7	396.7	396.7	396.7	396.7	397.2	397.6	398.0	398.4	398.4
175°	399.1	398.9	398.9	398.9	398.9	398.9	399.4	399.8	400.2	400.6	400.6
177.5°	400.3	400.2	400.2	400.2	400.2	400.2	400.6	401.0	401.5	401.9	401.9
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



TEST NUMBER: P831121

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G1

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°	9.0	9.2	9.3	9.5
92.5°	14.0	13.8	13.7	13.6
95°	24.6	24.6	24.6	24.6
97.5°	35.5	35.4	35.4	35.3
100°	47.5	47.6	47.8	47.9
102.5°	61.0	61.0	60.9	60.8
105°	74.6	74.7	74.9	75.0
107.5°	89.7	89.6	89.6	89.5
110°	104.7	104.6	104.4	104.3



TEST NUMBER: P831121

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-UDD-G1

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	120.1	120.1	120.1	120.1
115°	134.5	134.4	134.3	134.2
117.5°	149.4	149.2	148.9	148.7
120°	164.6	164.5	164.3	164.2
122.5°	179.6	179.4	179.2	179.0
125°	194.6	194.4	194.1	193.8
127.5°	209.5	209.2	208.9	208.6
130°	224.6	224.1	223.6	223.1
132.5°	239.3	238.9	238.6	238.2
135°	254.4	254.3	254.1	254.0
137.5°	268.5	268.3	268.1	267.9
140°	282.9	282.4	281.9	281.4
142.5°	296.3	296.0	295.6	295.3
145°	309.3	309.1	308.8	308.5
147.5°	321.7	321.3	320.9	320.5
150°	333.1	332.7	332.2	331.8
152.5°	343.9	343.6	343.2	342.9
155°	354.1	353.6	353.1	352.6
157.5°	363.0	362.6	362.2	361.8
160°	371.4	371.1	370.9	370.6
162.5°	378.7	378.2	377.7	377.2
165°	385.0	384.5	384.0	383.5
167.5°	390.4	390.0	389.6	389.2
170°	394.7	394.3	393.8	393.3
172.5°	397.9	397.4	396.9	396.4
175°	400.1	399.6	399.1	398.6
177.5°	401.4	400.9	400.4	399.9
180°	401.2	401.2	401.2	401.2

TEST NUMBER: P831121

CATALOG NUMBER: S123DIP-S1000D365U940-4F0-1E-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	17.45	18.57	18.12	19.26	20.05	19.68	20.81	20.36	21.49	22.29
	3H	19.11	20.12	19.80	20.82	21.65	21.13	22.14	21.81	22.83	23.66
	4H	19.70	20.65	20.41	21.36	22.20	21.59	22.54	22.29	23.24	24.09
	6H	20.09	20.96	20.80	21.68	22.53	21.88	22.75	22.59	23.47	24.32
	8H	20.19	21.02	20.92	21.76	22.62	21.95	22.78	22.68	23.52	24.37
	12H	20.24	21.04	20.98	21.77	22.65	21.97	22.77	22.71	23.50	24.38
4H	2H	18.05	19.00	18.76	19.71	20.55	19.88	20.83	20.59	21.53	22.38
	3H	19.90	20.70	20.62	21.44	22.30	21.52	22.31	22.24	23.05	23.91
	4H	20.61	21.33	21.35	22.07	22.96	22.11	22.83	22.85	23.57	24.46
	6H	21.10	21.72	21.86	22.49	23.39	22.53	23.15	23.29	23.92	24.82
	8H	21.24	21.82	22.00	22.59	23.50	22.65	23.23	23.41	23.99	24.90
	12H	21.32	21.84	22.10	22.63	23.55	22.70	23.22	23.48	24.01	24.93
8H	4H	20.90	21.48	21.66	22.24	23.15	22.24	22.82	23.00	23.58	24.49
	6H	21.50	21.97	22.28	22.78	23.69	22.75	23.23	23.54	24.04	24.95
	8H	21.70	22.13	22.51	22.94	23.87	22.93	23.36	23.73	24.16	25.09
	12H	21.84	22.21	22.64	23.01	24.00	23.04	23.42	23.85	24.22	25.20
12H	4H	20.91	21.43	21.69	22.22	23.13	22.22	22.74	23.00	23.53	24.45
	6H	21.55	21.97	22.35	22.78	23.71	22.76	23.19	23.57	24.00	24.93
	8H	21.79	22.17	22.60	22.97	23.95	22.98	23.35	23.78	24.15	25.14