

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: P831385

Luminaire Tested: S123DIP-S340D365U930-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831385  
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-S340D365U930-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

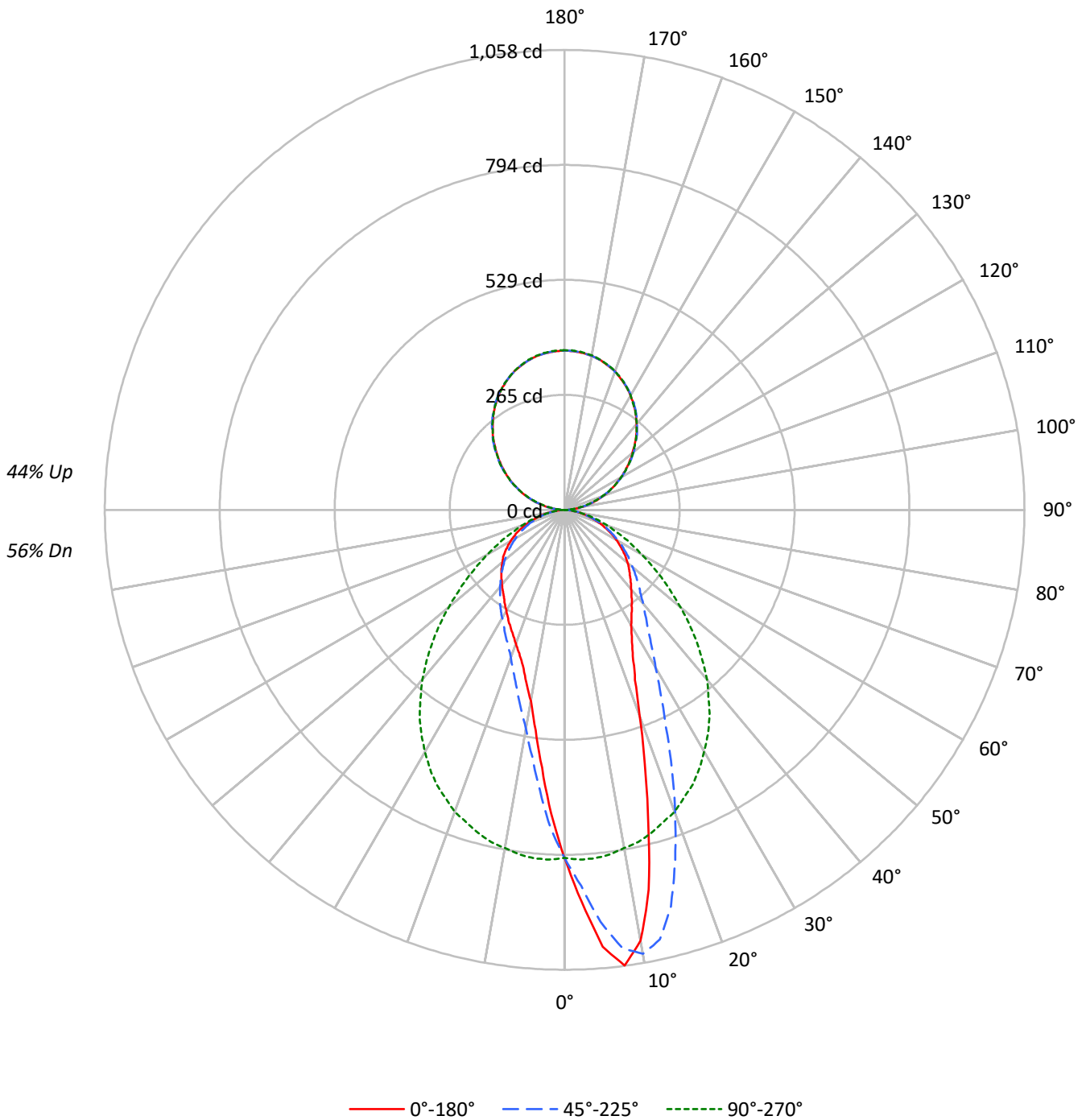
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2303.8 lumens  
Efficiency: N/A  
Efficacy: 102.8 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: General Diffuse  
  
Input Watts (W): 22.4  
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

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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	50	30	10	50	30	10	0				
RCR																															
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56													
1	100	96	92	88	93	89	86	83	77	74	72	66	64	62	55	54	53	48													
2	91	84	78	73	85	79	73	69	68	64	61	58	56	53	49	47	46	41													
3	84	75	68	62	78	70	64	59	61	56	52	52	49	46	44	42	40	36													
4	77	67	59	53	71	62	56	50	54	49	45	47	43	40	40	37	35	31													
5	71	60	52	46	66	56	49	44	49	44	39	43	38	35	37	33	31	28													
6	66	54	46	41	61	51	44	39	45	39	35	39	35	31	34	30	28	25													
7	61	49	41	36	57	46	39	34	41	35	31	36	31	28	31	28	25	23													
8	57	45	37	32	53	42	36	31	38	32	28	33	29	25	29	25	23	21													
9	53	41	34	29	50	39	32	28	35	29	26	31	26	23	27	23	21	19													
10	50	38	31	26	47	36	30	25	32	27	23	29	24	21	25	22	19	17													

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

	0°	45°	90°	135°	180°
0°	8617	8617	8617	8617	8617
5°	10897	10284	8694	7006	6438
10°	11002	11335	8636	5584	4880
15°	8286	10524	8576	4729	4126
20°	5774	8517	8467	4136	3748
25°	4403	6549	8280	3805	3515
30°	3808	5203	7982	3571	3329
35°	3533	4393	7638	3402	3197
40°	3346	3940	7156	3242	3153
45°	3235	3647	6543	3116	3133
50°	3178	3414	5816	3001	3116
55°	3061	3245	5103	2894	3130
60°	2951	3063	4398	2790	3078
65°	2771	2891	3795	2682	3018
70°	2559	2672	3226	2502	2842
75°	2316	2396	2766	2325	2595
80°	1909	2095	2188	2027	2188
85°	1519	1692	1606	1717	1741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 7470 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.7	3.3
10°-20°	188.3	8.2
20°-30°	222.9	9.7
30°-40°	224.1	9.7
40°-50°	205.6	8.9
50°-60°	169.7	7.4
60°-70°	120.1	5.2
70°-80°	64.1	2.8
80°-90°	17.0	0.7
90°-100°	23.6	1.0
100°-110°	71.5	3.1
110°-120°	121.7	5.3
120°-130°	160.0	6.9
130°-140°	179.9	7.8
140°-150°	176.9	7.7
150°-160°	148.9	6.5
160°-170°	99.1	4.3
170°-180°	34.7	1.5
0°-30°	486.9	21.1
0°-40°	711.0	30.9
0°-60°	1086.4	47.2
0°-90°	1287.6	55.9
90°-120°	216.7	9.4
90°-150°	733.5	31.8
90°-180°	1016.0	44.1
0°-180°	2303.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	800	800	800	800	800	
5°	1008	952	805	648	596	96
15°	744	944	770	424	370	205
25°	371	551	697	320	296	175
35°	269	334	581	259	243	169
45°	212	240	430	205	206	165
55°	163	173	272	154	167	146
65°	109	114	149	105	118	108
75°	56	58	66	56	62	59
85°	12	14	13	14	14	14
90°	9	7	0	7	9	5
95°	22	21	17	21	22	23
105°	69	68	65	68	69	73
115°	123	123	122	123	123	122
125°	177	180	179	180	177	158
135°	232	234	232	234	232	179
145°	282	284	282	284	282	176
155°	322	323	323	323	322	149
165°	351	351	352	351	351	99
175°	364	365	366	365	364	35
180°	367	367	367	367	367	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5
2.5°	902.3	901.3	900.4	895.8	891.1	888.9	886.7	880.0	873.3	865.9	858.4
5°	1008.5	1011.1	1013.7	1010.7	1007.8	998.7	989.5	977.5	965.4	951.8	938.3
7.5°	1057.5	1059.0	1060.5	1058.6	1056.8	1054.4	1052.0	1041.2	1030.4	1016.5	1002.6
10°	1006.6	1010.0	1013.3	1020.6	1027.8	1036.0	1044.2	1042.7	1041.2	1037.1	1033.0
12.5°	894.8	898.9	903.0	917.5	932.0	950.5	969.1	985.1	1001.1	1012.2	1023.4
15°	743.6	755.0	766.3	779.5	792.7	820.0	847.3	880.9	914.5	944.4	974.3
17.5°	612.5	616.8	621.1	635.2	649.3	683.7	718.0	756.8	795.7	845.2	894.8
20°	504.1	508.0	511.9	530.4	549.0	575.9	602.9	646.5	690.2	743.5	796.8
22.5°	423.5	429.6	435.7	446.1	456.5	482.3	508.1	547.0	585.8	644.7	703.5
25°	370.7	375.2	379.6	385.9	392.3	412.9	433.5	465.4	497.4	551.4	605.5
27.5°	334.7	336.5	338.4	344.7	351.0	364.4	377.8	405.3	432.7	478.6	524.5
30°	306.4	307.7	309.0	314.6	320.2	329.3	338.4	358.3	378.1	418.6	459.1
32.5°	286.8	287.7	288.6	292.9	297.2	303.7	310.2	324.6	339.1	372.6	406.0
35°	268.9	269.5	270.0	273.2	276.4	281.2	286.0	297.0	307.9	334.3	360.7
37.5°	253.3	254.1	254.8	256.7	258.5	262.8	267.1	275.8	284.5	304.8	325.0
40°	238.1	239.4	240.7	242.0	243.3	246.8	250.4	257.0	263.7	280.4	297.2
42.5°	225.1	226.4	227.7	228.3	228.8	230.9	232.9	239.0	245.2	257.6	270.0
45°	212.5	213.0	213.6	214.1	214.7	216.4	218.0	223.4	228.8	239.6	250.4
47.5°	201.0	201.0	201.0	201.3	201.7	203.2	204.7	208.6	212.5	220.8	229.2
50°	189.8	189.8	189.8	189.3	188.7	189.6	190.6	193.5	196.5	203.9	211.4
52.5°	176.4	176.4	176.4	176.6	176.8	176.8	176.8	179.4	182.0	188.7	195.4
55°	163.1	163.8	164.6	164.0	163.4	163.8	164.2	165.9	167.5	172.9	178.3
57.5°	149.7	150.1	150.4	150.3	150.1	150.3	150.4	151.9	153.4	157.5	161.6
60°	137.1	137.1	137.1	136.7	136.3	136.7	137.1	137.8	138.6	142.3	146.0
62.5°	123.0	123.1	123.3	123.5	123.7	123.3	123.0	123.9	124.8	127.6	130.4
65°	108.8	109.0	109.2	109.8	110.3	109.9	109.6	110.5	111.4	113.5	115.5
67.5°	96.2	95.8	95.5	95.6	95.8	96.4	96.9	97.1	97.3	99.5	101.8
70°	81.3	81.7	82.1	81.9	81.7	81.9	82.1	82.6	83.2	84.9	86.5
72.5°	68.0	68.2	68.3	68.3	68.3	68.7	69.1	69.6	70.2	71.1	72.1
75°	55.7	55.7	55.7	56.1	56.5	56.6	56.8	56.8	56.8	57.6	58.3
77.5°	42.3	43.3	44.2	44.0	43.8	44.2	44.6	45.1	45.7	46.1	46.4
80°	30.8	30.8	30.8	31.0	31.2	31.8	32.3	32.7	33.1	33.8	34.5
82.5°	19.7	19.9	20.1	20.6	21.2	21.5	21.9	22.5	23.0	23.0	23.0
85°	12.3	11.9	11.5	11.9	12.3	12.6	13.0	13.2	13.4	13.7	14.1
87.5°	5.9	5.9	5.9	5.9	5.9	6.1	6.3	6.3	6.3	6.3	6.3
90°	8.6	8.5	8.4	8.3	8.1	7.9	7.7	7.4	7.2	6.9	6.1
92.5°	12.4	12.5	12.6	12.8	12.9	12.9	12.7	12.5	12.3	12.1	11.7
95°	22.5	22.5	22.5	22.5	22.5	22.3	22.1	21.8	21.6	21.3	20.8
97.5°	32.3	32.3	32.4	32.5	32.5	32.4	32.1	31.8	31.4	31.1	30.7
100°	43.8	43.7	43.5	43.4	43.3	43.1	42.9	42.7	42.5	42.4	42.0
102.5°	55.6	55.7	55.7	55.8	55.9	55.8	55.6	55.4	55.2	55.0	54.6
105°	68.6	68.4	68.3	68.2	68.1	68.0	68.0	68.0	68.0	68.0	67.4
107.5°	81.8	81.9	82.0	82.0	82.1	82.0	81.8	81.6	81.4	81.2	81.0
110°	95.4	95.5	95.6	95.8	95.9	95.8	95.6	95.3	95.0	94.8	94.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	109.8	109.8	109.8	109.8	109.8	109.6	109.3	109.0	108.7	108.3	108.3
115°	122.7	122.8	122.9	122.9	123.0	123.0	122.9	122.9	122.8	122.7	122.9
117.5°	136.0	136.2	136.4	136.6	136.8	136.9	136.9	136.9	136.9	136.9	137.0
120°	150.1	150.2	150.4	150.5	150.6	150.7	150.8	150.8	150.9	151.0	151.3
122.5°	163.7	163.8	164.0	164.2	164.4	164.6	164.8	165.0	165.2	165.4	165.5
125°	177.2	177.4	177.7	178.0	178.2	178.5	178.7	179.0	179.2	179.5	179.6
127.5°	190.7	191.0	191.2	191.5	191.8	192.1	192.5	192.8	193.2	193.6	193.7
130°	204.0	204.4	204.9	205.3	205.8	206.1	206.4	206.6	206.9	207.2	207.3
132.5°	217.8	218.1	218.5	218.8	219.1	219.4	219.7	220.1	220.4	220.7	220.8
135°	232.2	232.4	232.5	232.6	232.7	232.9	233.2	233.4	233.7	234.0	234.0
137.5°	244.9	245.1	245.3	245.5	245.7	245.9	246.2	246.6	246.9	247.2	247.0
140°	257.3	257.7	258.2	258.6	259.1	259.3	259.4	259.5	259.5	259.6	259.5
142.5°	270.0	270.3	270.6	270.9	271.2	271.4	271.5	271.6	271.6	271.7	271.6
145°	282.1	282.3	282.6	282.8	283.1	283.3	283.3	283.4	283.4	283.5	283.3
147.5°	293.0	293.4	293.8	294.2	294.6	294.7	294.7	294.7	294.7	294.7	294.6
150°	303.4	303.8	304.2	304.5	304.9	305.1	305.1	305.1	305.1	305.1	305.0
152.5°	313.5	313.8	314.1	314.4	314.8	314.9	314.7	314.6	314.5	314.3	314.3
155°	322.4	322.9	323.3	323.7	324.2	324.3	324.0	323.8	323.5	323.3	323.2
157.5°	330.8	331.1	331.5	331.9	332.3	332.4	332.1	331.8	331.6	331.3	331.3
160°	338.8	339.1	339.3	339.6	339.9	339.8	339.5	339.2	338.9	338.5	338.5
162.5°	344.9	345.3	345.8	346.2	346.7	346.7	346.4	346.1	345.8	345.5	345.4
165°	350.6	351.1	351.5	352.0	352.4	352.5	352.1	351.7	351.3	350.9	350.9
167.5°	355.8	356.2	356.6	357.0	357.4	357.4	357.0	356.6	356.2	355.8	355.8
170°	359.6	360.0	360.5	360.9	361.4	361.4	360.9	360.5	360.0	359.6	359.6
172.5°	362.5	362.9	363.4	363.8	364.2	364.3	363.9	363.5	363.1	362.7	362.7
175°	364.5	364.9	365.4	365.8	366.3	366.3	365.9	365.5	365.1	364.8	364.8
177.5°	365.6	366.1	366.5	367.0	367.4	367.4	367.1	366.7	366.3	365.9	365.9
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5
2.5°	856.2	854.0	845.8	837.6	828.3	819.1	812.2	805.3	795.1	784.9	776.5
5°	927.9	917.5	900.2	882.9	859.5	836.1	820.4	804.6	783.4	762.2	745.3
7.5°	984.7	966.9	942.7	918.6	888.0	857.3	828.3	799.4	767.0	734.7	708.4
10°	1020.9	1008.9	981.0	953.1	912.1	871.1	830.6	790.1	748.5	706.9	672.0
12.5°	1024.5	1025.6	1000.0	974.3	927.9	881.5	832.2	783.0	730.6	678.3	637.6
15°	993.4	1012.6	998.5	984.3	937.5	890.7	830.2	769.6	709.3	648.9	601.9
17.5°	935.9	976.9	979.0	981.0	934.2	887.4	820.4	753.3	685.0	616.6	567.2
20°	857.3	917.9	938.7	959.5	921.4	883.3	811.3	739.2	662.7	586.2	534.3
22.5°	777.1	850.6	888.7	926.8	898.5	870.3	793.6	716.9	636.1	555.3	502.8
25°	685.7	765.9	824.4	882.9	865.7	848.4	772.8	697.2	611.2	525.2	471.6
27.5°	606.0	687.6	758.1	828.7	825.0	821.3	746.2	671.2	583.2	495.1	443.3
30°	535.1	611.0	690.0	768.9	778.0	787.1	714.7	642.2	554.0	465.8	415.8
32.5°	472.3	538.6	623.3	708.0	725.8	743.6	678.3	612.9	525.6	438.3	390.2
35°	420.9	481.0	565.7	650.4	672.7	695.0	638.2	581.3	496.3	411.2	365.3
37.5°	375.4	425.7	508.3	591.0	618.3	645.6	594.7	543.8	464.1	384.5	342.3
40°	337.7	378.1	454.1	530.1	561.6	593.2	551.2	509.3	433.7	358.1	319.3
42.5°	306.1	342.1	411.0	479.9	510.2	540.5	505.0	469.5	402.3	335.1	299.6
45°	279.1	307.9	370.5	433.1	461.9	490.7	460.2	429.8	370.5	311.3	278.2
47.5°	253.9	278.6	332.1	385.6	411.2	436.8	413.1	389.3	339.1	289.0	259.1
50°	231.2	251.1	297.9	344.7	367.0	389.3	368.3	347.3	306.1	264.8	238.8
52.5°	211.5	227.7	266.9	306.1	325.2	344.3	326.3	308.3	275.6	242.9	220.3
55°	192.0	205.8	239.8	273.8	286.8	299.8	285.8	271.9	245.5	219.2	200.0
57.5°	173.8	186.1	214.0	241.8	251.8	261.9	249.2	236.6	216.7	196.9	180.9
60°	156.0	166.0	189.3	212.5	218.6	224.7	214.5	204.3	190.4	176.4	162.1
62.5°	139.5	148.6	165.9	183.1	187.2	191.3	183.5	175.7	165.1	154.5	143.4
65°	122.4	129.3	143.4	157.5	160.1	162.7	155.8	149.0	141.0	133.0	124.8
67.5°	106.6	111.4	123.0	134.5	134.7	134.8	129.3	123.7	119.2	114.8	108.3
70°	91.2	95.8	103.4	111.1	111.3	111.4	107.0	102.5	99.2	95.8	91.0
72.5°	75.4	78.7	84.5	90.3	89.9	89.5	86.7	83.9	81.3	78.7	75.2
75°	61.1	63.9	67.8	71.7	70.6	69.5	68.0	66.5	64.3	62.0	59.8
77.5°	48.1	49.8	52.0	54.2	53.5	52.7	51.4	50.1	48.5	46.8	45.9
80°	35.3	36.0	37.5	39.0	38.6	38.3	36.8	35.3	34.9	34.5	33.2
82.5°	24.0	24.9	25.3	25.6	25.4	25.3	24.1	23.0	22.7	22.3	22.1
85°	14.3	14.5	14.7	14.9	14.3	13.7	13.4	13.0	13.0	13.0	12.8
87.5°	6.5	6.7	6.7	6.7	6.5	6.3	5.9	5.6	5.8	5.9	5.9
90°	5.3	4.4	3.6	2.8	2.2	1.6	0.9	0.3	0.9	1.6	2.2
92.5°	11.3	10.9	10.6	10.2	9.8	9.4	9.0	8.6	9.0	9.4	9.8
95°	20.3	19.8	19.3	18.8	18.3	17.9	17.4	17.0	17.4	17.9	18.3
97.5°	30.3	30.0	29.6	29.2	28.9	28.6	28.3	27.9	28.3	28.6	28.9
100°	41.7	41.4	41.1	40.7	40.3	40.0	39.6	39.2	39.6	40.0	40.3
102.5°	54.1	53.7	53.2	52.9	52.7	52.5	52.3	52.1	52.3	52.5	52.7
105°	66.8	66.3	65.7	65.3	65.2	65.1	65.0	64.8	65.0	65.1	65.2
107.5°	80.7	80.5	80.2	80.1	80.0	79.9	79.9	79.8	79.9	79.9	80.0
110°	94.5	94.4	94.3	94.2	94.0	93.9	93.8	93.6	93.8	93.9	94.0





TEST NUMBER: P831385

CATALOG NUMBER: S123DIP-S340D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	108.3	108.3	108.3	108.3	108.2	108.2	108.1	108.0	108.1	108.2	108.2
115°	123.0	123.1	123.3	123.2	123.0	122.8	122.6	122.5	122.6	122.8	123.0
117.5°	137.1	137.2	137.4	137.4	137.3	137.3	137.2	137.1	137.2	137.3	137.3
120°	151.6	151.9	152.3	152.2	151.8	151.5	151.1	150.7	151.1	151.5	151.8
122.5°	165.6	165.8	165.9	165.8	165.6	165.3	165.1	164.8	165.1	165.3	165.6
125°	179.8	179.9	180.0	180.0	179.8	179.6	179.4	179.2	179.4	179.6	179.8
127.5°	193.9	194.0	194.1	194.0	193.6	193.2	192.8	192.5	192.8	193.2	193.6
130°	207.5	207.7	207.9	207.8	207.3	206.7	206.2	205.7	206.2	206.7	207.3
132.5°	221.0	221.1	221.2	221.0	220.5	220.0	219.5	219.0	219.5	220.0	220.5
135°	234.1	234.1	234.2	234.0	233.7	233.3	232.9	232.5	232.9	233.3	233.7
137.5°	246.8	246.6	246.4	246.2	245.9	245.5	245.2	244.9	245.2	245.5	245.9
140°	259.5	259.4	259.3	259.1	258.8	258.5	258.2	257.9	258.2	258.5	258.8
142.5°	271.4	271.3	271.2	271.0	270.6	270.3	270.0	269.7	270.0	270.3	270.6
145°	283.1	282.9	282.7	282.6	282.5	282.3	282.2	282.1	282.2	282.3	282.5
147.5°	294.4	294.2	294.0	293.8	293.5	293.2	293.0	292.7	293.0	293.2	293.5
150°	304.9	304.7	304.6	304.5	304.3	304.2	304.1	304.0	304.1	304.2	304.3
152.5°	314.2	314.1	314.1	314.0	313.8	313.6	313.4	313.2	313.4	313.6	313.8
155°	323.1	323.1	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0	323.0
157.5°	331.2	331.1	331.1	331.1	331.1	331.2	331.3	331.3	331.3	331.2	331.1
160°	338.5	338.5	338.5	338.6	338.7	338.9	339.0	339.1	339.0	338.9	338.7
162.5°	345.3	345.3	345.2	345.3	345.5	345.6	345.8	346.0	345.8	345.6	345.5
165°	350.9	350.9	350.9	351.0	351.2	351.4	351.6	351.8	351.6	351.4	351.2
167.5°	355.7	355.6	355.6	355.7	355.9	356.2	356.4	356.7	356.4	356.2	355.9
170°	359.6	359.6	359.6	359.7	360.0	360.2	360.5	360.7	360.5	360.2	360.0
172.5°	362.7	362.7	362.7	362.9	363.1	363.4	363.6	363.9	363.6	363.4	363.1
175°	364.8	364.8	364.8	364.9	365.1	365.4	365.7	365.9	365.7	365.4	365.1
177.5°	365.9	365.9	365.9	366.0	366.3	366.6	366.8	367.1	366.8	366.6	366.3
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8



TEST NUMBER: P831385

CATALOG NUMBER: S123DIP-S340D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5	800.5
2.5°	768.2	760.9	753.7	748.1	742.5	733.1	723.6	721.4	719.1	716.0	712.8
5°	728.4	710.6	692.8	676.8	660.8	648.4	635.9	627.8	619.6	613.6	607.7
7.5°	682.0	655.2	628.5	609.6	590.6	572.6	554.6	548.8	543.1	535.3	527.5
10°	637.0	607.5	578.0	553.3	528.6	510.9	493.3	486.2	479.2	469.3	459.5
12.5°	596.9	564.6	532.3	507.4	482.5	465.4	448.3	438.1	427.9	422.3	416.8
15°	555.0	520.4	485.9	462.8	439.8	424.4	409.0	400.1	391.1	385.8	380.4
17.5°	517.8	483.6	449.5	427.4	405.3	391.1	377.0	369.2	361.4	357.3	353.3
20°	482.5	449.1	415.7	394.1	372.6	361.1	349.5	344.5	339.5	336.2	332.8
22.5°	450.2	417.3	384.5	366.1	347.7	338.4	329.1	325.6	322.0	319.3	316.5
25°	417.9	388.5	359.2	343.6	328.0	320.4	312.8	309.2	305.7	302.9	300.1
27.5°	391.5	363.5	335.4	322.0	308.7	302.7	296.8	294.0	291.2	288.6	286.0
30°	365.9	340.8	315.7	304.2	292.7	287.3	281.9	279.1	276.4	273.9	271.5
32.5°	342.1	320.6	299.0	288.4	277.8	273.4	268.9	265.6	262.2	260.4	258.5
35°	319.4	300.1	280.8	272.1	263.4	258.9	254.4	251.7	248.9	247.4	245.9
37.5°	300.1	282.9	265.6	257.2	248.9	244.6	240.3	237.9	235.5	234.9	234.4
40°	280.4	265.6	250.7	242.6	234.4	230.7	227.0	225.5	224.0	223.6	223.2
42.5°	264.1	249.6	235.1	227.7	220.3	217.1	214.0	213.2	212.5	213.0	213.6
45°	245.2	233.1	221.0	214.1	207.3	204.7	202.1	201.5	201.0	202.1	203.2
47.5°	229.2	218.0	206.9	200.4	193.9	192.0	190.2	190.0	189.8	191.3	192.8
50°	212.8	202.1	191.3	186.1	180.9	179.2	177.6	178.1	178.7	181.1	183.5
52.5°	197.6	187.6	177.6	172.7	167.9	166.8	165.7	167.0	168.3	170.9	173.5
55°	180.9	171.8	162.7	159.0	155.3	154.2	153.0	155.6	158.2	160.7	163.1
57.5°	164.9	156.9	149.0	145.6	142.3	142.1	141.9	144.3	146.7	149.3	151.9
60°	147.8	141.2	134.5	131.9	129.3	129.6	130.0	132.8	135.6	137.6	139.7
62.5°	132.2	126.7	121.1	118.7	116.3	117.2	118.1	120.9	123.7	126.1	128.5
65°	116.6	112.0	107.3	105.7	104.0	105.3	106.6	109.0	111.4	113.1	114.8
67.5°	101.8	97.9	94.0	92.7	91.4	92.7	94.0	96.4	98.8	100.5	102.1
70°	86.2	83.0	79.9	78.9	78.0	79.5	81.0	83.0	85.1	86.7	88.4
72.5°	71.7	69.3	66.9	66.7	66.5	67.8	69.1	71.1	73.2	74.3	75.4
75°	57.6	56.3	55.0	54.8	54.6	55.9	57.2	58.3	59.4	60.4	61.3
77.5°	44.9	43.8	42.7	42.9	43.1	44.0	44.9	46.1	47.2	47.7	48.3
80°	31.9	31.6	31.2	31.6	31.9	32.7	33.4	34.2	34.9	35.3	35.7
82.5°	21.9	21.5	21.2	21.7	22.3	22.8	23.4	24.0	24.5	24.7	24.9
85°	12.6	13.2	13.7	13.7	13.7	13.9	14.1	14.3	14.5	14.3	14.1
87.5°	5.9	6.1	6.3	6.3	6.3	6.5	6.7	6.7	6.7	6.5	6.3
90°	2.8	3.6	4.4	5.3	6.1	6.9	7.2	7.4	7.7	7.9	8.1
92.5°	10.2	10.6	10.9	11.3	11.7	12.1	12.3	12.5	12.7	12.9	12.9
95°	18.8	19.3	19.8	20.3	20.8	21.3	21.6	21.8	22.1	22.3	22.5
97.5°	29.2	29.6	30.0	30.3	30.7	31.1	31.4	31.8	32.1	32.4	32.5
100°	40.7	41.1	41.4	41.7	42.0	42.4	42.5	42.7	42.9	43.1	43.3
102.5°	52.9	53.2	53.7	54.1	54.6	55.0	55.2	55.4	55.6	55.8	55.9
105°	65.3	65.7	66.3	66.8	67.4	68.0	68.0	68.0	68.0	68.0	68.1
107.5°	80.1	80.2	80.5	80.7	81.0	81.2	81.4	81.6	81.8	82.0	82.1
110°	94.2	94.3	94.4	94.5	94.7	94.8	95.0	95.3	95.6	95.8	95.9



TEST NUMBER: P831385

CATALOG NUMBER: S123DIP-S340D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	108.3	108.3	108.3	108.3	108.3	108.3	108.7	109.0	109.3	109.6	109.8
115°	123.2	123.3	123.1	123.0	122.9	122.7	122.8	122.9	122.9	123.0	123.0
117.5°	137.4	137.4	137.2	137.1	137.0	136.9	136.9	136.9	136.9	136.9	136.8
120°	152.2	152.3	151.9	151.6	151.3	151.0	150.9	150.8	150.8	150.7	150.6
122.5°	165.8	165.9	165.8	165.6	165.5	165.4	165.2	165.0	164.8	164.6	164.4
125°	180.0	180.0	179.9	179.8	179.6	179.5	179.2	179.0	178.7	178.5	178.2
127.5°	194.0	194.1	194.0	193.9	193.7	193.6	193.2	192.8	192.5	192.1	191.8
130°	207.8	207.9	207.7	207.5	207.3	207.2	206.9	206.6	206.4	206.1	205.8
132.5°	221.0	221.2	221.1	221.0	220.8	220.7	220.4	220.1	219.7	219.4	219.1
135°	234.0	234.2	234.1	234.1	234.0	234.0	233.7	233.4	233.2	232.9	232.7
137.5°	246.2	246.4	246.6	246.8	247.0	247.2	246.9	246.6	246.2	245.9	245.7
140°	259.1	259.3	259.4	259.5	259.5	259.6	259.5	259.5	259.4	259.3	259.1
142.5°	271.0	271.2	271.3	271.4	271.6	271.7	271.6	271.6	271.5	271.4	271.2
145°	282.6	282.7	282.9	283.1	283.3	283.5	283.4	283.4	283.3	283.3	283.1
147.5°	293.8	294.0	294.2	294.4	294.6	294.7	294.7	294.7	294.7	294.7	294.6
150°	304.5	304.6	304.7	304.9	305.0	305.1	305.1	305.1	305.1	305.1	304.9
152.5°	314.0	314.1	314.1	314.2	314.3	314.3	314.5	314.6	314.7	314.9	314.8
155°	323.0	323.0	323.1	323.1	323.2	323.3	323.5	323.8	324.0	324.3	324.2
157.5°	331.1	331.1	331.1	331.2	331.3	331.3	331.6	331.8	332.1	332.4	332.3
160°	338.6	338.5	338.5	338.5	338.5	338.5	338.9	339.2	339.5	339.8	339.9
162.5°	345.3	345.2	345.3	345.3	345.4	345.5	345.8	346.1	346.4	346.7	346.7
165°	351.0	350.9	350.9	350.9	350.9	350.9	351.3	351.7	352.1	352.5	352.4
167.5°	355.7	355.6	355.6	355.7	355.8	355.8	356.2	356.6	357.0	357.4	357.4
170°	359.7	359.6	359.6	359.6	359.6	359.6	360.0	360.5	360.9	361.4	361.4
172.5°	362.9	362.7	362.7	362.7	362.7	362.7	363.1	363.5	363.9	364.3	364.2
175°	364.9	364.8	364.8	364.8	364.8	364.8	365.1	365.5	365.9	366.3	366.3
177.5°	366.0	365.9	365.9	365.9	365.9	365.9	366.3	366.7	367.1	367.4	367.4
180°	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8	366.8



TEST NUMBER: P831385

CATALOG NUMBER: S123DIP-S340D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	800.5	800.5	800.5	800.5
2.5°	711.5	710.2	705.0	699.8
5°	603.2	598.8	597.3	595.8
7.5°	527.1	526.7	518.9	511.1
10°	460.0	460.6	453.5	446.5
12.5°	412.1	407.5	406.9	406.4
15°	376.1	371.8	371.1	370.3
17.5°	350.7	348.1	347.3	346.6
20°	331.3	329.8	328.5	327.2
22.5°	314.6	312.8	311.6	310.5
25°	298.5	296.8	296.4	296.0
27.5°	284.0	281.9	281.9	281.9
30°	270.2	268.9	268.4	267.8
32.5°	257.4	256.3	256.3	256.3
35°	245.3	244.8	244.0	243.3
37.5°	234.4	234.4	234.0	233.6
40°	223.8	224.4	224.4	224.4
42.5°	214.1	214.7	214.7	214.7
45°	204.1	205.0	205.4	205.8
47.5°	194.3	195.8	196.1	196.5
50°	184.6	185.7	185.9	186.1
52.5°	174.8	176.1	177.0	177.9
55°	164.4	165.7	166.2	166.8
57.5°	153.2	154.5	154.7	154.9
60°	141.0	142.3	142.6	143.0
62.5°	129.3	130.0	130.4	130.8
65°	115.9	117.0	117.8	118.5
67.5°	103.1	104.0	104.0	104.0
70°	88.8	89.1	89.7	90.3
72.5°	75.6	75.8	75.8	75.8
75°	61.7	62.0	62.2	62.4
77.5°	48.5	48.7	48.7	48.7
80°	35.5	35.3	35.3	35.3
82.5°	24.3	23.8	23.8	23.8
85°	13.9	13.7	13.9	14.1
87.5°	6.3	6.3	6.3	6.3
90°	8.3	8.4	8.5	8.6
92.5°	12.8	12.6	12.5	12.4
95°	22.5	22.5	22.5	22.5
97.5°	32.5	32.4	32.3	32.3
100°	43.4	43.5	43.7	43.8
102.5°	55.8	55.7	55.7	55.6
105°	68.2	68.3	68.4	68.6
107.5°	82.0	82.0	81.9	81.8
110°	95.8	95.6	95.5	95.4



TEST NUMBER: P831385

CATALOG NUMBER: S123DIP-S340D365U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	109.8	109.8	109.8	109.8
115°	122.9	122.9	122.8	122.7
117.5°	136.6	136.4	136.2	136.0
120°	150.5	150.4	150.2	150.1
122.5°	164.2	164.0	163.8	163.7
125°	178.0	177.7	177.4	177.2
127.5°	191.5	191.2	191.0	190.7
130°	205.3	204.9	204.4	204.0
132.5°	218.8	218.5	218.1	217.8
135°	232.6	232.5	232.4	232.2
137.5°	245.5	245.3	245.1	244.9
140°	258.6	258.2	257.7	257.3
142.5°	270.9	270.6	270.3	270.0
145°	282.8	282.6	282.3	282.1
147.5°	294.2	293.8	293.4	293.0
150°	304.5	304.2	303.8	303.4
152.5°	314.4	314.1	313.8	313.5
155°	323.7	323.3	322.9	322.4
157.5°	331.9	331.5	331.1	330.8
160°	339.6	339.3	339.1	338.8
162.5°	346.2	345.8	345.3	344.9
165°	352.0	351.5	351.1	350.6
167.5°	357.0	356.6	356.2	355.8
170°	360.9	360.5	360.0	359.6
172.5°	363.8	363.4	362.9	362.5
175°	365.8	365.4	364.9	364.5
177.5°	367.0	366.5	366.1	365.6
180°	366.8	366.8	366.8	366.8

TEST NUMBER: P831385

CATALOG NUMBER: S123DIP-S340D365U930-4F0-1E-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	11.58	12.46	12.50	13.39	14.57	13.82	14.70	14.73	15.62	16.81
	3H	13.23	14.02	14.16	14.95	16.16	15.25	16.03	16.17	16.97	18.18
	4H	13.81	14.55	14.75	15.49	16.71	15.70	16.44	16.64	17.38	18.60
	6H	14.18	14.86	15.13	15.81	17.04	15.97	16.66	16.92	17.60	18.84
	8H	14.28	14.93	15.24	15.89	17.12	16.04	16.69	16.99	17.65	18.88
	12H	14.32	14.94	15.29	15.90	17.15	16.06	16.67	17.02	17.63	18.89
4H	2H	12.16	12.90	13.11	13.84	15.06	13.99	14.73	14.93	15.67	16.89
	3H	13.99	14.61	14.95	15.58	16.81	15.61	16.22	16.56	17.19	18.43
	4H	14.69	15.25	15.65	16.22	17.48	16.19	16.75	17.15	17.72	18.98
	6H	15.16	15.65	16.14	16.64	17.90	16.60	17.08	17.57	18.07	19.33
	8H	15.30	15.75	16.28	16.74	18.01	16.71	17.16	17.69	18.14	19.41
	12H	15.37	15.78	16.37	16.78	18.05	16.75	17.16	17.75	18.16	19.44
8H	4H	14.96	15.41	15.93	16.39	17.66	16.30	16.75	17.28	17.73	19.00
	6H	15.55	15.92	16.55	16.94	18.21	16.80	17.17	17.80	18.20	19.47
	8H	15.75	16.08	16.76	17.09	18.38	16.98	17.31	17.99	18.32	19.61
	12H	15.88	16.17	16.89	17.17	18.51	17.08	17.37	18.10	18.38	19.71
12H	4H	14.96	15.37	15.95	16.36	17.64	16.27	16.68	17.27	17.68	18.96
	6H	15.60	15.92	16.61	16.94	18.23	16.81	17.14	17.83	18.15	19.44
	8H	15.83	16.12	16.85	17.13	18.46	17.01	17.30	18.03	18.31	19.64