

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: P831415

Luminaire Tested: S123DIP-S340D585U935-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831415  
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-S340D585U935-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

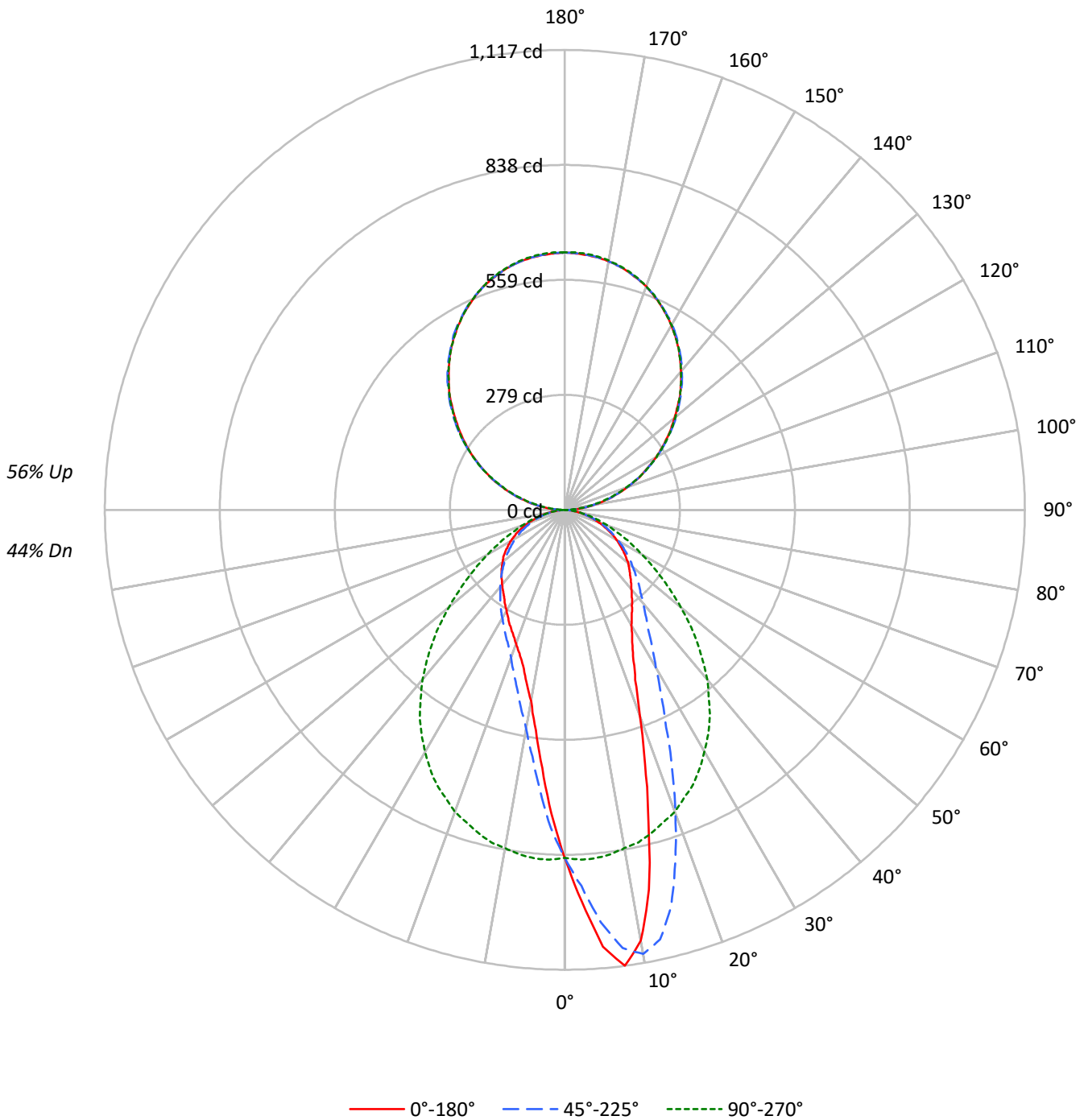
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3092.5 lumens  
Efficiency: N/A  
Efficacy: 112.0 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): 27.6  
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	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44				
1	97	93	89	86	89	85	82	79	71	69	67	58	56	55	45	44	44	38				
2	89	82	76	71	81	75	70	66	63	59	56	51	49	46	41	39	37	33				
3	81	72	65	60	74	66	60	56	56	51	48	46	43	40	36	34	32	28				
4	75	64	57	51	68	59	53	48	50	45	41	41	38	35	33	31	29	25				
5	69	58	50	44	63	53	46	41	45	40	36	37	33	30	30	27	25	22				
6	63	52	44	39	58	48	41	36	41	35	32	34	30	27	28	25	23	20				
7	59	47	39	34	54	44	37	32	37	32	28	31	27	24	25	23	20	18				
8	55	43	35	30	50	40	33	29	34	29	25	29	25	22	23	21	19	16				
9	51	39	32	27	47	37	30	26	31	26	23	26	23	20	22	19	17	15				
10	48	36	29	25	44	34	28	23	29	24	21	25	21	18	20	18	16	14				

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

	0°	45°	90°	135°	180°
0°	9099	9099	9099	9099	9099
5°	11507	10861	9181	7398	6799
10°	11620	11970	9120	5898	5153
15°	8751	11115	9058	4995	4358
20°	6097	8993	8942	4368	3959
25°	4650	6916	8745	4018	3713
30°	4022	5495	8429	3771	3515
35°	3732	4639	8067	3593	3376
40°	3532	4162	7557	3423	3329
45°	3416	3851	6909	3290	3308
50°	3358	3607	6142	3170	3291
55°	3232	3427	5388	3055	3305
60°	3115	3233	4646	2947	3251
65°	2926	3051	4006	2832	3186
70°	2703	2820	3408	2640	2999
75°	2445	2529	2920	2454	2741
80°	2021	2213	2312	2139	2312
85°	1593	1791	1692	1815	1840

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 7888 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.9	2.6
10°-20°	198.8	6.4
20°-30°	235.4	7.6
30°-40°	236.7	7.7
40°-50°	217.2	7.0
50°-60°	179.2	5.8
60°-70°	126.8	4.1
70°-80°	67.7	2.2
80°-90°	18.5	0.6
90°-100°	40.2	1.3
100°-110°	121.8	3.9
110°-120°	207.4	6.7
120°-130°	272.8	8.8
130°-140°	306.6	9.9
140°-150°	301.5	9.7
150°-160°	253.8	8.2
160°-170°	169.0	5.5
170°-180°	59.2	1.9
0°-30°	514.2	16.6
0°-40°	750.9	24.3
0°-60°	1147.3	37.1
0°-90°	1360.2	44.0
90°-120°	369.4	11.9
90°-150°	1250.3	40.4
90°-180°	1732.0	56.0
0°-180°	3092.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	845	845	845	845	845	
5°	1065	1005	850	685	629	101
15°	785	997	813	448	391	217
25°	392	582	736	338	313	185
35°	284	353	614	273	257	178
45°	224	253	454	216	217	174
55°	172	183	287	163	176	154
65°	115	120	157	111	125	114
75°	59	61	70	59	66	62
85°	13	14	14	15	15	14
90°	15	12	0	12	15	8
95°	38	36	29	36	38	38
105°	117	116	110	116	117	124
115°	209	209	209	209	209	207
125°	302	306	306	306	302	270
135°	396	399	396	399	396	304
145°	481	483	481	483	481	300
155°	550	551	550	551	550	253
165°	598	598	600	598	598	169
175°	621	622	624	622	621	59
180°	625	625	625	625	625	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	952.8	951.9	950.9	946.0	941.1	938.7	936.4	929.3	922.2	914.4	906.5
5°	1065.0	1067.8	1070.5	1067.4	1064.2	1054.6	1045.0	1032.3	1019.5	1005.2	990.9
7.5°	1116.8	1118.4	1119.9	1118.0	1116.0	1113.5	1110.9	1099.5	1088.2	1073.5	1058.7
10°	1063.1	1066.6	1070.1	1077.8	1085.4	1094.1	1102.7	1101.1	1099.5	1095.2	1090.9
12.5°	945.0	949.3	953.6	968.9	984.2	1003.8	1023.4	1040.3	1057.2	1068.9	1080.7
15°	785.3	797.3	809.3	823.2	837.1	865.9	894.8	930.3	965.8	997.4	1028.9
17.5°	646.9	651.4	655.9	670.8	685.7	722.0	758.3	799.3	840.2	892.6	945.0
20°	532.3	536.4	540.6	560.2	579.8	608.2	636.7	682.8	728.8	785.1	841.4
22.5°	447.2	453.7	460.1	471.1	482.1	509.4	536.6	577.6	618.6	680.8	743.0
25°	391.5	396.2	400.9	407.6	414.2	436.0	457.8	491.5	525.3	582.3	639.4
27.5°	353.4	355.4	357.4	364.0	370.7	384.8	398.9	428.0	457.0	505.4	553.9
30°	323.6	325.0	326.4	332.3	338.1	347.8	357.4	378.3	399.3	442.1	484.9
32.5°	302.8	303.8	304.8	309.3	313.8	320.7	327.5	342.8	358.1	393.5	428.8
35°	284.0	284.6	285.2	288.5	291.9	297.0	302.1	313.6	325.2	353.0	380.9
37.5°	267.5	268.3	269.1	271.1	273.0	277.5	282.0	291.3	300.5	321.9	343.2
40°	251.4	252.8	254.2	255.6	256.9	260.7	264.4	271.5	278.5	296.2	313.8
42.5°	237.7	239.1	240.5	241.1	241.6	243.8	246.0	252.4	258.9	272.0	285.2
45°	224.4	225.0	225.6	226.1	226.7	228.5	230.3	236.0	241.6	253.0	264.4
47.5°	212.2	212.2	212.2	212.6	213.0	214.6	216.1	220.3	224.4	233.2	242.0
50°	200.5	200.5	200.5	199.9	199.3	200.3	201.2	204.4	207.5	215.4	223.2
52.5°	186.3	186.3	186.3	186.5	186.7	186.7	186.7	189.5	192.2	199.3	206.3
55°	172.2	173.0	173.8	173.2	172.6	173.0	173.4	175.2	176.9	182.6	188.3
57.5°	158.1	158.5	158.9	158.7	158.5	158.7	158.9	160.4	162.0	166.3	170.6
60°	144.7	144.7	144.7	144.4	144.0	144.4	144.7	145.5	146.3	150.2	154.2
62.5°	129.8	130.0	130.2	130.4	130.6	130.2	129.8	130.8	131.8	134.7	137.7
65°	114.9	115.1	115.3	115.9	116.5	116.1	115.7	116.7	117.7	119.8	122.0
67.5°	101.6	101.2	100.8	101.0	101.2	101.8	102.4	102.6	102.8	105.1	107.5
70°	85.9	86.3	86.7	86.5	86.3	86.5	86.7	87.3	87.9	89.6	91.4
72.5°	71.8	72.0	72.2	72.2	72.2	72.6	73.0	73.6	74.1	75.1	76.1
75°	58.8	58.8	58.8	59.2	59.6	59.8	60.0	60.0	60.0	60.8	61.6
77.5°	44.7	45.7	46.7	46.5	46.3	46.7	47.1	47.7	48.2	48.6	49.0
80°	32.6	32.6	32.6	32.8	33.0	33.5	34.1	34.5	34.9	35.7	36.5
82.5°	20.8	21.0	21.2	21.8	22.4	22.8	23.1	23.7	24.3	24.3	24.3
85°	12.9	12.6	12.2	12.6	12.9	13.3	13.7	13.9	14.1	14.5	14.9
87.5°	6.3	6.3	6.3	6.3	6.3	6.5	6.7	6.7	6.7	6.7	6.7
90°	14.7	14.5	14.3	14.1	13.9	13.5	13.1	12.7	12.2	11.8	10.4
92.5°	21.1	21.3	21.6	21.8	22.0	21.9	21.6	21.3	21.0	20.6	20.0
95°	38.3	38.3	38.3	38.3	38.3	38.1	37.7	37.2	36.8	36.3	35.5
97.5°	55.0	55.1	55.2	55.3	55.4	55.2	54.7	54.1	53.6	53.0	52.4
100°	74.6	74.4	74.2	74.0	73.8	73.5	73.2	72.8	72.5	72.2	71.6
102.5°	94.8	94.9	95.0	95.1	95.2	95.1	94.8	94.5	94.1	93.8	93.0
105°	116.9	116.7	116.4	116.2	116.0	115.9	115.9	115.9	115.9	115.9	114.9
107.5°	139.5	139.6	139.7	139.8	139.9	139.8	139.5	139.1	138.8	138.5	138.1
110°	162.6	162.8	163.0	163.2	163.4	163.3	162.9	162.4	162.0	161.6	161.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	187.1	187.1	187.1	187.1	187.1	186.8	186.3	185.7	185.2	184.7	184.7
115°	209.2	209.3	209.4	209.5	209.6	209.6	209.5	209.4	209.3	209.2	209.4
117.5°	231.8	232.1	232.5	232.8	233.1	233.3	233.3	233.3	233.3	233.3	233.5
120°	255.9	256.1	256.3	256.5	256.7	256.9	257.0	257.1	257.2	257.3	257.9
122.5°	278.9	279.3	279.6	279.9	280.3	280.6	280.9	281.2	281.6	281.9	282.1
125°	302.0	302.5	302.9	303.3	303.8	304.2	304.6	305.1	305.5	306.0	306.2
127.5°	325.1	325.5	326.0	326.4	326.9	327.4	328.1	328.7	329.4	330.0	330.2
130°	347.7	348.5	349.2	350.0	350.8	351.4	351.8	352.2	352.7	353.1	353.4
132.5°	371.3	371.8	372.4	372.9	373.5	374.0	374.5	375.1	375.6	376.2	376.4
135°	395.8	396.0	396.3	396.5	396.7	397.0	397.5	397.9	398.3	398.8	398.9
137.5°	417.4	417.8	418.1	418.4	418.7	419.2	419.7	420.3	420.8	421.4	421.0
140°	438.6	439.3	440.1	440.8	441.6	442.0	442.2	442.3	442.4	442.5	442.4
142.5°	460.2	460.7	461.3	461.8	462.3	462.7	462.8	462.9	463.0	463.1	462.9
145°	480.8	481.2	481.7	482.1	482.5	482.8	482.9	483.0	483.1	483.2	482.9
147.5°	499.5	500.1	500.8	501.4	502.1	502.4	502.4	502.4	502.4	502.4	502.1
150°	517.1	517.8	518.4	519.1	519.8	520.1	520.1	520.1	520.1	520.1	519.9
152.5°	534.3	534.9	535.4	536.0	536.5	536.7	536.5	536.2	536.0	535.8	535.7
155°	549.5	550.3	551.1	551.8	552.6	552.8	552.3	551.9	551.5	551.0	550.9
157.5°	563.8	564.4	565.1	565.8	566.4	566.5	566.1	565.6	565.2	564.8	564.7
160°	577.5	578.0	578.4	578.8	579.3	579.2	578.7	578.1	577.6	577.0	577.0
162.5°	587.9	588.6	589.4	590.1	590.9	591.0	590.5	589.9	589.4	588.8	588.7
165°	597.7	598.4	599.2	600.0	600.7	600.8	600.1	599.5	598.8	598.2	598.2
167.5°	606.5	607.2	607.8	608.5	609.1	609.1	608.5	607.8	607.2	606.5	606.4
170°	612.9	613.7	614.4	615.2	616.0	616.0	615.2	614.4	613.7	612.9	612.9
172.5°	617.8	618.6	619.3	620.1	620.9	620.9	620.3	619.6	619.0	618.3	618.3
175°	621.2	622.0	622.8	623.5	624.3	624.4	623.7	623.0	622.4	621.7	621.7
177.5°	623.2	624.0	624.7	625.5	626.3	626.3	625.7	625.0	624.4	623.7	623.7
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	904.2	901.8	893.2	884.6	874.8	865.0	857.7	850.4	839.7	828.9	820.0
5°	979.9	968.9	950.7	932.4	907.7	883.0	866.3	849.7	827.3	804.9	787.1
7.5°	1039.9	1021.1	995.6	970.1	937.7	905.4	874.8	844.2	810.0	775.9	748.1
10°	1078.2	1065.4	1036.0	1006.6	963.2	919.9	877.1	834.4	790.4	746.5	709.6
12.5°	1081.9	1083.1	1056.0	1028.9	979.9	930.9	878.9	826.9	771.6	716.3	673.3
15°	1049.1	1069.3	1054.4	1039.5	990.1	940.7	876.7	812.8	749.0	685.3	635.7
17.5°	988.3	1031.7	1033.8	1036.0	986.6	937.1	866.3	795.5	723.4	651.2	599.0
20°	905.4	969.3	991.3	1013.2	973.0	932.8	856.7	780.6	699.8	619.0	564.3
22.5°	820.6	898.3	938.5	978.7	948.9	919.1	838.1	757.1	671.8	586.4	530.9
25°	724.1	808.9	870.7	932.4	914.2	896.0	816.1	736.3	645.5	554.7	498.0
27.5°	640.0	726.1	800.6	875.2	871.2	867.3	788.1	708.8	615.9	522.9	468.2
30°	565.1	645.3	728.6	812.0	821.6	831.2	754.7	678.2	585.1	491.9	439.2
32.5°	498.8	568.8	658.2	747.7	766.5	785.3	716.3	647.3	555.1	462.9	412.1
35°	444.4	508.0	597.4	686.9	710.4	733.9	673.9	613.9	524.1	434.2	385.8
37.5°	396.4	449.5	536.8	624.1	652.9	681.8	628.0	574.3	490.1	406.0	361.5
40°	356.6	399.3	479.6	559.8	593.1	626.5	582.1	537.8	458.0	378.2	337.2
42.5°	323.2	361.3	434.1	506.8	538.8	570.8	533.3	495.8	424.8	353.8	316.4
45°	294.8	325.2	391.3	457.4	487.8	518.2	486.0	453.9	391.3	328.7	293.8
47.5°	268.1	294.2	350.7	407.2	434.2	461.3	436.2	411.1	358.1	305.2	273.6
50°	244.2	265.2	314.6	364.0	387.6	411.1	388.9	366.8	323.2	279.7	252.2
52.5°	223.4	240.5	281.8	323.2	343.4	363.6	344.6	325.6	291.1	256.5	232.6
55°	202.8	217.3	253.2	289.1	302.8	316.6	301.9	287.1	259.3	231.4	211.2
57.5°	183.6	196.5	225.9	255.4	266.0	276.6	263.2	249.9	228.9	207.9	191.0
60°	164.8	175.3	199.9	224.4	230.9	237.3	226.5	215.8	201.0	186.3	171.2
62.5°	147.3	156.9	175.2	193.4	197.7	202.0	193.8	185.5	174.4	163.2	151.4
65°	129.3	136.5	151.4	166.3	169.1	171.8	164.6	157.3	148.9	140.4	131.8
67.5°	112.6	117.7	129.8	142.0	142.2	142.4	136.5	130.6	125.9	121.2	114.3
70°	96.3	101.2	109.2	117.3	117.5	117.7	113.0	108.3	104.7	101.2	96.1
72.5°	79.6	83.2	89.2	95.3	94.9	94.5	91.6	88.7	85.9	83.2	79.4
75°	64.5	67.5	71.6	75.7	74.5	73.4	71.8	70.2	67.9	65.5	63.2
77.5°	50.8	52.6	54.9	57.3	56.5	55.7	54.3	53.0	51.2	49.4	48.4
80°	37.3	38.1	39.6	41.2	40.8	40.4	38.8	37.3	36.9	36.5	35.1
82.5°	25.3	26.3	26.7	27.1	26.9	26.7	25.5	24.3	23.9	23.5	23.3
85°	15.1	15.3	15.5	15.7	15.1	14.5	14.1	13.7	13.7	13.7	13.5
87.5°	6.9	7.1	7.1	7.1	6.9	6.7	6.3	5.9	6.1	6.3	6.3
90°	8.9	7.5	6.1	4.9	3.8	2.7	1.6	0.5	1.6	2.7	3.8
92.5°	19.3	18.7	18.0	17.4	16.7	16.0	15.4	14.7	15.4	16.0	16.7
95°	34.6	33.7	32.8	32.0	31.3	30.5	29.7	29.0	29.7	30.5	31.3
97.5°	51.7	51.1	50.4	49.8	49.3	48.7	48.2	47.6	48.2	48.7	49.3
100°	71.1	70.6	70.0	69.4	68.8	68.1	67.4	66.8	67.4	68.1	68.8
102.5°	92.3	91.5	90.7	90.2	89.9	89.5	89.2	88.9	89.2	89.5	89.9
105°	113.9	113.0	112.0	111.4	111.2	110.9	110.7	110.5	110.7	110.9	111.2
107.5°	137.6	137.2	136.7	136.5	136.4	136.3	136.1	136.0	136.1	136.3	136.4
110°	161.1	160.9	160.7	160.5	160.3	160.0	159.8	159.6	159.8	160.0	160.3





TEST NUMBER: P831415

CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	184.7	184.7	184.7	184.6	184.5	184.4	184.3	184.2	184.3	184.4	184.5
115°	209.6	209.9	210.1	210.0	209.7	209.4	209.0	208.7	209.0	209.4	209.7
117.5°	233.7	233.9	234.1	234.2	234.1	234.0	233.9	233.8	233.9	234.0	234.1
120°	258.4	259.0	259.5	259.5	258.8	258.2	257.5	256.8	257.5	258.2	258.8
122.5°	282.3	282.5	282.8	282.7	282.2	281.8	281.3	280.9	281.3	281.8	282.2
125°	306.4	306.6	306.8	306.8	306.4	306.1	305.8	305.5	305.8	306.1	306.4
127.5°	330.5	330.7	330.9	330.7	330.0	329.4	328.7	328.1	328.7	329.4	330.0
130°	353.8	354.1	354.4	354.1	353.3	352.4	351.5	350.6	351.5	352.4	353.3
132.5°	376.6	376.8	377.1	376.7	375.9	375.0	374.1	373.2	374.1	375.0	375.9
135°	399.0	399.1	399.2	398.9	398.3	397.6	397.0	396.3	397.0	397.6	398.3
137.5°	420.7	420.4	420.1	419.6	419.1	418.5	418.0	417.4	418.0	418.5	419.1
140°	442.3	442.2	442.0	441.7	441.2	440.6	440.1	439.5	440.1	440.6	441.2
142.5°	462.7	462.5	462.2	461.9	461.3	460.8	460.2	459.7	460.2	460.8	461.3
145°	482.6	482.3	481.9	481.7	481.4	481.2	481.0	480.8	481.0	481.2	481.4
147.5°	501.7	501.4	501.1	500.7	500.3	499.8	499.4	499.0	499.4	499.8	500.3
150°	519.6	519.4	519.2	519.0	518.8	518.6	518.3	518.1	518.3	518.6	518.8
152.5°	535.6	535.5	535.4	535.1	534.8	534.5	534.2	533.8	534.2	534.5	534.8
155°	550.8	550.7	550.6	550.5	550.5	550.5	550.5	550.5	550.5	550.5	550.5
157.5°	564.6	564.4	564.3	564.3	564.4	564.6	564.7	564.8	564.7	564.6	564.4
160°	577.0	577.0	577.0	577.2	577.4	577.6	577.8	578.0	577.8	577.6	577.4
162.5°	588.6	588.5	588.4	588.5	588.8	589.2	589.5	589.8	589.5	589.2	588.8
165°	598.2	598.2	598.2	598.3	598.7	599.0	599.3	599.6	599.3	599.0	598.7
167.5°	606.3	606.2	606.1	606.2	606.7	607.1	607.6	608.0	607.6	607.1	606.7
170°	612.9	612.9	612.9	613.1	613.6	614.0	614.4	614.9	614.4	614.0	613.6
172.5°	618.3	618.3	618.3	618.5	619.0	619.4	619.8	620.3	619.8	619.4	619.0
175°	621.7	621.7	621.7	622.0	622.4	622.8	623.3	623.7	623.3	622.8	622.4
177.5°	623.7	623.7	623.7	623.9	624.4	624.8	625.2	625.7	625.2	624.8	624.4
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



TEST NUMBER: P831415

CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	811.2	803.6	795.9	790.0	784.2	774.2	764.1	761.8	759.4	756.1	752.8
5°	769.2	750.4	731.6	714.7	697.9	684.7	671.6	662.9	654.3	648.0	641.8
7.5°	720.2	692.0	663.7	643.7	623.7	604.7	585.7	579.6	573.5	565.3	557.0
10°	672.7	641.6	610.4	584.3	558.2	539.6	520.9	513.5	506.0	495.6	485.2
12.5°	630.4	596.3	562.1	535.8	509.6	491.5	473.5	462.7	451.9	446.0	440.1
15°	586.1	549.6	513.1	488.8	464.5	448.2	431.9	422.5	413.1	407.4	401.7
17.5°	546.8	510.7	474.7	451.3	428.0	413.1	398.2	389.9	381.7	377.4	373.1
20°	509.6	474.3	439.0	416.2	393.5	381.3	369.1	363.8	358.5	355.0	351.5
22.5°	475.4	440.7	406.0	386.6	367.2	357.4	347.6	343.8	340.1	337.2	334.2
25°	441.3	410.3	379.3	362.9	346.4	338.3	330.3	326.6	322.8	319.9	317.0
27.5°	413.5	383.8	354.2	340.1	326.0	319.7	313.4	310.5	307.5	304.8	302.1
30°	386.4	359.9	333.4	321.3	309.1	303.4	297.7	294.8	291.9	289.3	286.8
32.5°	361.3	338.5	315.8	304.6	293.4	288.7	284.0	280.5	276.9	275.0	273.0
35°	337.4	317.0	296.6	287.3	278.1	273.4	268.7	265.8	262.8	261.3	259.7
37.5°	317.0	298.7	280.5	271.6	262.8	258.3	253.8	251.3	248.7	248.1	247.5
40°	296.2	280.5	264.8	256.2	247.5	243.6	239.7	238.1	236.5	236.1	235.8
42.5°	278.9	263.6	248.3	240.5	232.6	229.3	225.9	225.2	224.4	225.0	225.6
45°	258.9	246.2	233.4	226.1	218.9	216.1	213.4	212.8	212.2	213.4	214.6
47.5°	242.0	230.3	218.5	211.6	204.8	202.8	200.8	200.6	200.5	202.0	203.6
50°	224.8	213.4	202.0	196.5	191.0	189.3	187.5	188.1	188.7	191.2	193.8
52.5°	208.7	198.1	187.5	182.4	177.3	176.1	175.0	176.3	177.7	180.4	183.2
55°	191.0	181.4	171.8	167.9	164.0	162.8	161.6	164.4	167.1	169.7	172.2
57.5°	174.2	165.7	157.3	153.8	150.2	150.0	149.8	152.4	154.9	157.7	160.4
60°	156.1	149.1	142.0	139.3	136.5	136.9	137.3	140.2	143.2	145.3	147.5
62.5°	139.6	133.8	127.9	125.3	122.8	123.8	124.7	127.7	130.6	133.2	135.7
65°	123.2	118.3	113.4	111.6	109.8	111.2	112.6	115.1	117.7	119.4	121.2
67.5°	107.5	103.4	99.2	97.9	96.5	97.9	99.2	101.8	104.3	106.1	107.9
70°	91.0	87.7	84.3	83.4	82.4	83.9	85.5	87.7	89.8	91.6	93.4
72.5°	75.7	73.2	70.6	70.4	70.2	71.6	73.0	75.1	77.3	78.5	79.6
75°	60.8	59.4	58.1	57.9	57.7	59.0	60.4	61.6	62.8	63.7	64.7
77.5°	47.5	46.3	45.1	45.3	45.5	46.5	47.5	48.6	49.8	50.4	51.0
80°	33.7	33.3	33.0	33.3	33.7	34.5	35.3	36.1	36.9	37.3	37.7
82.5°	23.1	22.8	22.4	22.9	23.5	24.1	24.7	25.3	25.9	26.1	26.3
85°	13.3	13.9	14.5	14.5	14.5	14.7	14.9	15.1	15.3	15.1	14.9
87.5°	6.3	6.5	6.7	6.7	6.7	6.9	7.1	7.1	7.1	6.9	6.7
90°	4.9	6.1	7.5	8.9	10.4	11.8	12.2	12.7	13.1	13.5	13.9
92.5°	17.4	18.0	18.7	19.3	20.0	20.6	21.0	21.3	21.6	21.9	22.0
95°	32.0	32.8	33.7	34.6	35.5	36.3	36.8	37.2	37.7	38.1	38.3
97.5°	49.8	50.4	51.1	51.7	52.4	53.0	53.6	54.1	54.7	55.2	55.4
100°	69.4	70.0	70.6	71.1	71.6	72.2	72.5	72.8	73.2	73.5	73.8
102.5°	90.2	90.7	91.5	92.3	93.0	93.8	94.1	94.5	94.8	95.1	95.2
105°	111.4	112.0	113.0	113.9	114.9	115.9	115.9	115.9	115.9	115.9	116.0
107.5°	136.5	136.7	137.2	137.6	138.1	138.5	138.8	139.1	139.5	139.8	139.9
110°	160.5	160.7	160.9	161.1	161.4	161.6	162.0	162.4	162.9	163.3	163.4



TEST NUMBER: P831415

CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	184.6	184.7	184.7	184.7	184.7	184.7	185.2	185.7	186.3	186.8	187.1
115°	210.0	210.1	209.9	209.6	209.4	209.2	209.3	209.4	209.5	209.6	209.6
117.5°	234.2	234.1	233.9	233.7	233.5	233.3	233.3	233.3	233.3	233.3	233.1
120°	259.5	259.5	259.0	258.4	257.9	257.3	257.2	257.1	257.0	256.9	256.7
122.5°	282.7	282.8	282.5	282.3	282.1	281.9	281.6	281.2	280.9	280.6	280.3
125°	306.8	306.8	306.6	306.4	306.2	306.0	305.5	305.1	304.6	304.2	303.8
127.5°	330.7	330.9	330.7	330.5	330.2	330.0	329.4	328.7	328.1	327.4	326.9
130°	354.1	354.4	354.1	353.8	353.4	353.1	352.7	352.2	351.8	351.4	350.8
132.5°	376.7	377.1	376.8	376.6	376.4	376.2	375.6	375.1	374.5	374.0	373.5
135°	398.9	399.2	399.1	399.0	398.9	398.8	398.3	397.9	397.5	397.0	396.7
137.5°	419.6	420.1	420.4	420.7	421.0	421.4	420.8	420.3	419.7	419.2	418.7
140°	441.7	442.0	442.2	442.3	442.4	442.5	442.4	442.3	442.2	442.0	441.6
142.5°	461.9	462.2	462.5	462.7	462.9	463.1	463.0	462.9	462.8	462.7	462.3
145°	481.7	481.9	482.3	482.6	482.9	483.2	483.1	483.0	482.9	482.8	482.5
147.5°	500.7	501.1	501.4	501.7	502.1	502.4	502.4	502.4	502.4	502.4	502.1
150°	519.0	519.2	519.4	519.6	519.9	520.1	520.1	520.1	520.1	520.1	519.8
152.5°	535.1	535.4	535.5	535.6	535.7	535.8	536.0	536.2	536.5	536.7	536.5
155°	550.5	550.6	550.7	550.8	550.9	551.0	551.5	551.9	552.3	552.8	552.6
157.5°	564.3	564.3	564.4	564.6	564.7	564.8	565.2	565.6	566.1	566.5	566.4
160°	577.2	577.0	577.0	577.0	577.0	577.0	577.6	578.1	578.7	579.2	579.3
162.5°	588.5	588.4	588.5	588.6	588.7	588.8	589.4	589.9	590.5	591.0	590.9
165°	598.3	598.2	598.2	598.2	598.2	598.2	598.8	599.5	600.1	600.8	600.7
167.5°	606.2	606.1	606.2	606.3	606.4	606.5	607.2	607.8	608.5	609.1	609.1
170°	613.1	612.9	612.9	612.9	612.9	612.9	613.7	614.4	615.2	616.0	616.0
172.5°	618.5	618.3	618.3	618.3	618.3	618.3	619.0	619.6	620.3	620.9	620.9
175°	622.0	621.7	621.7	621.7	621.7	621.7	622.4	623.0	623.7	624.4	624.3
177.5°	623.9	623.7	623.7	623.7	623.7	623.7	624.4	625.0	625.7	626.3	626.3
180°	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2	625.2



TEST NUMBER: P831415

CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	845.3	845.3	845.3	845.3
2.5°	751.4	750.0	744.5	739.0
5°	637.1	632.3	630.8	629.2
7.5°	556.6	556.2	548.0	539.8
10°	485.8	486.4	479.0	471.5
12.5°	435.2	430.3	429.7	429.1
15°	397.2	392.7	391.9	391.1
17.5°	370.3	367.6	366.8	366.0
20°	349.9	348.3	347.0	345.6
22.5°	332.3	330.3	329.1	327.9
25°	315.2	313.4	313.0	312.6
27.5°	299.9	297.7	297.7	297.7
30°	285.4	284.0	283.4	282.8
32.5°	271.8	270.7	270.7	270.7
35°	259.1	258.5	257.7	256.9
37.5°	247.5	247.5	247.1	246.7
40°	236.3	236.9	236.9	236.9
42.5°	226.1	226.7	226.7	226.7
45°	215.6	216.5	216.9	217.3
47.5°	205.2	206.7	207.1	207.5
50°	195.0	196.1	196.3	196.5
52.5°	184.6	185.9	186.9	187.9
55°	173.6	175.0	175.5	176.1
57.5°	161.8	163.2	163.4	163.6
60°	148.9	150.2	150.6	151.0
62.5°	136.5	137.3	137.7	138.1
65°	122.4	123.6	124.4	125.1
67.5°	108.9	109.8	109.8	109.8
70°	93.8	94.1	94.7	95.3
72.5°	79.8	80.0	80.0	80.0
75°	65.1	65.5	65.7	65.9
77.5°	51.2	51.4	51.4	51.4
80°	37.5	37.3	37.3	37.3
82.5°	25.7	25.1	25.1	25.1
85°	14.7	14.5	14.7	14.9
87.5°	6.7	6.7	6.7	6.7
90°	14.1	14.3	14.5	14.7
92.5°	21.8	21.6	21.3	21.1
95°	38.3	38.3	38.3	38.3
97.5°	55.3	55.2	55.1	55.0
100°	74.0	74.2	74.4	74.6
102.5°	95.1	95.0	94.9	94.8
105°	116.2	116.4	116.7	116.9
107.5°	139.8	139.7	139.6	139.5
110°	163.2	163.0	162.8	162.6



TEST NUMBER: P831415

CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	187.1	187.1	187.1	187.1
115°	209.5	209.4	209.3	209.2
117.5°	232.8	232.5	232.1	231.8
120°	256.5	256.3	256.1	255.9
122.5°	279.9	279.6	279.3	278.9
125°	303.3	302.9	302.5	302.0
127.5°	326.4	326.0	325.5	325.1
130°	350.0	349.2	348.5	347.7
132.5°	372.9	372.4	371.8	371.3
135°	396.5	396.3	396.0	395.8
137.5°	418.4	418.1	417.8	417.4
140°	440.8	440.1	439.3	438.6
142.5°	461.8	461.3	460.7	460.2
145°	482.1	481.7	481.2	480.8
147.5°	501.4	500.8	500.1	499.5
150°	519.1	518.4	517.8	517.1
152.5°	536.0	535.4	534.9	534.3
155°	551.8	551.1	550.3	549.5
157.5°	565.8	565.1	564.4	563.8
160°	578.8	578.4	578.0	577.5
162.5°	590.1	589.4	588.6	587.9
165°	600.0	599.2	598.4	597.7
167.5°	608.5	607.8	607.2	606.5
170°	615.2	614.4	613.7	612.9
172.5°	620.1	619.3	618.6	617.8
175°	623.5	622.8	622.0	621.2
177.5°	625.5	624.7	624.0	623.2
180°	625.2	625.2	625.2	625.2



TEST NUMBER: P831415

CATALOG NUMBER: S123DIP-S340D585U935-4F0-1E-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	10.65	11.43	11.66	12.45	13.81	12.89	13.66	13.90	14.68	16.04
	3H	12.29	12.99	13.32	14.02	15.39	14.30	15.00	15.33	16.03	17.41
	4H	12.86	13.52	13.90	14.55	15.94	14.75	15.41	15.79	16.44	17.83
	6H	13.23	13.84	14.28	14.87	16.27	15.02	15.63	16.07	16.67	18.06
	8H	13.33	13.90	14.38	14.95	16.35	15.08	15.66	16.14	16.71	18.10
	12H	13.37	13.92	14.42	14.96	16.38	15.10	15.65	16.16	16.69	18.11
4H	2H	11.21	11.88	12.26	12.91	14.29	13.04	13.70	14.08	14.73	16.12
	3H	13.04	13.59	14.09	14.65	16.04	14.65	15.20	15.70	16.26	17.66
	4H	13.73	14.23	14.79	15.28	16.70	15.23	15.74	16.29	16.79	18.21
	6H	14.20	14.63	15.27	15.71	17.12	15.63	16.07	16.70	17.14	18.55
	8H	14.34	14.74	15.40	15.81	17.24	15.74	16.15	16.81	17.21	18.64
	12H	14.40	14.77	15.49	15.85	17.28	15.78	16.15	16.87	17.23	18.66
8H	4H	13.99	14.39	15.06	15.46	16.89	15.33	15.74	16.40	16.80	18.23
	6H	14.58	14.91	15.67	16.02	17.45	15.83	16.16	16.92	17.27	18.70
	8H	14.79	15.08	15.88	16.17	17.61	16.01	16.30	17.11	17.39	18.84
	12H	14.91	15.16	16.01	16.25	17.74	16.11	16.37	17.21	17.45	18.94
12H	4H	13.99	14.35	15.07	15.43	16.87	15.30	15.67	16.39	16.75	18.18
	6H	14.63	14.92	15.72	16.01	17.46	15.85	16.14	16.94	17.23	18.68
	8H	14.86	15.12	15.96	16.20	17.69	16.04	16.30	17.14	17.38	18.87