

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: P831409

Luminaire Tested: S123DIP-S340D585U927-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831409  
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-S340D585U927-4F0-1E-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: -

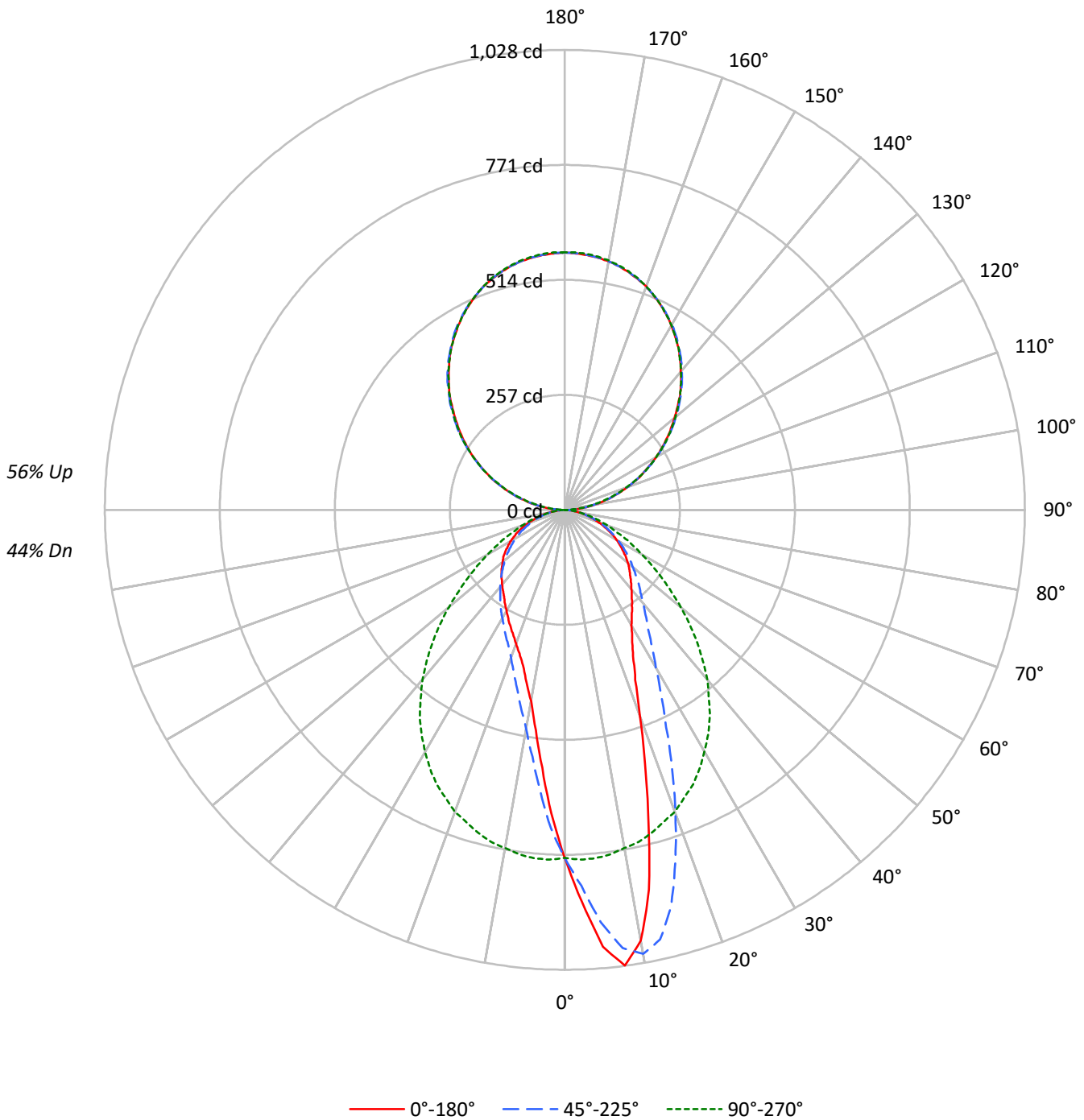
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2845.3 lumens  
Efficiency: N/A  
Efficacy: 103.1 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: 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

TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

### Luminous Intensity Polar Plot





TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**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	33	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°	8372	8372	8372	8372	8372
5°	10588	9994	8447	6807	6255
10°	10691	11014	8391	5426	4741
15°	8052	10225	8333	4596	4009
20°	5611	8275	8227	4018	3643
25°	4278	6364	8045	3697	3417
30°	3701	5056	7756	3470	3234
35°	3434	4268	7422	3306	3106
40°	3250	3829	6953	3149	3063
45°	3142	3544	6357	3028	3043
50°	3088	3317	5652	2915	3028
55°	2973	3153	4958	2811	3042
60°	2868	2975	4273	2713	2992
65°	2692	2809	3685	2606	2932
70°	2486	2596	3135	2430	2760
75°	2250	2325	2687	2258	2520
80°	1860	2033	2126	1971	2126
85°	1470	1655	1556	1667	1692

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 7258 cd/sqm



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.5	2.6
10°-20°	182.9	6.4
20°-30°	216.6	7.6
30°-40°	217.8	7.7
40°-50°	199.8	7.0
50°-60°	164.9	5.8
60°-70°	116.7	4.1
70°-80°	62.3	2.2
80°-90°	17.0	0.6
90°-100°	37.0	1.3
100°-110°	112.1	3.9
110°-120°	190.8	6.7
120°-130°	251.0	8.8
130°-140°	282.1	9.9
140°-150°	277.4	9.7
150°-160°	233.5	8.2
160°-170°	155.5	5.5
170°-180°	54.4	1.9
0°-30°	473.1	16.6
0°-40°	690.8	24.3
0°-60°	1055.6	37.1
0°-90°	1251.5	44.0
90°-120°	339.9	11.9
90°-150°	1150.4	40.4
90°-180°	1594.0	56.0
0°-180°	2845.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	778	778	778	778	778	
5°	980	925	782	630	579	93
15°	723	918	748	412	360	200
25°	360	536	677	311	288	170
35°	261	325	565	252	236	164
45°	206	233	418	199	200	160
55°	158	168	264	150	162	142
65°	106	110	145	102	115	105
75°	54	56	65	54	61	57
85°	12	13	13	14	14	13
90°	14	11	0	11	14	7
95°	35	33	27	33	35	35
105°	108	107	102	107	108	114
115°	192	192	192	192	192	191
125°	278	282	281	282	278	249
135°	364	367	365	367	364	280
145°	442	445	442	445	442	276
155°	506	507	506	507	506	233
165°	550	550	552	550	550	155
175°	572	572	574	572	572	54
180°	575	575	575	575	575	



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	876.7	875.8	874.9	870.4	865.8	863.7	861.5	855.0	848.5	841.3	834.1
5°	979.9	982.4	985.0	982.1	979.2	970.3	961.5	949.8	938.0	924.9	911.7
7.5°	1027.5	1029.0	1030.4	1028.6	1026.8	1024.5	1022.1	1011.7	1001.2	987.7	974.1
10°	978.1	981.3	984.6	991.6	998.7	1006.6	1014.5	1013.1	1011.7	1007.7	1003.7
12.5°	869.5	873.4	877.4	891.5	905.5	923.6	941.6	957.2	972.7	983.5	994.3
15°	722.6	733.6	744.6	757.4	770.2	796.7	823.3	855.9	888.6	917.6	946.7
17.5°	595.2	599.3	603.5	617.2	630.9	664.3	697.7	735.4	773.1	821.3	869.5
20°	489.8	493.6	497.3	515.4	533.4	559.6	585.8	628.2	670.6	722.4	774.2
22.5°	411.4	417.4	423.4	433.5	443.6	468.7	493.7	531.5	569.2	626.4	683.6
25°	360.2	364.5	368.9	375.0	381.1	401.2	421.2	452.2	483.3	535.8	588.3
27.5°	325.2	327.0	328.8	334.9	341.1	354.1	367.1	393.8	420.5	465.0	509.6
30°	297.8	299.0	300.3	305.7	311.1	320.0	328.8	348.1	367.4	406.8	446.1
32.5°	278.6	279.5	280.4	284.6	288.7	295.1	301.4	315.4	329.5	362.0	394.5
35°	261.3	261.8	262.4	265.5	268.5	273.2	277.9	288.6	299.2	324.8	350.5
37.5°	246.1	246.9	247.6	249.4	251.2	255.4	259.5	268.0	276.5	296.1	315.8
40°	231.3	232.6	233.9	235.1	236.4	239.8	243.3	249.8	256.3	272.5	288.7
42.5°	218.7	220.0	221.2	221.8	222.3	224.3	226.3	232.3	238.2	250.3	262.4
45°	206.4	207.0	207.5	208.1	208.6	210.2	211.9	217.1	222.3	232.8	243.3
47.5°	195.3	195.3	195.3	195.6	196.0	197.4	198.9	202.7	206.4	214.6	222.7
50°	184.4	184.4	184.4	183.9	183.3	184.2	185.2	188.0	190.9	198.1	205.4
52.5°	171.4	171.4	171.4	171.6	171.8	171.8	171.8	174.3	176.9	183.3	189.8
55°	158.4	159.2	159.9	159.3	158.8	159.2	159.5	161.2	162.8	168.0	173.2
57.5°	145.5	145.8	146.2	146.0	145.8	146.0	146.2	147.6	149.1	153.0	157.0
60°	133.2	133.2	133.2	132.8	132.5	132.8	133.2	133.9	134.6	138.2	141.8
62.5°	119.5	119.6	119.8	120.0	120.2	119.8	119.5	120.4	121.3	124.0	126.7
65°	105.7	105.9	106.1	106.7	107.2	106.8	106.5	107.4	108.3	110.3	112.2
67.5°	93.5	93.1	92.8	92.9	93.1	93.7	94.2	94.4	94.6	96.7	98.9
70°	79.0	79.4	79.8	79.6	79.4	79.6	79.8	80.3	80.8	82.5	84.1
72.5°	66.0	66.2	66.4	66.4	66.4	66.8	67.1	67.7	68.2	69.1	70.0
75°	54.1	54.1	54.1	54.5	54.9	55.0	55.2	55.2	55.2	55.9	56.7
77.5°	41.1	42.0	42.9	42.8	42.6	42.9	43.3	43.9	44.4	44.8	45.1
80°	30.0	30.0	30.0	30.1	30.3	30.9	31.4	31.8	32.1	32.8	33.6
82.5°	19.1	19.3	19.5	20.0	20.6	20.9	21.3	21.8	22.4	22.4	22.4
85°	11.9	11.5	11.2	11.5	11.9	12.3	12.6	12.8	13.0	13.4	13.7
87.5°	5.8	5.8	5.8	5.8	5.8	6.0	6.1	6.1	6.1	6.1	6.1
90°	13.6	13.4	13.2	13.0	12.8	12.5	12.0	11.6	11.2	10.8	9.5
92.5°	19.4	19.6	19.8	20.0	20.2	20.2	19.9	19.6	19.3	19.0	18.4
95°	35.2	35.2	35.2	35.2	35.2	35.0	34.6	34.2	33.8	33.4	32.6
97.5°	50.6	50.7	50.8	50.9	51.0	50.8	50.3	49.8	49.3	48.8	48.2
100°	68.7	68.5	68.3	68.1	67.9	67.6	67.3	67.0	66.7	66.4	65.9
102.5°	87.2	87.3	87.4	87.5	87.6	87.5	87.2	86.9	86.6	86.3	85.6
105°	107.5	107.3	107.1	106.9	106.7	106.6	106.6	106.6	106.6	106.6	105.7
107.5°	128.3	128.4	128.5	128.6	128.7	128.6	128.3	128.0	127.7	127.4	127.0
110°	149.6	149.8	150.0	150.2	150.4	150.3	149.9	149.5	149.1	148.7	148.5



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.2	172.2	172.2	172.2	172.2	171.9	171.4	170.9	170.4	169.9	169.9
115°	192.5	192.6	192.7	192.8	192.9	192.9	192.8	192.7	192.6	192.5	192.7
117.5°	213.3	213.6	213.9	214.2	214.5	214.6	214.6	214.6	214.6	214.6	214.8
120°	235.4	235.6	235.8	236.0	236.2	236.4	236.5	236.6	236.7	236.8	237.3
122.5°	256.7	257.0	257.3	257.6	257.9	258.2	258.5	258.8	259.1	259.4	259.6
125°	277.9	278.3	278.7	279.1	279.5	279.9	280.3	280.7	281.1	281.5	281.7
127.5°	299.1	299.5	299.9	300.3	300.7	301.2	301.8	302.4	303.0	303.6	303.8
130°	319.9	320.6	321.3	322.0	322.7	323.3	323.7	324.1	324.5	324.9	325.2
132.5°	341.6	342.1	342.6	343.1	343.6	344.1	344.6	345.1	345.6	346.1	346.3
135°	364.2	364.4	364.6	364.8	365.0	365.3	365.7	366.1	366.5	366.9	367.0
137.5°	384.1	384.4	384.7	385.0	385.3	385.7	386.2	386.7	387.2	387.7	387.4
140°	403.5	404.2	404.9	405.6	406.3	406.7	406.8	406.9	407.0	407.1	407.0
142.5°	423.4	423.9	424.4	424.9	425.4	425.7	425.8	425.9	426.0	426.1	425.9
145°	442.4	442.8	443.2	443.6	444.0	444.2	444.3	444.4	444.5	444.6	444.3
147.5°	459.5	460.1	460.7	461.3	461.9	462.2	462.2	462.2	462.2	462.2	461.9
150°	475.8	476.4	477.0	477.6	478.2	478.5	478.5	478.5	478.5	478.5	478.3
152.5°	491.6	492.1	492.6	493.1	493.6	493.8	493.6	493.4	493.2	493.0	492.9
155°	505.6	506.3	507.0	507.7	508.4	508.6	508.2	507.8	507.4	507.0	506.9
157.5°	518.7	519.3	519.9	520.5	521.1	521.2	520.8	520.4	520.0	519.6	519.5
160°	531.4	531.8	532.2	532.6	533.0	532.9	532.4	531.9	531.4	530.9	530.9
162.5°	540.9	541.6	542.3	543.0	543.7	543.8	543.3	542.8	542.3	541.8	541.7
165°	549.9	550.6	551.3	552.0	552.7	552.8	552.2	551.6	551.0	550.4	550.4
167.5°	558.0	558.6	559.2	559.8	560.4	560.4	559.8	559.2	558.6	558.0	557.9
170°	563.9	564.6	565.3	566.0	566.7	566.7	566.0	565.3	564.6	563.9	563.9
172.5°	568.4	569.1	569.8	570.5	571.2	571.3	570.7	570.1	569.5	568.9	568.9
175°	571.6	572.3	573.0	573.7	574.4	574.5	573.9	573.3	572.6	572.0	572.0
177.5°	573.4	574.1	574.8	575.5	576.2	576.3	575.7	575.1	574.5	573.9	573.9
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	831.9	829.8	821.8	813.9	804.9	795.8	789.2	782.5	772.6	762.6	754.5
5°	901.6	891.5	874.7	857.9	835.2	812.4	797.1	781.8	761.2	740.6	724.2
7.5°	956.8	939.5	916.0	892.6	862.8	833.0	804.9	776.7	745.3	713.9	688.3
10°	992.0	980.3	953.2	926.1	886.2	846.4	807.0	767.7	727.3	686.8	652.9
12.5°	995.4	996.5	971.6	946.7	901.6	856.5	808.6	760.8	709.9	659.0	619.5
15°	965.3	983.9	970.2	956.4	911.0	865.5	806.7	747.8	689.2	630.5	584.9
17.5°	909.3	949.2	951.2	953.2	907.7	862.2	797.1	731.9	665.5	599.1	551.1
20°	833.0	891.8	912.0	932.3	895.3	858.3	788.3	718.2	643.9	569.5	519.2
22.5°	755.0	826.5	863.5	900.5	873.1	845.6	771.1	696.6	618.1	539.6	488.5
25°	666.3	744.2	801.1	857.9	841.1	824.3	750.9	677.4	593.9	510.3	458.2
27.5°	588.8	668.1	736.6	805.2	801.6	798.0	725.1	652.2	566.6	481.1	430.8
30°	519.9	593.7	670.4	747.1	755.9	764.8	694.4	624.0	538.3	452.6	404.1
32.5°	458.9	523.3	605.6	687.9	705.2	722.6	659.0	595.5	510.7	425.9	379.1
35°	408.9	467.4	549.7	632.0	653.6	675.3	620.1	564.8	482.2	399.5	355.0
37.5°	364.7	413.6	493.9	574.2	600.8	627.3	577.8	528.4	451.0	373.6	332.6
40°	328.1	367.4	441.2	515.0	545.7	576.4	535.6	494.8	421.4	347.9	310.2
42.5°	297.4	332.4	399.4	466.3	495.7	525.1	490.7	456.2	390.9	325.6	291.1
45°	271.2	299.2	360.0	420.8	448.8	476.8	447.2	417.6	360.0	302.5	270.3
47.5°	246.7	270.7	322.7	374.6	399.5	424.4	401.3	378.2	329.5	280.8	251.7
50°	224.7	244.0	289.5	334.9	356.6	378.2	357.9	337.5	297.4	257.3	232.1
52.5°	205.5	221.2	259.3	297.4	316.0	334.6	317.1	299.6	267.8	236.0	214.0
55°	186.6	199.9	233.0	266.0	278.6	291.3	277.7	264.2	238.6	212.9	194.4
57.5°	168.9	180.8	207.9	235.0	244.7	254.4	242.2	229.9	210.6	191.3	175.8
60°	151.6	161.3	183.9	206.4	212.4	218.4	208.4	198.5	185.0	171.4	157.5
62.5°	135.5	144.4	161.2	177.9	181.9	185.9	178.3	170.7	160.4	150.1	139.3
65°	118.9	125.6	139.3	153.0	155.6	158.1	151.4	144.7	137.0	129.2	121.3
67.5°	103.6	108.3	119.5	130.7	130.8	131.0	125.6	120.2	115.9	111.5	105.2
70°	88.6	93.1	100.5	107.9	108.1	108.3	103.9	99.6	96.4	93.1	88.4
72.5°	73.3	76.5	82.1	87.7	87.3	87.0	84.3	81.6	79.0	76.5	73.1
75°	59.4	62.1	65.9	69.7	68.6	67.5	66.0	64.6	62.4	60.3	58.1
77.5°	46.7	48.4	50.5	52.7	52.0	51.3	50.0	48.7	47.1	45.5	44.6
80°	34.3	35.0	36.5	37.9	37.5	37.2	35.7	34.3	33.9	33.6	32.3
82.5°	23.3	24.2	24.5	24.9	24.7	24.5	23.5	22.4	22.0	21.7	21.5
85°	13.9	14.1	14.3	14.4	13.9	13.4	13.0	12.6	12.6	12.6	12.5
87.5°	6.3	6.5	6.5	6.5	6.3	6.1	5.8	5.4	5.6	5.8	5.8
90°	8.2	6.9	5.6	4.5	3.5	2.5	1.5	0.5	1.5	2.5	3.5
92.5°	17.8	17.2	16.6	16.0	15.4	14.8	14.2	13.6	14.2	14.8	15.4
95°	31.8	31.0	30.2	29.5	28.8	28.1	27.4	26.7	27.4	28.1	28.8
97.5°	47.6	47.0	46.4	45.8	45.3	44.8	44.3	43.8	44.3	44.8	45.3
100°	65.4	64.9	64.4	63.9	63.3	62.7	62.1	61.5	62.1	62.7	63.3
102.5°	84.9	84.2	83.5	83.0	82.7	82.4	82.1	81.8	82.1	82.4	82.7
105°	104.8	103.9	103.0	102.5	102.3	102.1	101.9	101.7	101.9	102.1	102.3
107.5°	126.6	126.2	125.8	125.6	125.5	125.4	125.3	125.2	125.3	125.4	125.5
110°	148.3	148.1	147.9	147.7	147.5	147.3	147.1	146.9	147.1	147.3	147.5





TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	169.9	169.9	169.9	169.8	169.7	169.6	169.5	169.4	169.5	169.6	169.7
115°	192.9	193.1	193.3	193.2	192.9	192.6	192.3	192.0	192.3	192.6	192.9
117.5°	215.0	215.2	215.4	215.5	215.4	215.3	215.2	215.1	215.2	215.3	215.4
120°	237.8	238.3	238.8	238.7	238.1	237.5	236.9	236.3	236.9	237.5	238.1
122.5°	259.8	260.0	260.2	260.1	259.7	259.3	258.9	258.5	258.9	259.3	259.7
125°	281.9	282.1	282.3	282.3	282.0	281.7	281.4	281.1	281.4	281.7	282.0
127.5°	304.0	304.2	304.4	304.2	303.6	303.0	302.4	301.8	302.4	303.0	303.6
130°	325.5	325.8	326.1	325.8	325.0	324.2	323.4	322.6	323.4	324.2	325.0
132.5°	346.5	346.7	346.9	346.6	345.8	345.0	344.2	343.4	344.2	345.0	345.8
135°	367.1	367.2	367.3	367.1	366.5	365.9	365.2	364.6	365.2	365.9	366.5
137.5°	387.1	386.8	386.5	386.1	385.6	385.1	384.6	384.1	384.6	385.1	385.6
140°	406.9	406.8	406.7	406.4	405.9	405.4	404.9	404.4	404.9	405.4	405.9
142.5°	425.7	425.5	425.3	424.9	424.4	423.9	423.4	422.9	423.4	423.9	424.4
145°	444.0	443.7	443.4	443.2	443.0	442.8	442.6	442.4	442.6	442.8	443.0
147.5°	461.6	461.3	461.0	460.7	460.3	459.9	459.5	459.1	459.5	459.9	460.3
150°	478.1	477.9	477.7	477.5	477.3	477.1	476.9	476.7	476.9	477.1	477.3
152.5°	492.8	492.7	492.6	492.4	492.1	491.8	491.5	491.2	491.5	491.8	492.1
155°	506.8	506.7	506.6	506.5	506.5	506.5	506.5	506.5	506.5	506.5	506.5
157.5°	519.4	519.3	519.2	519.2	519.3	519.4	519.5	519.6	519.5	519.4	519.3
160°	530.9	530.9	530.9	531.0	531.2	531.4	531.6	531.8	531.6	531.4	531.2
162.5°	541.6	541.5	541.4	541.5	541.8	542.1	542.4	542.7	542.4	542.1	541.8
165°	550.4	550.4	550.4	550.5	550.8	551.1	551.4	551.7	551.4	551.1	550.8
167.5°	557.8	557.7	557.6	557.8	558.2	558.6	559.0	559.4	559.0	558.6	558.2
170°	563.9	563.9	563.9	564.1	564.5	564.9	565.3	565.7	565.3	564.9	564.5
172.5°	568.9	568.9	568.9	569.1	569.5	569.9	570.3	570.7	570.3	569.9	569.5
175°	572.0	572.0	572.0	572.2	572.6	573.0	573.5	573.9	573.5	573.0	572.6
177.5°	573.9	573.9	573.9	574.1	574.5	574.9	575.3	575.7	575.3	574.9	574.5
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2

TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8	777.8
2.5°	746.4	739.3	732.3	726.9	721.5	712.3	703.1	700.9	698.7	695.7	692.6
5°	707.8	690.4	673.1	657.6	642.1	630.0	617.9	610.0	602.0	596.2	590.5
7.5°	662.6	636.7	610.7	592.3	573.9	556.4	538.9	533.3	527.7	520.1	512.5
10°	619.0	590.3	561.6	537.6	513.6	496.4	479.3	472.4	465.6	456.0	446.5
12.5°	580.0	548.6	517.2	493.0	468.8	452.2	435.6	425.7	415.8	410.4	405.0
15°	539.2	505.6	472.1	449.7	427.3	412.4	397.4	388.7	380.0	374.8	369.6
17.5°	503.1	469.9	436.7	415.2	393.8	380.0	366.3	358.8	351.2	347.2	343.2
20°	468.8	436.4	403.9	382.9	362.0	350.8	339.6	334.8	329.9	326.6	323.4
22.5°	437.4	405.5	373.6	355.7	337.8	328.8	319.8	316.3	312.9	310.2	307.5
25°	406.0	377.5	349.0	333.9	318.7	311.3	303.9	300.5	297.0	294.3	291.6
27.5°	380.4	353.2	325.9	312.9	299.9	294.2	288.4	285.7	283.0	280.4	277.9
30°	355.5	331.1	306.8	295.6	284.4	279.2	273.9	271.2	268.5	266.2	263.8
32.5°	332.4	311.5	290.5	280.3	270.0	265.6	261.3	258.1	254.8	253.0	251.2
35°	310.4	291.6	272.9	264.4	255.9	251.6	247.2	244.5	241.8	240.4	238.9
37.5°	291.6	274.8	258.1	249.9	241.8	237.7	233.5	231.2	228.8	228.3	227.7
40°	272.5	258.1	243.6	235.7	227.7	224.1	220.5	219.1	217.6	217.3	216.9
42.5°	256.6	242.5	228.5	221.2	214.0	211.0	207.9	207.2	206.4	207.0	207.5
45°	238.2	226.5	214.7	208.1	201.4	198.9	196.3	195.8	195.3	196.3	197.4
47.5°	222.7	211.9	201.0	194.7	188.4	186.6	184.8	184.6	184.4	185.9	187.3
50°	206.8	196.3	185.9	180.8	175.8	174.1	172.5	173.1	173.6	175.9	178.3
52.5°	192.0	182.3	172.5	167.8	163.1	162.1	161.0	162.2	163.5	166.0	168.5
55°	175.8	166.9	158.1	154.5	150.9	149.8	148.7	151.2	153.8	156.1	158.4
57.5°	160.2	152.5	144.7	141.5	138.2	138.1	137.9	140.2	142.6	145.1	147.6
60°	143.6	137.1	130.7	128.1	125.6	126.0	126.3	129.0	131.7	133.7	135.7
62.5°	128.5	123.1	117.7	115.3	113.0	113.9	114.8	117.5	120.2	122.5	124.9
65°	113.3	108.8	104.3	102.7	101.1	102.3	103.6	105.9	108.3	109.9	111.5
67.5°	98.9	95.1	91.3	90.0	88.8	90.0	91.3	93.7	96.0	97.6	99.3
70°	83.7	80.7	77.6	76.7	75.8	77.2	78.7	80.7	82.7	84.3	85.9
72.5°	69.7	67.3	65.0	64.8	64.6	65.9	67.1	69.1	71.1	72.2	73.3
75°	55.9	54.7	53.4	53.2	53.1	54.3	55.6	56.7	57.7	58.6	59.6
77.5°	43.7	42.6	41.5	41.7	41.9	42.8	43.7	44.8	45.8	46.4	46.9
80°	31.0	30.7	30.3	30.7	31.0	31.8	32.5	33.2	33.9	34.3	34.6
82.5°	21.3	20.9	20.6	21.1	21.7	22.2	22.7	23.3	23.8	24.0	24.2
85°	12.3	12.8	13.4	13.4	13.4	13.5	13.7	13.9	14.1	13.9	13.7
87.5°	5.8	6.0	6.1	6.1	6.1	6.3	6.5	6.5	6.5	6.3	6.1
90°	4.5	5.6	6.9	8.2	9.5	10.8	11.2	11.6	12.0	12.5	12.8
92.5°	16.0	16.6	17.2	17.8	18.4	19.0	19.3	19.6	19.9	20.2	20.2
95°	29.5	30.2	31.0	31.8	32.6	33.4	33.8	34.2	34.6	35.0	35.2
97.5°	45.8	46.4	47.0	47.6	48.2	48.8	49.3	49.8	50.3	50.8	51.0
100°	63.9	64.4	64.9	65.4	65.9	66.4	66.7	67.0	67.3	67.6	67.9
102.5°	83.0	83.5	84.2	84.9	85.6	86.3	86.6	86.9	87.2	87.5	87.6
105°	102.5	103.0	103.9	104.8	105.7	106.6	106.6	106.6	106.6	106.6	106.7
107.5°	125.6	125.8	126.2	126.6	127.0	127.4	127.7	128.0	128.3	128.6	128.7
110°	147.7	147.9	148.1	148.3	148.5	148.7	149.1	149.5	149.9	150.3	150.4



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	169.8	169.9	169.9	169.9	169.9	169.9	170.4	170.9	171.4	171.9	172.2
115°	193.2	193.3	193.1	192.9	192.7	192.5	192.6	192.7	192.8	192.9	192.9
117.5°	215.5	215.4	215.2	215.0	214.8	214.6	214.6	214.6	214.6	214.6	214.5
120°	238.7	238.8	238.3	237.8	237.3	236.8	236.7	236.6	236.5	236.4	236.2
122.5°	260.1	260.2	260.0	259.8	259.6	259.4	259.1	258.8	258.5	258.2	257.9
125°	282.3	282.3	282.1	281.9	281.7	281.5	281.1	280.7	280.3	279.9	279.5
127.5°	304.2	304.4	304.2	304.0	303.8	303.6	303.0	302.4	301.8	301.2	300.7
130°	325.8	326.1	325.8	325.5	325.2	324.9	324.5	324.1	323.7	323.3	322.7
132.5°	346.6	346.9	346.7	346.5	346.3	346.1	345.6	345.1	344.6	344.1	343.6
135°	367.1	367.3	367.2	367.1	367.0	366.9	366.5	366.1	365.7	365.3	365.0
137.5°	386.1	386.5	386.8	387.1	387.4	387.7	387.2	386.7	386.2	385.7	385.3
140°	406.4	406.7	406.8	406.9	407.0	407.1	407.0	406.9	406.8	406.7	406.3
142.5°	424.9	425.3	425.5	425.7	425.9	426.1	426.0	425.9	425.8	425.7	425.4
145°	443.2	443.4	443.7	444.0	444.3	444.6	444.5	444.4	444.3	444.2	444.0
147.5°	460.7	461.0	461.3	461.6	461.9	462.2	462.2	462.2	462.2	462.2	461.9
150°	477.5	477.7	477.9	478.1	478.3	478.5	478.5	478.5	478.5	478.5	478.2
152.5°	492.4	492.6	492.7	492.8	492.9	493.0	493.2	493.4	493.6	493.8	493.6
155°	506.5	506.6	506.7	506.8	506.9	507.0	507.4	507.8	508.2	508.6	508.4
157.5°	519.2	519.2	519.3	519.4	519.5	519.6	520.0	520.4	520.8	521.2	521.1
160°	531.0	530.9	530.9	530.9	530.9	530.9	531.4	531.9	532.4	532.9	533.0
162.5°	541.5	541.4	541.5	541.6	541.7	541.8	542.3	542.8	543.3	543.8	543.7
165°	550.5	550.4	550.4	550.4	550.4	550.4	551.0	551.6	552.2	552.8	552.7
167.5°	557.8	557.6	557.7	557.8	557.9	558.0	558.6	559.2	559.8	560.4	560.4
170°	564.1	563.9	563.9	563.9	563.9	563.9	564.6	565.3	566.0	566.7	566.7
172.5°	569.1	568.9	568.9	568.9	568.9	568.9	569.5	570.1	570.7	571.3	571.2
175°	572.2	572.0	572.0	572.0	572.0	572.0	572.6	573.3	573.9	574.5	574.4
177.5°	574.1	573.9	573.9	573.9	573.9	573.9	574.5	575.1	575.7	576.3	576.2
180°	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2	575.2



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	777.8	777.8	777.8	777.8
2.5°	691.3	690.1	685.0	680.0
5°	586.1	581.8	580.4	578.9
7.5°	512.1	511.8	504.2	496.6
10°	447.0	447.5	440.7	433.8
12.5°	400.4	395.9	395.4	394.8
15°	365.4	361.3	360.6	359.8
17.5°	340.7	338.2	337.5	336.7
20°	321.9	320.5	319.2	318.0
22.5°	305.7	303.9	302.8	301.7
25°	290.0	288.4	288.0	287.7
27.5°	275.9	273.9	273.9	273.9
30°	262.6	261.3	260.8	260.2
32.5°	250.1	249.0	249.0	249.0
35°	238.4	237.8	237.1	236.4
37.5°	227.7	227.7	227.4	227.0
40°	217.5	218.0	218.0	218.0
42.5°	208.1	208.6	208.6	208.6
45°	198.3	199.2	199.6	199.9
47.5°	188.8	190.2	190.6	190.9
50°	179.4	180.5	180.6	180.8
52.5°	169.8	171.1	172.0	172.9
55°	159.7	161.0	161.5	162.1
57.5°	148.9	150.1	150.3	150.5
60°	137.0	138.2	138.6	139.0
62.5°	125.6	126.3	126.7	127.0
65°	112.6	113.7	114.4	115.1
67.5°	100.2	101.1	101.1	101.1
70°	86.3	86.6	87.2	87.7
72.5°	73.4	73.6	73.6	73.6
75°	59.9	60.3	60.5	60.6
77.5°	47.1	47.3	47.3	47.3
80°	34.5	34.3	34.3	34.3
82.5°	23.6	23.1	23.1	23.1
85°	13.5	13.4	13.5	13.7
87.5°	6.1	6.1	6.1	6.1
90°	13.0	13.2	13.4	13.6
92.5°	20.0	19.8	19.6	19.4
95°	35.2	35.2	35.2	35.2
97.5°	50.9	50.8	50.7	50.6
100°	68.1	68.3	68.5	68.7
102.5°	87.5	87.4	87.3	87.2
105°	106.9	107.1	107.3	107.5
107.5°	128.6	128.5	128.4	128.3
110°	150.2	150.0	149.8	149.6



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	172.2	172.2	172.2	172.2
115°	192.8	192.7	192.6	192.5
117.5°	214.2	213.9	213.6	213.3
120°	236.0	235.8	235.6	235.4
122.5°	257.6	257.3	257.0	256.7
125°	279.1	278.7	278.3	277.9
127.5°	300.3	299.9	299.5	299.1
130°	322.0	321.3	320.6	319.9
132.5°	343.1	342.6	342.1	341.6
135°	364.8	364.6	364.4	364.2
137.5°	385.0	384.7	384.4	384.1
140°	405.6	404.9	404.2	403.5
142.5°	424.9	424.4	423.9	423.4
145°	443.6	443.2	442.8	442.4
147.5°	461.3	460.7	460.1	459.5
150°	477.6	477.0	476.4	475.8
152.5°	493.1	492.6	492.1	491.6
155°	507.7	507.0	506.3	505.6
157.5°	520.5	519.9	519.3	518.7
160°	532.6	532.2	531.8	531.4
162.5°	543.0	542.3	541.6	540.9
165°	552.0	551.3	550.6	549.9
167.5°	559.8	559.2	558.6	558.0
170°	566.0	565.3	564.6	563.9
172.5°	570.5	569.8	569.1	568.4
175°	573.7	573.0	572.3	571.6
177.5°	575.5	574.8	574.1	573.4
180°	575.2	575.2	575.2	575.2



TEST NUMBER: P831409

CATALOG NUMBER: S123DIP-S340D585U927-4F0-1E-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	10.36	11.14	11.37	12.16	13.51	12.60	13.38	13.61	14.39	15.75
	3H	12.00	12.70	13.03	13.73	15.10	14.02	14.71	15.04	15.74	17.12
	4H	12.57	13.23	13.61	14.27	15.65	14.46	15.12	15.50	16.15	17.54
	6H	12.94	13.55	13.99	14.58	15.98	14.73	15.34	15.78	16.38	17.77
	8H	13.04	13.61	14.09	14.66	16.06	14.79	15.37	15.85	16.42	17.82
	12H	13.08	13.63	14.13	14.67	16.09	14.81	15.36	15.87	16.40	17.82
4H	2H	10.92	11.59	11.97	12.62	14.00	12.75	13.41	13.79	14.44	15.83
	3H	12.75	13.30	13.80	14.36	15.75	14.36	14.91	15.41	15.97	17.37
	4H	13.44	13.95	14.50	15.00	16.42	14.94	15.45	16.00	16.50	17.92
	6H	13.91	14.34	14.98	15.42	16.83	15.34	15.78	16.41	16.85	18.26
	8H	14.05	14.45	15.11	15.52	16.95	15.45	15.86	16.52	16.92	18.35
	12H	14.11	14.48	15.19	15.55	16.99	15.49	15.86	16.58	16.94	18.37
8H	4H	13.70	14.11	14.77	15.17	16.60	15.04	15.45	16.11	16.51	17.94
	6H	14.29	14.62	15.38	15.73	17.16	15.54	15.87	16.63	16.98	18.41
	8H	14.49	14.79	15.59	15.88	17.32	15.72	16.01	16.82	17.10	18.55
	12H	14.61	14.87	15.71	15.96	17.44	15.82	16.08	16.92	17.16	18.65
12H	4H	13.70	14.06	14.78	15.14	16.58	15.01	15.38	16.10	16.46	17.89
	6H	14.34	14.63	15.43	15.72	17.17	15.56	15.85	16.65	16.94	18.39
	8H	14.57	14.82	15.67	15.91	17.40	15.75	16.01	16.85	17.09	18.58