

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: P832131

Luminaire Tested: S123RDIP-S340D585U930-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

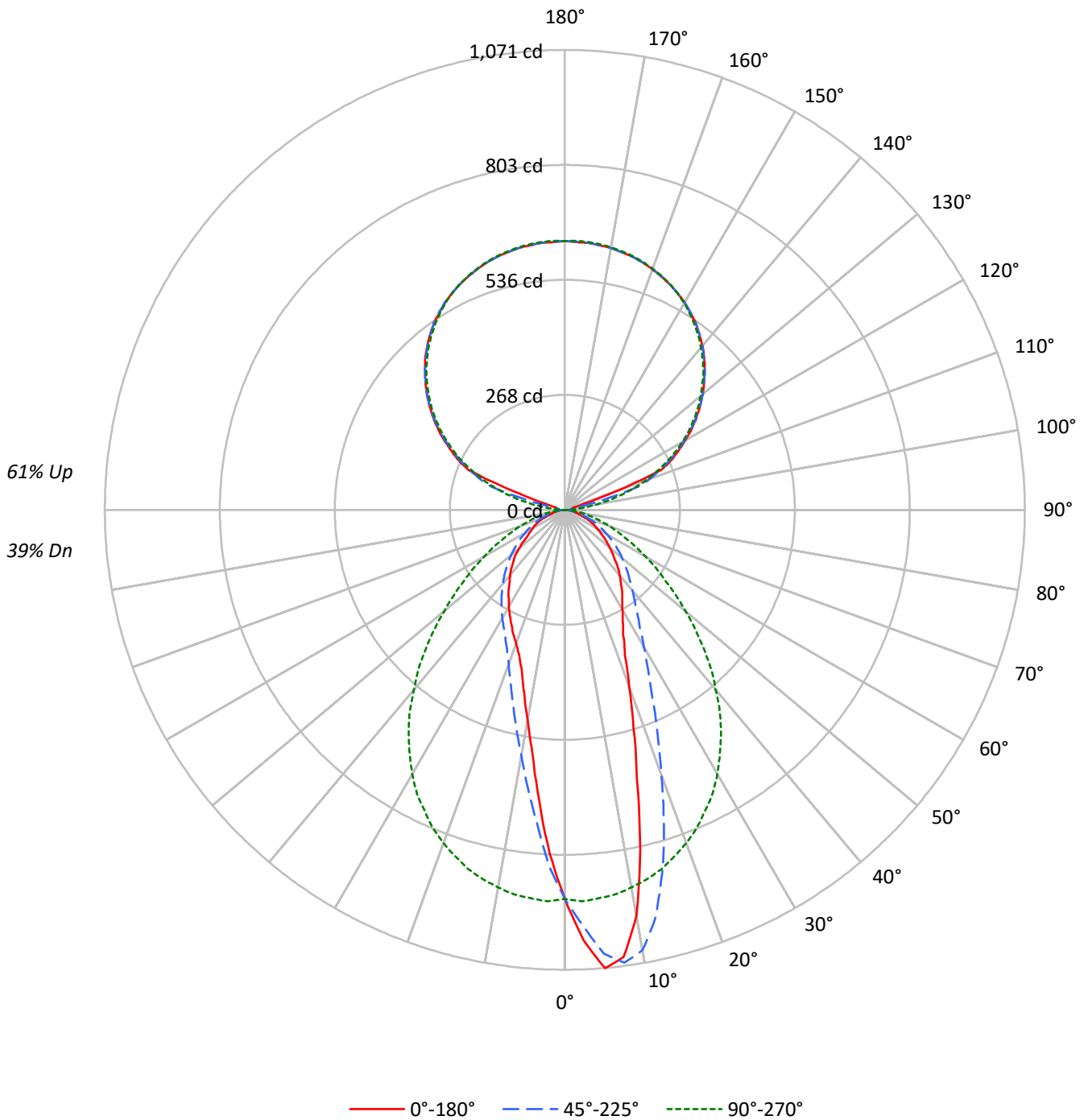
Test Method: LM-79-2019  
Report Number: P832131  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S340D585U930-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3110.2 lumens  
Efficiency: N/A  
Efficacy: 112.7 lumens/watt  
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: Semi-Indirect  
  
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: P832131  
CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

### Luminous Intensity Polar Plot





TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				
1	96	92	88	85	87	84	81	78	68	66	64	54	53	52	41	40	40	34				
2	88	81	75	70	80	74	69	65	61	57	54	48	46	44	37	36	34	29				
3	81	72	65	59	73	66	60	55	54	50	46	43	41	38	34	32	30	26				
4	74	64	57	51	67	59	52	47	49	44	40	39	36	33	30	28	27	23				
5	68	57	50	44	62	53	46	41	44	39	35	36	32	29	28	26	24	20				
6	63	52	44	39	57	48	41	36	40	35	31	32	29	26	26	23	21	18				
7	58	47	39	34	53	43	37	32	36	31	28	30	26	23	24	21	19	17				
8	54	43	35	30	50	40	33	29	33	28	25	27	24	21	22	19	18	15				
9	51	39	32	27	46	36	30	26	31	26	22	25	22	19	20	18	16	14				
10	48	36	29	25	43	33	27	23	28	24	20	24	20	18	19	17	15	13				

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

	0°	45°	90°	135°	180°
0°	9749	9749	9749	9749	9749
5°	11577	11207	9811	7931	7363
10°	10488	11384	9762	6355	5451
15°	7221	9760	9658	5194	4313
20°	5024	7514	9465	4379	3790
25°	3828	5727	9183	3892	3493
30°	3332	4579	8830	3614	3235
35°	3059	3862	8330	3380	3001
40°	2792	3450	7676	3149	2786
45°	2521	3154	6970	2930	2573
50°	2289	2910	6137	2718	2308
55°	2070	2672	5339	2509	1980
60°	1856	2430	4637	2278	1871
65°	1712	2157	3991	2048	1768
70°	1391	1863	3484	1854	1438
75°	1219	1485	2949	1535	1268
80°	1103	1252	2417	1289	1196
85°	1013	1099	1840	1173	1099

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 7354 cd/sqm



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.6	2.7
10°-20°	191.0	6.1
20°-30°	219.2	7.0
30°-40°	216.0	6.9
40°-50°	190.5	6.1
50°-60°	146.6	4.7
60°-70°	96.4	3.1
70°-80°	46.8	1.5
80°-90°	13.1	0.4
90°-100°	22.1	0.7
100°-110°	106.7	3.4
110°-120°	261.5	8.4
120°-130°	332.0	10.7
130°-140°	354.6	11.4
140°-150°	331.6	10.7
150°-160°	267.5	8.6
160°-170°	172.6	5.6
170°-180°	59.5	1.9
0°-30°	492.8	15.8
0°-40°	708.8	22.8
0°-60°	1045.9	33.6
0°-90°	1202.1	38.7
90°-120°	390.2	12.5
90°-150°	1408.4	45.3
90°-180°	1908.0	61.3
0°-180°	3110.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	906	906	906	906	906	
5°	1071	1037	908	734	681	98
15°	648	876	867	466	387	183
25°	322	482	773	328	294	152
35°	233	294	634	257	228	145
45°	166	207	458	192	169	129
55°	110	142	284	134	106	99
65°	67	85	157	80	69	66
75°	29	36	71	37	30	32
85°	8	9	15	10	9	9
90°	14	11	0	11	14	7
95°	18	14	28	14	18	15
105°	20	102	139	102	20	43
115°	273	267	260	267	273	257
125°	374	372	366	372	374	334
135°	461	461	456	461	461	355
145°	532	531	526	531	532	332
155°	579	579	580	579	579	267
165°	610	610	612	610	610	172
175°	624	624	626	624	624	59
180°	626	626	626	626	626	



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	1003.8	1000.6	997.5	996.5	995.6	992.6	989.7	983.0	976.3	969.4	962.6
5°	1071.4	1071.7	1072.1	1071.2	1070.2	1066.3	1062.4	1054.3	1046.1	1037.2	1028.3
7.5°	1050.6	1056.5	1062.4	1063.6	1064.7	1067.6	1070.6	1068.8	1066.9	1063.6	1060.2
10°	959.6	959.2	958.8	965.5	972.2	992.1	1011.9	1022.2	1032.4	1041.5	1050.6
12.5°	811.0	811.6	812.2	834.1	856.0	874.7	893.5	919.5	945.5	973.5	1001.5
15°	648.0	657.1	666.2	685.7	705.2	733.4	761.7	796.6	831.5	875.8	920.2
17.5°	532.2	536.1	540.0	558.7	577.5	604.2	630.9	670.5	710.0	767.2	824.4
20°	438.6	442.1	445.6	459.2	472.7	498.4	524.0	561.7	599.4	656.0	712.6
22.5°	366.2	373.0	379.9	389.0	398.1	416.7	435.2	473.7	512.1	563.7	615.3
25°	322.3	325.5	328.7	336.4	344.2	362.1	379.9	405.3	430.8	482.2	533.6
27.5°	292.6	293.6	294.5	300.2	306.0	317.5	329.0	352.6	376.2	418.5	460.9
30°	268.1	269.8	271.5	275.9	280.4	288.7	297.1	313.8	330.5	368.4	406.3
32.5°	249.2	250.1	251.0	254.8	258.5	264.6	270.7	283.9	297.1	326.1	355.0
35°	232.8	233.0	233.2	236.0	238.8	244.7	250.7	261.6	272.6	293.9	315.3
37.5°	214.3	215.6	216.9	218.9	221.0	226.2	231.4	240.3	249.2	266.8	284.5
40°	198.7	199.8	200.9	203.3	205.7	209.8	213.9	222.1	230.2	245.5	260.7
42.5°	183.1	183.8	184.6	187.0	189.4	194.4	199.4	205.9	212.4	225.0	237.7
45°	165.6	167.5	169.3	171.9	174.5	178.8	183.1	189.8	196.4	207.2	218.0
47.5°	151.1	152.1	153.0	155.2	157.5	162.7	167.9	173.8	179.7	189.8	199.8
50°	136.7	137.0	137.4	139.4	141.5	146.1	150.8	157.6	164.5	173.8	183.1
52.5°	122.9	123.8	124.8	126.8	128.9	132.0	135.2	142.2	149.3	158.4	167.5
55°	110.3	110.8	111.4	112.9	114.4	118.1	121.8	127.9	134.1	142.4	150.8
57.5°	98.4	99.2	99.9	101.0	102.1	105.5	108.8	114.2	119.6	127.9	136.3
60°	86.2	87.1	88.0	89.3	90.6	93.2	95.8	100.6	105.5	112.9	120.3
62.5°	77.2	77.4	77.6	78.7	79.8	81.7	83.6	87.5	91.4	98.8	106.2
65°	67.2	67.8	68.3	68.9	69.4	70.9	72.4	75.8	79.1	84.7	90.2
67.5°	56.8	57.4	57.9	58.9	59.8	61.1	62.4	64.6	66.8	72.0	77.2
70°	44.2	44.2	44.2	45.7	47.2	49.4	51.6	53.3	55.0	59.2	63.5
72.5°	36.0	36.2	36.4	36.6	36.8	38.1	39.4	42.1	44.9	47.5	50.1
75°	29.3	29.5	29.7	29.9	30.1	30.5	30.8	31.8	32.7	35.7	38.6
77.5°	23.4	23.6	23.8	24.0	24.1	24.5	24.9	25.3	25.6	26.7	27.9
80°	17.8	18.0	18.2	18.4	18.6	18.8	18.9	19.3	19.7	20.2	20.8
82.5°	13.0	13.0	13.0	13.0	13.0	13.4	13.7	13.7	13.7	14.1	14.5
85°	8.2	8.2	8.2	8.4	8.5	8.5	8.5	8.7	8.9	8.9	8.9
87.5°	3.7	3.5	3.3	3.5	3.7	3.7	3.7	3.9	4.1	4.1	4.1
90°	14.0	13.7	13.5	13.3	13.1	12.8	12.4	12.0	11.6	11.2	9.8
92.5°	15.8	15.7	15.6	15.5	15.4	15.0	14.3	13.5	12.8	12.1	11.2
95°	17.7	17.7	17.7	17.7	17.7	17.3	16.6	15.9	15.1	14.4	13.3
97.5°	19.1	19.0	18.9	18.8	18.7	18.2	17.4	16.5	15.7	14.9	20.2
100°	19.5	19.4	19.3	19.2	19.1	18.7	17.8	17.0	16.2	15.3	31.5
102.5°	20.0	19.8	19.6	19.4	19.2	20.8	24.2	27.6	31.0	34.4	52.4
105°	20.5	20.3	20.0	19.8	19.6	28.7	47.0	65.3	83.5	101.8	111.1
107.5°	48.4	61.9	75.4	89.0	102.5	117.2	133.1	149.1	165.0	180.9	179.3
110°	127.9	142.7	157.4	172.2	187.0	196.1	199.5	202.9	206.3	209.7	208.6



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	242.3	242.5	242.7	242.9	243.1	242.7	241.8	240.9	239.9	239.0	237.9
115°	273.4	273.0	272.6	272.2	271.8	271.0	270.0	269.0	267.9	266.9	266.0
117.5°	298.5	298.4	298.3	298.2	298.1	297.7	296.8	296.0	295.2	294.4	293.8
120°	324.6	324.6	324.6	324.6	324.6	324.2	323.3	322.5	321.7	320.9	320.5
122.5°	350.2	350.0	349.9	349.8	349.7	349.4	348.9	348.4	347.9	347.4	346.9
125°	373.9	373.7	373.5	373.2	373.0	372.8	372.6	372.4	372.2	372.0	371.6
127.5°	397.1	397.3	397.5	397.7	397.9	397.9	397.6	397.3	397.0	396.7	396.1
130°	419.4	419.6	419.9	420.1	420.3	420.2	419.7	419.3	418.9	418.5	418.1
132.5°	439.9	440.2	440.5	440.8	441.1	441.1	440.7	440.3	439.8	439.4	439.1
135°	460.8	461.1	461.4	461.8	462.1	462.1	461.8	461.4	461.1	460.8	460.4
137.5°	480.8	481.0	481.2	481.4	481.6	481.5	481.0	480.5	479.9	479.4	479.2
140°	498.5	498.7	498.9	499.1	499.3	499.2	498.8	498.4	498.0	497.6	497.3
142.5°	514.8	515.1	515.4	515.7	516.0	516.0	515.7	515.4	515.1	514.8	514.5
145°	531.5	531.5	531.5	531.5	531.5	531.4	531.2	531.0	530.8	530.6	530.4
147.5°	543.6	544.1	544.6	545.1	545.7	545.8	545.6	545.4	545.2	545.0	544.8
150°	557.5	557.9	558.2	558.5	558.8	558.8	558.6	558.4	558.2	558.0	557.8
152.5°	568.7	569.2	569.7	570.3	570.8	570.8	570.4	570.0	569.6	569.2	569.1
155°	578.9	579.6	580.2	580.8	581.4	581.5	581.0	580.4	579.9	579.4	579.3
157.5°	587.8	588.6	589.4	590.3	591.1	591.2	590.6	589.9	589.3	588.7	588.8
160°	596.1	596.9	597.6	598.3	599.0	599.1	598.5	597.8	597.2	596.6	596.7
162.5°	604.0	604.7	605.3	605.9	606.5	606.5	605.8	605.0	604.3	603.6	603.7
165°	610.1	610.8	611.5	612.3	613.0	612.9	612.1	611.3	610.5	609.6	609.7
167.5°	614.7	615.6	616.4	617.2	618.0	618.0	617.2	616.4	615.6	614.7	614.7
170°	618.9	619.8	620.6	621.4	622.2	622.2	621.4	620.6	619.8	618.9	618.9
172.5°	621.3	622.2	623.1	624.0	625.0	625.0	624.2	623.4	622.5	621.7	621.6
175°	623.6	624.4	625.2	626.1	626.9	626.9	626.2	625.5	624.8	624.0	623.9
177.5°	624.0	625.1	626.1	627.1	628.2	628.3	627.5	626.6	625.8	625.0	624.9
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	961.6	960.7	951.8	942.9	934.1	925.4	918.9	912.4	901.5	890.5	883.6
5°	1021.2	1014.2	1000.1	986.0	964.8	943.6	925.8	908.0	885.3	862.7	843.7
7.5°	1054.5	1048.7	1031.6	1014.5	986.5	958.5	930.6	902.8	869.3	835.9	807.3
10°	1055.4	1060.2	1046.1	1032.0	1000.4	968.9	931.0	893.1	848.2	803.2	766.3
12.5°	1022.3	1043.1	1040.2	1037.2	1005.1	973.0	926.9	880.9	825.7	770.6	724.3
15°	960.5	1000.8	1012.7	1024.6	998.0	971.5	919.1	866.7	801.9	737.1	684.0
17.5°	880.9	937.3	968.7	1000.1	980.8	961.4	904.1	846.7	773.7	700.7	643.0
20°	786.5	860.4	909.6	958.8	951.8	944.7	885.5	826.3	747.5	668.8	606.2
22.5°	693.3	771.3	839.3	907.2	914.5	921.7	861.9	802.1	716.0	629.8	566.1
25°	612.9	692.2	773.2	854.1	870.5	886.8	830.0	773.2	683.9	594.5	531.2
27.5°	536.2	611.6	700.7	789.9	819.6	849.3	797.3	745.3	652.3	559.3	496.1
30°	473.7	541.1	632.0	723.0	764.4	805.8	758.1	710.4	618.1	525.8	464.0
32.5°	415.4	475.7	567.1	658.4	706.5	754.6	713.4	672.2	583.4	494.6	433.6
35°	369.3	423.3	508.6	593.8	647.6	701.5	667.7	633.9	547.2	460.5	402.7
37.5°	329.8	375.1	455.1	535.1	592.3	649.5	621.3	593.1	511.5	430.0	375.4
40°	297.1	333.5	407.9	482.4	538.5	594.5	570.4	546.3	473.3	400.3	349.3
42.5°	269.0	300.4	367.3	434.1	485.5	537.0	521.0	505.0	438.9	372.8	325.5
45°	244.4	270.7	329.6	388.4	435.8	483.1	470.5	457.9	400.9	343.9	300.4
47.5°	222.4	245.1	297.6	350.2	392.7	435.2	423.5	411.8	364.7	317.5	278.0
50°	202.4	221.7	265.5	309.3	347.6	385.8	376.2	366.5	327.5	288.5	254.4
52.5°	183.4	199.4	238.8	278.1	309.0	339.8	332.4	324.9	294.9	264.8	233.8
55°	165.4	180.1	213.3	246.6	272.9	299.3	291.9	284.5	261.1	237.7	210.4
57.5°	149.1	161.9	188.8	215.8	236.7	257.7	254.2	250.7	231.2	211.7	189.2
60°	131.8	143.3	166.6	189.8	206.7	223.6	219.5	215.4	201.5	187.5	168.2
62.5°	116.4	126.6	145.2	163.8	177.5	191.2	188.3	185.3	174.7	164.1	148.2
65°	100.3	110.3	125.3	140.4	151.1	161.9	159.3	156.7	148.7	140.7	127.9
67.5°	85.6	94.0	107.0	119.9	127.2	134.4	132.9	131.5	125.3	119.2	109.2
70°	70.7	78.0	88.8	99.5	104.5	109.6	110.1	110.7	105.1	99.5	92.1
72.5°	55.9	61.6	71.7	81.7	85.6	89.5	89.3	89.1	85.8	82.4	75.8
75°	42.9	47.2	55.0	62.8	66.1	69.4	70.2	70.9	67.8	64.6	60.9
77.5°	30.8	33.8	39.7	45.7	49.4	53.1	53.5	53.8	52.4	50.9	47.3
80°	21.7	22.7	26.4	30.1	34.0	37.9	38.4	39.0	37.5	36.0	33.8
82.5°	15.0	15.6	16.9	18.2	21.4	24.5	25.3	26.0	25.3	24.5	22.1
85°	9.1	9.3	9.8	10.4	11.9	13.4	14.1	14.9	14.5	14.1	12.8
87.5°	4.1	4.1	4.3	4.5	4.8	5.2	6.1	7.1	6.5	5.9	5.4
90°	8.5	7.1	5.8	4.6	3.6	2.5	1.5	0.5	1.5	2.5	3.6
92.5°	10.2	9.3	8.4	8.2	8.8	9.5	10.1	10.7	10.1	9.5	8.8
95°	12.1	11.0	9.9	11.4	15.7	19.9	24.1	28.4	24.1	19.9	15.7
97.5°	25.4	30.7	36.0	40.0	42.9	45.8	48.7	51.6	48.7	45.8	42.9
100°	47.6	63.7	79.8	86.9	84.8	82.7	80.7	78.6	80.7	82.7	84.8
102.5°	70.4	88.4	106.3	114.7	113.3	112.0	110.6	109.3	110.6	112.0	113.3
105°	120.4	129.7	139.0	143.1	142.0	140.8	139.7	138.6	139.7	140.8	142.0
107.5°	177.8	176.2	174.7	173.4	172.5	171.6	170.7	169.7	170.7	171.6	172.5
110°	207.4	206.3	205.2	204.2	203.4	202.5	201.7	200.9	201.7	202.5	203.4





TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	236.7	235.6	234.5	233.5	232.8	232.1	231.4	230.6	231.4	232.1	232.8
115°	265.1	264.1	263.2	262.4	261.8	261.2	260.6	259.9	260.6	261.2	261.8
117.5°	293.3	292.8	292.3	291.7	290.9	290.2	289.5	288.8	289.5	290.2	290.9
120°	320.2	319.9	319.6	319.0	318.1	317.1	316.2	315.3	316.2	317.1	318.1
122.5°	346.5	346.1	345.7	345.1	344.4	343.7	343.0	342.2	343.0	343.7	344.4
125°	371.2	370.8	370.4	369.7	368.9	368.1	367.3	366.4	367.3	368.1	368.9
127.5°	395.6	395.1	394.6	393.9	393.1	392.3	391.4	390.6	391.4	392.3	393.1
130°	417.7	417.3	416.9	416.2	415.4	414.6	413.8	412.9	413.8	414.6	415.4
132.5°	438.8	438.5	438.2	437.6	436.8	436.0	435.1	434.3	435.1	436.0	436.8
135°	460.0	459.6	459.2	458.7	458.0	457.4	456.8	456.2	456.8	457.4	458.0
137.5°	479.0	478.8	478.6	478.1	477.3	476.4	475.6	474.8	475.6	476.4	477.3
140°	496.9	496.6	496.3	495.9	495.2	494.6	494.0	493.4	494.0	494.6	495.2
142.5°	514.1	513.8	513.5	513.1	512.4	511.8	511.2	510.6	511.2	511.8	512.4
145°	530.2	530.0	529.7	529.3	528.6	527.8	527.1	526.4	527.1	527.8	528.6
147.5°	544.6	544.4	544.2	543.8	543.3	542.8	542.3	541.7	542.3	542.8	543.3
150°	557.6	557.4	557.2	556.9	556.6	556.3	556.0	555.7	556.0	556.3	556.6
152.5°	569.0	568.9	568.8	568.7	568.6	568.4	568.3	568.2	568.3	568.4	568.6
155°	579.2	579.1	579.0	579.0	579.2	579.5	579.7	579.9	579.7	579.5	579.2
157.5°	588.9	589.0	589.1	589.2	589.2	589.2	589.2	589.2	589.2	589.2	589.2
160°	596.8	596.9	597.0	597.1	597.2	597.3	597.4	597.5	597.4	597.3	597.2
162.5°	603.8	603.9	604.0	604.2	604.5	604.8	605.1	605.4	605.1	604.8	604.5
165°	609.8	609.9	610.0	610.2	610.6	610.9	611.2	611.5	611.2	610.9	610.6
167.5°	614.7	614.7	614.7	614.9	615.4	615.8	616.2	616.6	616.2	615.8	615.4
170°	618.9	618.9	618.9	619.1	619.5	620.0	620.4	620.8	620.4	620.0	619.5
172.5°	621.5	621.4	621.3	621.5	622.0	622.5	623.1	623.6	623.1	622.5	622.0
175°	623.8	623.7	623.6	623.8	624.4	624.9	625.4	625.9	625.4	624.9	624.4
177.5°	624.8	624.7	624.6	624.8	625.3	625.8	626.3	626.8	626.3	625.8	625.3
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7	905.7
2.5°	876.8	866.2	855.6	848.0	840.4	830.9	821.4	821.1	820.7	813.6	806.6
5°	824.8	806.4	788.0	770.0	752.0	734.0	716.0	711.9	707.8	701.7	695.6
7.5°	778.7	749.4	720.1	697.0	674.0	656.0	638.0	625.7	613.5	604.0	594.5
10°	729.3	693.0	656.6	628.7	600.9	581.4	561.9	547.8	533.6	527.0	520.3
12.5°	678.1	638.5	599.0	571.7	544.4	521.0	497.6	484.8	472.0	462.7	453.4
15°	630.9	588.4	545.9	516.9	488.0	466.1	444.1	431.3	418.5	409.2	400.0
17.5°	585.3	542.4	499.5	470.1	440.8	420.9	401.1	388.6	376.2	370.4	364.7
20°	543.7	500.4	457.1	429.5	401.8	382.3	362.8	356.1	349.4	344.1	338.7
22.5°	502.4	460.9	419.3	392.7	366.2	352.0	337.9	332.5	327.2	323.1	319.0
25°	467.9	426.5	385.1	361.9	338.7	327.7	316.8	313.2	309.7	305.6	301.5
27.5°	433.0	393.6	354.3	335.7	317.1	308.2	299.3	294.9	290.4	287.1	283.7
30°	402.2	365.8	329.4	314.0	298.6	290.8	283.0	278.1	273.3	270.2	267.0
32.5°	372.5	340.2	307.9	294.7	281.5	273.9	266.3	261.6	257.0	253.3	249.6
35°	345.0	317.0	288.9	276.8	264.8	257.2	249.6	244.9	240.3	236.6	232.8
37.5°	320.9	295.4	270.0	258.6	247.3	240.6	234.0	229.1	224.3	220.4	216.5
40°	298.2	275.7	253.3	242.3	231.4	224.1	216.9	212.6	208.3	204.8	201.3
42.5°	278.1	257.5	236.9	226.2	215.4	208.5	201.6	196.6	191.6	189.6	187.5
45°	257.0	238.8	220.6	210.2	199.8	192.5	185.3	181.0	176.8	174.9	173.1
47.5°	238.4	221.5	204.6	194.4	184.2	177.7	171.2	167.9	164.5	161.9	159.3
50°	220.2	203.9	187.5	177.7	167.9	162.3	156.7	152.6	148.5	146.7	144.8
52.5°	202.8	187.9	173.1	163.0	153.0	147.6	142.2	138.7	135.2	131.3	127.4
55°	183.1	170.1	157.1	148.2	139.3	133.7	128.1	124.0	119.9	115.9	111.8
57.5°	166.7	153.9	141.1	133.1	125.1	119.8	114.4	109.9	105.5	102.1	98.8
60°	148.9	137.8	126.6	118.8	111.0	105.8	100.6	96.4	92.1	90.4	88.8
62.5°	132.2	121.8	111.4	104.5	97.7	92.7	87.6	84.9	82.1	81.0	79.8
65°	115.1	106.2	97.3	91.0	84.7	80.4	76.1	74.8	73.5	72.6	71.7
67.5°	99.2	91.5	83.9	78.4	72.8	69.8	66.8	65.4	63.9	62.8	61.6
70°	84.7	78.0	71.3	66.5	61.6	58.9	56.1	54.8	53.5	51.4	49.4
72.5°	69.1	63.9	58.7	55.0	51.2	48.8	46.4	43.8	41.2	39.4	37.5
75°	57.2	52.0	46.8	43.3	39.7	36.9	34.2	33.2	32.3	31.8	31.2
77.5°	43.8	39.4	34.9	32.1	29.3	28.0	26.7	26.2	25.6	25.4	25.3
80°	31.6	27.9	24.1	22.7	21.2	20.8	20.4	20.1	19.7	19.5	19.3
82.5°	19.7	17.8	16.0	15.6	15.2	15.0	14.9	14.7	14.5	14.3	14.1
85°	11.5	10.8	10.0	9.8	9.7	9.5	9.3	9.3	9.3	9.3	9.3
87.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.6	4.5
90°	4.6	5.8	7.1	8.5	9.8	11.2	11.6	12.0	12.4	12.8	13.1
92.5°	8.2	8.4	9.3	10.2	11.2	12.1	12.8	13.5	14.3	15.0	15.4
95°	11.4	9.9	11.0	12.1	13.3	14.4	15.1	15.9	16.6	17.3	17.7
97.5°	40.0	36.0	30.7	25.4	20.2	14.9	15.7	16.5	17.4	18.2	18.7
100°	86.9	79.8	63.7	47.6	31.5	15.3	16.2	17.0	17.8	18.7	19.1
102.5°	114.7	106.3	88.4	70.4	52.4	34.4	31.0	27.6	24.2	20.8	19.2
105°	143.1	139.0	129.7	120.4	111.1	101.8	83.5	65.3	47.0	28.7	19.6
107.5°	173.4	174.7	176.2	177.8	179.3	180.9	165.0	149.1	133.1	117.2	102.5
110°	204.2	205.2	206.3	207.4	208.6	209.7	206.3	202.9	199.5	196.1	187.0



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	233.5	234.5	235.6	236.7	237.9	239.0	239.9	240.9	241.8	242.7	243.1
115°	262.4	263.2	264.1	265.1	266.0	266.9	267.9	269.0	270.0	271.0	271.8
117.5°	291.7	292.3	292.8	293.3	293.8	294.4	295.2	296.0	296.8	297.7	298.1
120°	319.0	319.6	319.9	320.2	320.5	320.9	321.7	322.5	323.3	324.2	324.6
122.5°	345.1	345.7	346.1	346.5	346.9	347.4	347.9	348.4	348.9	349.4	349.7
125°	369.7	370.4	370.8	371.2	371.6	372.0	372.2	372.4	372.6	372.8	373.0
127.5°	393.9	394.6	395.1	395.6	396.1	396.7	397.0	397.3	397.6	397.9	397.9
130°	416.2	416.9	417.3	417.7	418.1	418.5	418.9	419.3	419.7	420.2	420.3
132.5°	437.6	438.2	438.5	438.8	439.1	439.4	439.8	440.3	440.7	441.1	441.1
135°	458.7	459.2	459.6	460.0	460.4	460.8	461.1	461.4	461.8	462.1	462.1
137.5°	478.1	478.6	478.8	479.0	479.2	479.4	479.9	480.5	481.0	481.5	481.6
140°	495.9	496.3	496.6	496.9	497.3	497.6	498.0	498.4	498.8	499.2	499.3
142.5°	513.1	513.5	513.8	514.1	514.5	514.8	515.1	515.4	515.7	516.0	516.0
145°	529.3	529.7	530.0	530.2	530.4	530.6	530.8	531.0	531.2	531.4	531.5
147.5°	543.8	544.2	544.4	544.6	544.8	545.0	545.2	545.4	545.6	545.8	545.7
150°	556.9	557.2	557.4	557.6	557.8	558.0	558.2	558.4	558.6	558.8	558.8
152.5°	568.7	568.8	568.9	569.0	569.1	569.2	569.6	570.0	570.4	570.8	570.8
155°	579.0	579.0	579.1	579.2	579.3	579.4	579.9	580.4	581.0	581.5	581.4
157.5°	589.2	589.1	589.0	588.9	588.8	588.7	589.3	589.9	590.6	591.2	591.1
160°	597.1	597.0	596.9	596.8	596.7	596.6	597.2	597.8	598.5	599.1	599.0
162.5°	604.2	604.0	603.9	603.8	603.7	603.6	604.3	605.0	605.8	606.5	606.5
165°	610.2	610.0	609.9	609.8	609.7	609.6	610.5	611.3	612.1	612.9	613.0
167.5°	614.9	614.7	614.7	614.7	614.7	614.7	615.6	616.4	617.2	618.0	618.0
170°	619.1	618.9	618.9	618.9	618.9	618.9	619.8	620.6	621.4	622.2	622.2
172.5°	621.5	621.3	621.4	621.5	621.6	621.7	622.5	623.4	624.2	625.0	625.0
175°	623.8	623.6	623.7	623.8	623.9	624.0	624.8	625.5	626.2	626.9	626.9
177.5°	624.8	624.6	624.7	624.8	624.9	625.0	625.8	626.6	627.5	628.3	628.2
180°	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9	625.9



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	905.7	905.7	905.7	905.7
2.5°	804.7	802.9	802.1	801.4
5°	689.8	684.0	682.7	681.4
7.5°	592.1	589.7	581.7	573.7
10°	512.8	505.4	502.1	498.7
12.5°	446.6	439.7	438.6	437.5
15°	395.1	390.3	388.6	387.0
17.5°	361.3	358.0	355.9	353.9
20°	336.3	333.8	332.4	330.9
22.5°	317.1	315.3	314.2	313.1
25°	298.8	296.0	295.0	294.1
27.5°	281.3	278.9	278.0	277.0
30°	265.0	262.9	261.6	260.3
32.5°	247.1	244.7	244.0	243.2
35°	231.4	229.9	229.1	228.4
37.5°	214.6	212.8	211.7	210.6
40°	200.3	199.4	198.9	198.3
42.5°	185.9	184.2	184.0	183.8
45°	171.4	169.7	169.3	169.0
47.5°	157.8	156.3	156.2	156.0
50°	142.8	140.7	139.3	137.8
52.5°	125.5	123.7	122.4	121.1
55°	109.7	107.7	106.6	105.5
57.5°	97.9	96.9	96.4	95.8
60°	88.2	87.6	87.3	86.9
62.5°	79.3	78.7	78.7	78.7
65°	71.1	70.6	70.0	69.4
67.5°	60.5	59.4	59.2	59.0
70°	47.7	46.0	45.9	45.7
72.5°	37.3	37.1	36.8	36.4
75°	30.8	30.5	30.5	30.5
77.5°	24.9	24.5	24.5	24.5
80°	19.1	18.9	19.1	19.3
82.5°	14.1	14.1	13.9	13.7
85°	9.1	8.9	8.9	8.9
87.5°	4.5	4.5	4.5	4.5
90°	13.3	13.5	13.7	14.0
92.5°	15.5	15.6	15.7	15.8
95°	17.7	17.7	17.7	17.7
97.5°	18.8	18.9	19.0	19.1
100°	19.2	19.3	19.4	19.5
102.5°	19.4	19.6	19.8	20.0
105°	19.8	20.0	20.3	20.5
107.5°	89.0	75.4	61.9	48.4
110°	172.2	157.4	142.7	127.9



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	242.9	242.7	242.5	242.3
115°	272.2	272.6	273.0	273.4
117.5°	298.2	298.3	298.4	298.5
120°	324.6	324.6	324.6	324.6
122.5°	349.8	349.9	350.0	350.2
125°	373.2	373.5	373.7	373.9
127.5°	397.7	397.5	397.3	397.1
130°	420.1	419.9	419.6	419.4
132.5°	440.8	440.5	440.2	439.9
135°	461.8	461.4	461.1	460.8
137.5°	481.4	481.2	481.0	480.8
140°	499.1	498.9	498.7	498.5
142.5°	515.7	515.4	515.1	514.8
145°	531.5	531.5	531.5	531.5
147.5°	545.1	544.6	544.1	543.6
150°	558.5	558.2	557.9	557.5
152.5°	570.3	569.7	569.2	568.7
155°	580.8	580.2	579.6	578.9
157.5°	590.3	589.4	588.6	587.8
160°	598.3	597.6	596.9	596.1
162.5°	605.9	605.3	604.7	604.0
165°	612.3	611.5	610.8	610.1
167.5°	617.2	616.4	615.6	614.7
170°	621.4	620.6	619.8	618.9
172.5°	624.0	623.1	622.2	621.3
175°	626.1	625.2	624.4	623.6
177.5°	627.1	626.1	625.1	624.0
180°	625.9	625.9	625.9	625.9



TEST NUMBER: P832131

CATALOG NUMBER: S123RDIP-S340D585U930-4F0-1E-UDD-G

**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	7.49	8.22	8.55	9.27	10.70	12.15	12.88	13.21	13.94	15.37
	3H	8.70	9.35	9.77	10.42	11.87	13.64	14.30	14.71	15.36	16.81
	4H	9.08	9.70	10.16	10.76	12.22	14.13	14.75	15.21	15.81	17.27
	6H	9.36	9.92	10.44	10.99	12.46	14.44	15.00	15.52	16.07	17.54
	8H	9.44	9.98	10.53	11.07	12.52	14.51	15.05	15.61	16.14	17.60
	12H	9.49	10.00	10.59	11.08	12.56	14.54	15.05	15.64	16.13	17.62
4H	2H	8.20	8.82	9.29	9.88	11.34	12.14	12.75	13.22	13.82	15.27
	3H	9.56	10.07	10.65	11.17	12.63	13.79	14.30	14.88	15.39	16.86
	4H	10.01	10.48	11.11	11.57	13.05	14.39	14.86	15.49	15.94	17.43
	6H	10.37	10.78	11.48	11.88	13.37	14.82	15.22	15.93	16.33	17.81
	8H	10.50	10.87	11.60	11.97	13.47	14.95	15.33	16.06	16.42	17.92
	12H	10.57	10.91	11.69	12.02	13.52	15.01	15.35	16.13	16.46	17.96
8H	4H	10.32	10.70	11.42	11.79	13.29	14.35	14.72	15.45	15.82	17.32
	6H	10.78	11.09	11.91	12.23	13.72	14.84	15.15	15.97	16.29	17.79
	8H	10.97	11.24	12.11	12.37	13.88	15.03	15.30	16.16	16.42	17.93
	12H	11.11	11.35	12.25	12.47	14.02	15.14	15.38	16.28	16.50	18.05
12H	4H	10.33	10.67	11.45	11.78	13.28	14.29	14.63	15.42	15.75	17.25
	6H	10.84	11.11	11.97	12.23	13.74	14.82	15.09	15.95	16.21	17.72
	8H	11.05	11.29	12.19	12.41	13.96	15.00	15.24	16.14	16.36	17.91