

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: P832091

Luminaire Tested: S123RDIP-S340D365U830-4F0-1E-UDD-G4

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P832091  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-2, G3-1807-864-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDIP-S340D365U830-4F0-1E-UDD-G4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: -

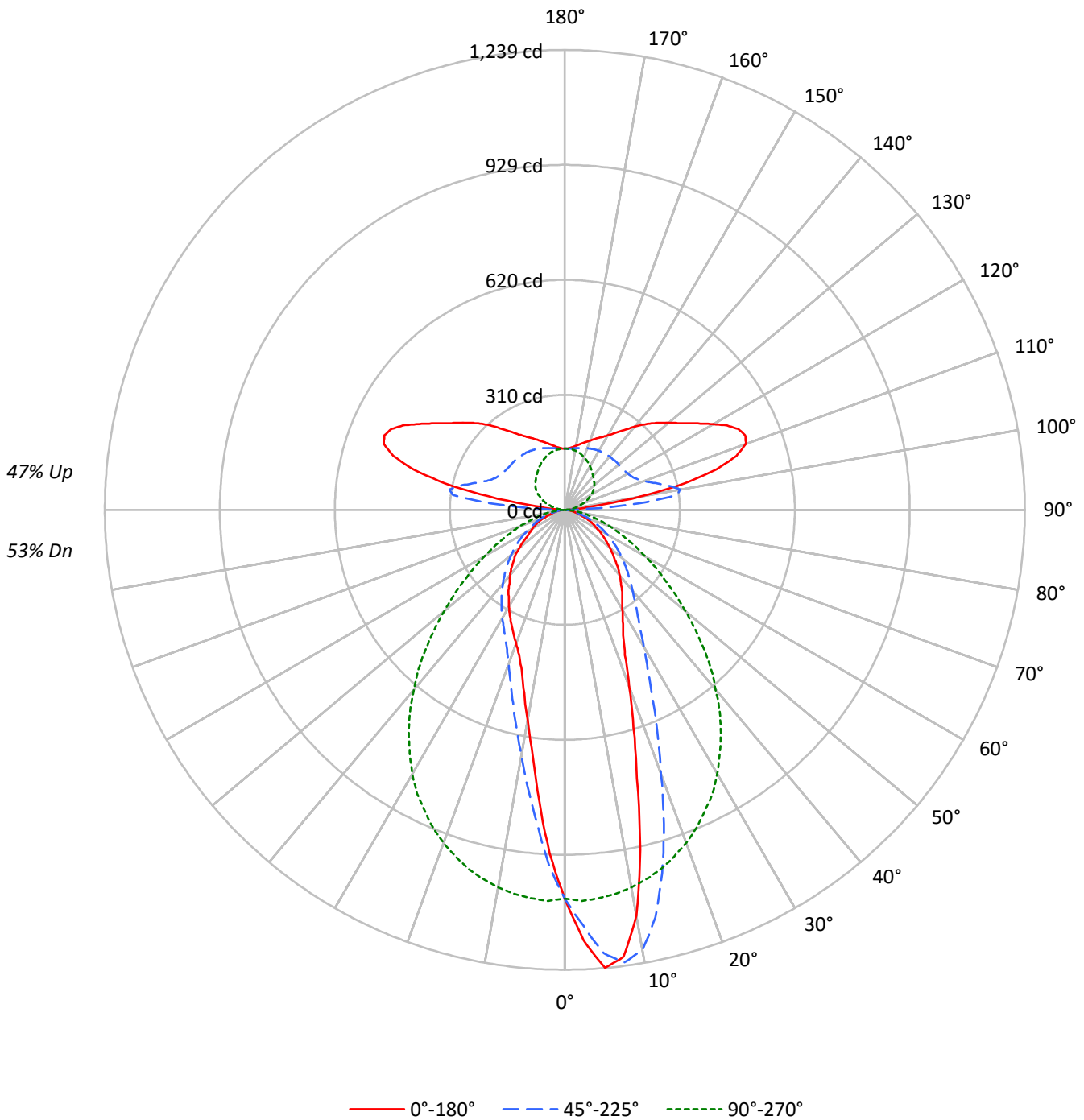
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2626.9 lumens  
Efficiency: N/A  
Efficacy: 117.3 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: 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				
RC	80					70					50					30				
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																				
0	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53		
1	99	95	92	88	92	88	85	83	76	73	71	64	62	61	53	52	51	46		
2	91	84	78	74	84	78	73	69	67	64	61	57	55	52	48	46	45	40		
3	84	75	68	63	77	70	64	59	60	56	52	52	48	45	43	41	39	35		
4	77	67	60	54	71	63	56	51	54	49	45	47	43	40	39	37	35	31		
5	71	60	53	47	66	56	50	45	49	44	40	42	38	35	36	33	31	28		
6	66	55	47	41	61	51	44	39	45	39	35	39	35	32	33	30	28	25		
7	61	50	42	37	57	47	40	35	41	36	32	36	32	28	31	28	25	23		
8	57	46	38	33	53	43	36	32	38	32	29	33	29	26	29	25	23	21		
9	54	42	35	30	50	40	33	29	35	30	26	31	27	24	27	23	21	19		
10	50	39	32	27	47	37	30	26	33	27	24	29	25	22	25	22	20	18		

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

	0°	45°	90°	135°	180°
0°	11271	11271	11271	11271	11271
5°	13383	12956	11342	9168	8512
10°	12125	13160	11285	7346	6302
15°	8349	11283	11166	6004	4985
20°	5808	8687	10942	5063	4381
25°	4425	6621	10615	4500	4038
30°	3853	5294	10208	4179	3740
35°	3537	4465	9629	3907	3469
40°	3228	3988	8873	3641	3222
45°	2915	3647	8057	3389	2973
50°	2646	3364	7095	3141	2668
55°	2393	3089	6172	2901	2288
60°	2144	2809	5360	2635	2164
65°	1979	2493	4615	2366	2045
70°	1608	2156	4025	2140	1662
75°	1410	1713	3410	1776	1464
80°	1277	1450	2796	1488	1382
85°	1161	1272	2124	1346	1272

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 8502 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.4	3.6
10°-20°	220.8	8.4
20°-30°	253.4	9.6
30°-40°	249.8	9.5
40°-50°	220.3	8.4
50°-60°	169.5	6.5
60°-70°	111.4	4.2
70°-80°	54.1	2.1
80°-90°	14.6	0.6
90°-100°	89.3	3.4
100°-110°	261.4	10.0
110°-120°	255.3	9.7
120°-130°	203.3	7.7
130°-140°	160.4	6.1
140°-150°	119.7	4.6
150°-160°	83.4	3.2
160°-170°	49.0	1.9
170°-180°	15.9	0.6
0°-30°	569.7	21.7
0°-40°	819.4	31.2
0°-60°	1209.1	46.0
0°-90°	1389.2	52.9
90°-120°	606.0	23.1
90°-150°	1089.3	41.5
90°-180°	1238.0	47.1
0°-180°	2626.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1047	1047	1047	1047	1047	
5°	1239	1199	1050	848	788	113
15°	749	1012	1002	539	447	211
25°	373	558	894	379	340	176
35°	269	340	733	297	264	168
45°	192	240	529	223	195	149
55°	128	165	329	155	122	114
65°	78	98	181	93	80	76
75°	34	41	82	43	35	36
85°	9	10	17	11	10	10
90°	10	8	1	8	10	6
95°	39	198	11	198	39	63
105°	424	268	39	268	424	423
115°	515	205	68	205	515	502
125°	406	191	95	191	406	368
135°	329	188	111	188	329	255
145°	258	186	127	186	258	164
155°	214	180	144	180	214	99
165°	186	172	158	172	186	53
175°	168	166	164	166	168	16
180°	164	164	164	164	164	

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1160.4	1156.8	1153.1	1152.1	1151.0	1147.6	1144.1	1136.4	1128.7	1120.7	1112.8
5°	1238.6	1239.0	1239.4	1238.4	1237.3	1232.8	1228.3	1218.8	1209.4	1199.1	1188.8
7.5°	1214.5	1221.4	1228.3	1229.6	1230.8	1234.3	1237.7	1235.6	1233.4	1229.6	1225.7
10°	1109.3	1108.9	1108.5	1116.2	1123.9	1146.9	1169.9	1181.7	1193.5	1204.0	1214.5
12.5°	937.6	938.3	938.9	964.2	989.6	1011.2	1032.9	1063.0	1093.0	1125.4	1157.9
15°	749.2	759.7	770.2	792.7	815.3	847.9	880.5	920.9	961.2	1012.5	1063.8
17.5°	615.2	619.7	624.2	645.9	667.6	698.5	729.4	775.1	820.8	887.0	953.1
20°	507.0	511.1	515.2	530.8	546.5	576.1	605.8	649.3	692.9	758.4	823.9
22.5°	423.3	431.2	439.2	449.7	460.2	481.7	503.2	547.6	592.0	651.7	711.4
25°	372.6	376.3	379.9	389.0	398.0	418.6	439.2	468.6	498.0	557.5	616.9
27.5°	338.3	339.4	340.4	347.1	353.8	367.1	380.4	407.6	434.9	483.8	532.8
30°	310.0	311.9	313.8	319.0	324.1	333.8	343.5	362.8	382.1	425.9	469.7
32.5°	288.1	289.1	290.2	294.5	298.8	305.9	313.0	328.2	343.5	376.9	410.4
35°	269.2	269.4	269.6	272.8	276.0	282.9	289.8	302.5	315.1	339.8	364.5
37.5°	247.7	249.2	250.7	253.1	255.4	261.5	267.5	277.8	288.1	308.5	328.9
40°	229.7	231.0	232.3	235.0	237.8	242.6	247.3	256.7	266.2	283.8	301.4
42.5°	211.7	212.5	213.4	216.2	219.0	224.7	230.5	238.1	245.6	260.2	274.8
45°	191.5	193.6	195.8	198.8	201.8	206.7	211.7	219.4	227.1	239.6	252.0
47.5°	174.7	175.8	176.9	179.5	182.0	188.0	194.0	200.9	207.8	219.4	231.0
50°	158.0	158.4	158.8	161.2	163.6	168.9	174.3	182.2	190.2	200.9	211.7
52.5°	142.1	143.2	144.2	146.6	149.0	152.6	156.3	164.4	172.6	183.1	193.6
55°	127.5	128.2	128.8	130.5	132.2	136.5	140.8	147.9	155.0	164.6	174.3
57.5°	113.8	114.6	115.5	116.8	118.1	121.9	125.8	132.0	138.2	147.9	157.6
60°	99.6	100.7	101.7	103.2	104.8	107.8	110.8	116.3	121.9	130.5	139.1
62.5°	89.3	89.5	89.7	91.0	92.3	94.4	96.6	101.1	105.6	114.2	122.8
65°	77.7	78.3	79.0	79.6	80.3	82.0	83.7	87.6	91.4	97.9	104.3
67.5°	65.7	66.3	67.0	68.0	69.1	70.6	72.1	74.7	77.3	83.3	89.3
70°	51.1	51.1	51.1	52.8	54.5	57.1	59.7	61.6	63.5	68.5	73.4
72.5°	41.6	41.9	42.1	42.3	42.5	44.0	45.5	48.7	51.9	55.0	58.0
75°	33.9	34.1	34.3	34.6	34.8	35.2	35.6	36.7	37.8	41.2	44.6
77.5°	27.0	27.3	27.5	27.7	27.9	28.3	28.8	29.2	29.6	30.9	32.2
80°	20.6	20.8	21.0	21.3	21.5	21.7	21.9	22.3	22.8	23.4	24.0
82.5°	15.0	15.0	15.0	15.0	15.0	15.5	15.9	15.9	15.9	16.3	16.7
85°	9.4	9.4	9.4	9.7	9.9	9.9	9.9	10.1	10.3	10.3	10.3
87.5°	4.3	4.1	3.9	4.1	4.3	4.3	4.3	4.5	4.7	4.7	4.7
90°	9.7	10.0	9.7	9.3	9.7	9.0	8.7	8.3	8.0	8.3	7.3
92.5°	17.7	18.3	18.0	19.3	20.0	22.3	25.6	33.0	46.3	62.0	68.6
95°	38.6	40.0	42.3	45.3	51.6	63.6	81.3	119.9	160.2	197.5	175.9
97.5°	79.3	82.9	90.9	103.6	125.9	163.9	207.8	275.5	314.1	303.8	226.8
100°	208.8	208.5	221.5	245.8	279.5	326.7	365.7	392.7	381.0	315.4	213.2
102.5°	330.7	340.4	350.7	368.7	393.0	418.7	437.3	431.7	384.4	293.8	193.2
105°	423.7	425.3	436.0	448.7	464.0	472.6	466.3	433.0	363.4	267.8	177.5
107.5°	484.3	488.0	492.3	498.3	500.3	491.3	465.3	413.0	333.4	244.8	166.2
110°	518.9	519.6	520.3	517.6	508.3	485.0	443.0	381.7	305.4	225.8	160.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	525.9	525.6	522.3	512.6	493.6	462.0	413.7	350.7	281.1	213.2	156.9
115°	515.3	513.6	506.9	492.3	467.3	431.0	382.0	324.1	262.5	204.8	156.5
117.5°	492.0	489.6	479.6	463.3	437.3	399.7	354.7	303.4	250.1	199.2	156.9
120°	461.3	459.3	451.3	432.7	406.4	372.7	332.7	287.8	240.8	195.5	158.2
122.5°	432.7	430.0	421.0	404.7	382.0	351.4	315.1	275.5	233.2	193.2	160.5
125°	406.4	404.0	395.7	381.0	359.7	333.1	301.1	264.8	226.8	191.2	162.9
127.5°	383.7	381.7	374.0	361.4	342.1	317.4	288.1	255.1	220.8	190.2	165.5
130°	365.1	362.4	355.4	343.4	325.7	303.1	276.1	246.1	216.2	189.2	168.2
132.5°	346.7	345.1	339.1	327.1	310.8	289.4	264.8	237.8	211.8	188.9	170.2
135°	329.4	327.1	321.1	311.1	294.8	275.8	254.1	230.5	208.2	188.5	172.2
137.5°	311.1	309.1	304.1	293.8	279.8	262.8	243.5	223.5	204.8	187.9	173.5
140°	291.8	292.1	286.8	277.5	264.8	250.5	234.5	217.5	201.8	187.5	174.9
142.5°	273.8	274.1	269.5	261.5	251.1	239.1	225.8	211.8	199.2	186.9	175.9
145°	257.5	256.8	254.1	247.1	238.8	229.2	218.5	207.5	196.8	186.2	176.2
147.5°	243.5	243.1	240.5	235.5	228.8	221.8	212.8	203.8	194.5	185.2	176.2
150°	231.5	231.5	229.5	225.8	220.8	214.5	207.5	199.8	192.2	183.9	176.2
152.5°	221.5	221.5	220.5	217.2	213.5	208.5	202.5	196.2	189.5	182.2	175.2
155°	213.5	213.2	212.5	209.8	206.8	202.8	197.8	192.5	186.9	180.2	174.5
157.5°	205.8	205.8	205.2	203.2	200.5	197.2	193.2	188.5	183.9	178.5	173.5
160°	198.5	198.8	198.8	196.8	194.5	192.2	188.9	185.2	180.9	176.5	172.9
162.5°	191.9	192.2	192.2	190.5	189.2	187.2	184.2	181.2	177.9	174.5	171.5
165°	186.2	186.2	186.5	185.2	183.9	182.2	179.9	177.9	175.2	172.5	170.2
167.5°	180.5	180.5	180.9	179.9	179.2	177.9	176.5	174.9	172.5	170.5	168.9
170°	175.5	175.5	175.9	175.2	174.9	174.2	172.9	171.9	170.2	168.5	167.5
172.5°	170.9	171.2	171.9	171.2	171.2	170.9	169.9	169.2	167.9	166.9	166.5
175°	167.5	167.9	168.2	167.9	167.9	167.9	167.2	166.9	166.2	165.5	165.5
177.5°	165.2	165.2	165.9	165.5	165.9	165.9	165.5	165.2	164.9	164.5	164.9
180°	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1111.7	1110.6	1100.3	1090.0	1079.9	1069.9	1062.3	1054.8	1042.2	1029.5	1021.6
5°	1180.6	1172.5	1156.1	1139.8	1115.4	1090.9	1070.3	1049.7	1023.5	997.3	975.4
7.5°	1219.0	1212.4	1192.6	1172.9	1140.5	1108.1	1075.9	1043.7	1005.0	966.4	933.3
10°	1220.1	1225.7	1209.4	1193.1	1156.6	1120.1	1076.3	1032.5	980.6	928.6	885.9
12.5°	1181.9	1205.9	1202.5	1199.1	1161.9	1124.8	1071.6	1018.3	954.6	890.8	837.4
15°	1110.4	1157.0	1170.7	1184.5	1153.8	1123.1	1062.6	1002.0	927.1	852.2	790.8
17.5°	1018.3	1083.6	1119.9	1156.1	1133.8	1111.5	1045.2	978.8	894.5	810.1	743.4
20°	909.3	994.7	1051.6	1108.5	1100.3	1092.2	1023.7	955.2	864.2	773.2	700.9
22.5°	801.5	891.7	970.2	1048.8	1057.2	1065.6	996.4	927.3	827.7	728.1	654.5
25°	708.6	800.2	893.8	987.4	1006.3	1025.2	959.5	893.8	790.6	687.3	614.1
27.5°	619.9	707.1	810.1	913.2	947.5	981.8	921.7	861.6	754.1	646.5	573.6
30°	547.6	625.5	730.7	835.9	883.7	931.6	876.4	821.3	714.6	607.9	536.4
32.5°	480.2	550.0	655.6	761.2	816.8	872.4	824.7	777.1	674.5	571.8	501.2
35°	427.0	489.4	587.9	686.5	748.7	811.0	771.9	732.8	632.6	532.3	465.6
37.5°	381.2	433.6	526.1	618.6	684.8	750.9	718.2	685.6	591.4	497.1	434.0
40°	343.5	385.5	471.6	557.7	622.5	687.3	659.4	631.5	547.2	462.8	403.8
42.5°	311.0	347.3	424.6	501.9	561.3	620.8	602.3	583.9	507.4	431.0	376.3
45°	282.5	313.0	381.0	449.1	503.8	558.5	543.9	529.3	463.4	397.5	347.3
47.5°	257.2	283.3	344.1	404.8	454.0	503.2	489.6	476.1	421.6	367.1	321.3
50°	234.0	256.3	307.0	357.6	401.8	446.1	434.9	423.7	378.7	333.6	294.1
52.5°	212.1	230.5	276.0	321.6	357.2	392.8	384.2	375.6	340.9	306.1	270.3
55°	191.3	208.2	246.6	285.1	315.5	346.0	337.4	328.9	301.8	274.8	243.2
57.5°	172.4	187.2	218.3	249.4	273.7	297.9	293.9	289.8	267.2	244.7	218.7
60°	152.4	165.7	192.5	219.4	238.9	258.4	253.7	249.0	232.9	216.8	194.5
62.5°	134.6	146.4	167.9	189.3	205.2	221.1	217.7	214.2	202.0	189.8	171.3
65°	115.9	127.5	144.9	162.3	174.7	187.2	184.2	181.2	171.9	162.7	147.9
67.5°	99.0	108.6	123.6	138.7	147.0	155.4	153.7	152.0	144.9	137.8	126.2
70°	81.8	90.2	102.6	115.1	120.9	126.6	127.3	127.9	121.5	115.1	106.5
72.5°	64.6	71.3	82.9	94.4	99.0	103.5	103.2	103.0	99.2	95.3	87.6
75°	49.6	54.5	63.5	72.6	76.4	80.3	81.1	82.0	78.3	74.7	70.4
77.5°	35.6	39.1	45.9	52.8	57.1	61.4	61.8	62.3	60.5	58.8	54.7
80°	25.1	26.2	30.5	34.8	39.3	43.8	44.4	45.1	43.4	41.6	39.1
82.5°	17.4	18.0	19.5	21.0	24.7	28.3	29.2	30.1	29.2	28.3	25.5
85°	10.5	10.7	11.4	12.0	13.7	15.5	16.3	17.2	16.7	16.3	14.8
87.5°	4.7	4.7	4.9	5.2	5.6	6.0	7.1	8.2	7.5	6.9	6.2
90°	6.3	5.3	4.3	3.7	3.0	2.0	1.3	0.7	1.3	2.0	3.0
92.5°	51.3	33.6	23.0	17.0	13.7	10.7	7.3	5.0	7.3	10.7	13.7
95°	121.2	71.6	43.3	30.3	21.6	16.0	12.3	11.3	12.3	16.0	21.6
97.5°	134.9	77.3	49.3	35.0	26.3	21.3	18.3	18.0	18.3	21.3	26.3
100°	125.6	76.3	53.0	40.0	32.0	27.3	25.0	24.6	25.0	27.3	32.0
102.5°	117.6	77.6	57.3	45.6	38.6	34.3	32.3	31.6	32.3	34.3	38.6
105°	114.6	80.3	62.3	52.0	45.6	41.6	39.6	38.6	39.6	41.6	45.6
107.5°	113.9	84.6	68.6	59.0	53.0	49.0	47.0	46.0	47.0	49.0	53.0
110°	115.6	90.3	75.3	65.9	60.3	56.6	55.0	54.0	55.0	56.6	60.3





TEST NUMBER: P832091

CATALOG NUMBER: S123RDIP-S340D365U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	118.9	95.9	82.3	73.3	67.6	64.0	62.3	61.3	62.3	64.0	67.6
115°	122.6	102.3	89.6	80.6	74.9	71.6	69.6	68.3	69.6	71.6	74.9
117.5°	127.2	108.9	96.3	87.9	81.6	78.6	76.9	75.3	76.9	78.6	81.6
120°	132.6	115.2	103.3	94.9	88.6	85.3	83.6	82.6	83.6	85.3	88.6
122.5°	137.6	121.9	110.2	101.3	95.3	91.6	89.9	88.9	89.9	91.6	95.3
125°	142.9	128.2	116.6	107.6	101.3	97.6	95.6	94.9	95.6	97.6	101.3
127.5°	147.2	133.9	122.6	113.6	106.6	102.9	100.6	99.6	100.6	102.9	106.6
130°	151.5	138.9	127.9	118.9	111.9	107.9	104.9	103.9	104.9	107.9	111.9
132.5°	155.5	143.2	132.6	123.9	116.9	111.9	108.6	107.3	108.6	111.9	116.9
135°	158.9	147.6	137.2	128.2	121.2	116.2	112.6	111.2	112.6	116.2	121.2
137.5°	161.5	150.6	140.6	132.2	125.2	119.9	116.2	114.9	116.2	119.9	125.2
140°	163.5	153.5	143.9	135.6	128.9	123.6	120.2	118.6	120.2	123.6	128.9
142.5°	165.5	155.9	146.6	138.9	132.2	127.6	123.9	122.6	123.9	127.6	132.2
145°	166.9	157.9	149.2	141.6	135.9	130.9	127.9	126.9	127.9	130.9	135.9
147.5°	167.9	159.5	151.5	144.9	139.2	134.9	131.9	131.2	131.9	134.9	139.2
150°	168.2	161.2	153.5	147.6	142.9	138.6	135.9	135.6	135.9	138.6	142.9
152.5°	168.9	162.2	155.9	150.2	146.2	142.6	139.9	139.9	139.9	142.6	146.2
155°	168.9	163.5	157.9	153.2	149.6	146.2	144.2	144.2	144.2	146.2	149.6
157.5°	169.2	164.2	159.5	155.9	152.5	149.6	147.9	147.6	147.9	149.6	152.5
160°	169.2	165.2	161.2	157.9	155.5	152.9	151.5	151.5	151.5	152.9	155.5
162.5°	168.9	165.5	162.2	159.5	157.5	155.5	154.5	154.5	154.5	155.5	157.5
165°	168.2	165.9	163.2	160.9	159.5	157.9	157.2	157.5	157.2	157.9	159.5
167.5°	167.9	165.9	163.9	162.2	161.2	159.9	159.5	159.9	159.5	159.9	161.2
170°	166.9	165.5	163.9	163.2	162.5	161.5	161.2	161.9	161.2	161.5	162.5
172.5°	166.5	165.5	164.2	163.9	163.5	162.9	162.9	163.2	162.9	162.9	163.5
175°	165.9	165.2	164.5	164.2	164.2	163.5	163.9	164.2	163.9	163.5	164.2
177.5°	165.5	164.9	164.5	164.5	164.5	164.2	164.5	164.9	164.5	164.2	164.5
180°	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5



TEST NUMBER: P832091

CATALOG NUMBER: S123RDIP-S340D365U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1013.6	1001.4	989.1	980.3	971.5	960.6	949.6	949.2	948.8	940.6	932.5
5°	953.5	932.3	911.0	890.2	869.4	848.5	827.7	823.0	818.3	811.2	804.1
7.5°	900.3	866.4	832.4	805.8	779.2	758.4	737.6	723.4	709.2	698.3	687.3
10°	843.2	801.1	759.0	726.8	694.6	672.1	649.6	633.2	616.9	609.2	601.5
12.5°	783.9	738.2	692.5	660.9	629.4	602.3	575.3	560.5	545.7	534.9	524.2
15°	729.4	680.2	631.1	597.6	564.1	538.8	513.5	498.6	483.8	473.1	462.4
17.5°	676.6	627.0	577.4	543.5	509.6	486.6	463.7	449.3	434.9	428.2	421.6
20°	628.5	578.5	528.5	496.5	464.5	442.0	419.4	411.7	404.0	397.8	391.5
22.5°	580.9	532.8	484.7	454.0	423.3	407.0	390.7	384.5	378.2	373.5	368.8
25°	540.9	493.1	445.2	418.4	391.5	378.9	366.2	362.1	358.0	353.3	348.6
27.5°	500.6	455.1	409.6	388.1	366.6	356.3	346.0	340.9	335.7	331.9	328.0
30°	464.9	422.9	380.8	363.0	345.2	336.2	327.1	321.6	316.0	312.3	308.7
32.5°	430.6	393.3	355.9	340.7	325.4	316.6	307.8	302.5	297.1	292.8	288.5
35°	398.8	366.4	334.0	320.1	306.1	297.3	288.5	283.1	277.8	273.5	269.2
37.5°	370.9	341.5	312.1	299.0	285.9	278.2	270.5	264.9	259.3	254.8	250.3
40°	344.7	318.8	292.8	280.1	267.5	259.1	250.7	245.8	240.8	236.8	232.7
42.5°	321.6	297.7	273.9	261.5	249.0	241.1	233.1	227.3	221.5	219.2	216.8
45°	297.1	276.0	255.0	243.0	231.0	222.6	214.2	209.3	204.4	202.2	200.1
47.5°	275.6	256.1	236.6	224.7	212.9	205.4	197.9	194.0	190.2	187.2	184.2
50°	254.6	235.7	216.8	205.4	194.0	187.6	181.2	176.4	171.7	169.6	167.4
52.5°	234.4	217.2	200.1	188.5	176.9	170.7	164.4	160.3	156.3	151.8	147.3
55°	211.7	196.6	181.6	171.3	161.0	154.6	148.1	143.4	138.7	133.9	129.2
57.5°	192.8	178.0	163.1	153.9	144.7	138.5	132.2	127.1	121.9	118.1	114.2
60°	172.2	159.3	146.4	137.4	128.4	122.4	116.3	111.4	106.5	104.5	102.6
62.5°	152.8	140.8	128.8	120.9	112.9	107.1	101.3	98.1	94.9	93.6	92.3
65°	133.1	122.8	112.5	105.2	97.9	92.9	88.0	86.5	85.0	83.9	82.9
67.5°	114.6	105.8	97.0	90.6	84.1	80.7	77.3	75.6	73.8	72.6	71.3
70°	97.9	90.2	82.4	76.8	71.3	68.0	64.8	63.3	61.8	59.5	57.1
72.5°	79.9	73.8	67.8	63.5	59.2	56.5	53.7	50.7	47.7	45.5	43.4
75°	66.1	60.1	54.1	50.0	45.9	42.7	39.5	38.4	37.4	36.7	36.1
77.5°	50.7	45.5	40.4	37.1	33.9	32.4	30.9	30.3	29.6	29.4	29.2
80°	36.5	32.2	27.9	26.2	24.5	24.0	23.6	23.2	22.8	22.5	22.3
82.5°	22.8	20.6	18.5	18.0	17.6	17.4	17.2	17.0	16.7	16.5	16.3
85°	13.3	12.5	11.6	11.4	11.2	10.9	10.7	10.7	10.7	10.7	10.7
87.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.4	5.2
90°	3.7	4.3	5.3	6.3	7.3	8.3	8.0	8.3	8.7	9.0	9.7
92.5°	17.0	23.0	33.6	51.3	68.6	62.0	46.3	33.0	25.6	22.3	20.0
95°	30.3	43.3	71.6	121.2	175.9	197.5	160.2	119.9	81.3	63.6	51.6
97.5°	35.0	49.3	77.3	134.9	226.8	303.8	314.1	275.5	207.8	163.9	125.9
100°	40.0	53.0	76.3	125.6	213.2	315.4	381.0	392.7	365.7	326.7	279.5
102.5°	45.6	57.3	77.6	117.6	193.2	293.8	384.4	431.7	437.3	418.7	393.0
105°	52.0	62.3	80.3	114.6	177.5	267.8	363.4	433.0	466.3	472.6	464.0
107.5°	59.0	68.6	84.6	113.9	166.2	244.8	333.4	413.0	465.3	491.3	500.3
110°	65.9	75.3	90.3	115.6	160.2	225.8	305.4	381.7	443.0	485.0	508.3



TEST NUMBER: P832091

CATALOG NUMBER: S123RDIP-S340D365U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	73.3	82.3	95.9	118.9	156.9	213.2	281.1	350.7	413.7	462.0	493.6
115°	80.6	89.6	102.3	122.6	156.5	204.8	262.5	324.1	382.0	431.0	467.3
117.5°	87.9	96.3	108.9	127.2	156.9	199.2	250.1	303.4	354.7	399.7	437.3
120°	94.9	103.3	115.2	132.6	158.2	195.5	240.8	287.8	332.7	372.7	406.4
122.5°	101.3	110.2	121.9	137.6	160.5	193.2	233.2	275.5	315.1	351.4	382.0
125°	107.6	116.6	128.2	142.9	162.9	191.2	226.8	264.8	301.1	333.1	359.7
127.5°	113.6	122.6	133.9	147.2	165.5	190.2	220.8	255.1	288.1	317.4	342.1
130°	118.9	127.9	138.9	151.5	168.2	189.2	216.2	246.1	276.1	303.1	325.7
132.5°	123.9	132.6	143.2	155.5	170.2	188.9	211.8	237.8	264.8	289.4	310.8
135°	128.2	137.2	147.6	158.9	172.2	188.5	208.2	230.5	254.1	275.8	294.8
137.5°	132.2	140.6	150.6	161.5	173.5	187.9	204.8	223.5	243.5	262.8	279.8
140°	135.6	143.9	153.5	163.5	174.9	187.5	201.8	217.5	234.5	250.5	264.8
142.5°	138.9	146.6	155.9	165.5	175.9	186.9	199.2	211.8	225.8	239.1	251.1
145°	141.6	149.2	157.9	166.9	176.2	186.2	196.8	207.5	218.5	229.2	238.8
147.5°	144.9	151.5	159.5	167.9	176.2	185.2	194.5	203.8	212.8	221.8	228.8
150°	147.6	153.5	161.2	168.2	176.2	183.9	192.2	199.8	207.5	214.5	220.8
152.5°	150.2	155.9	162.2	168.9	175.2	182.2	189.5	196.2	202.5	208.5	213.5
155°	153.2	157.9	163.5	168.9	174.5	180.2	186.9	192.5	197.8	202.8	206.8
157.5°	155.9	159.5	164.2	169.2	173.5	178.5	183.9	188.5	193.2	197.2	200.5
160°	157.9	161.2	165.2	169.2	172.9	176.5	180.9	185.2	188.9	192.2	194.5
162.5°	159.5	162.2	165.5	168.9	171.5	174.5	177.9	181.2	184.2	187.2	189.2
165°	160.9	163.2	165.9	168.2	170.2	172.5	175.2	177.9	179.9	182.2	183.9
167.5°	162.2	163.9	165.9	167.9	168.9	170.5	172.5	174.9	176.5	177.9	179.2
170°	163.2	163.9	165.5	166.9	167.5	168.5	170.2	171.9	172.9	174.2	174.9
172.5°	163.9	164.2	165.5	166.5	166.5	166.9	167.9	169.2	169.9	170.9	171.2
175°	164.2	164.5	165.2	165.9	165.5	165.5	166.2	166.9	167.2	167.9	167.9
177.5°	164.5	164.5	164.9	165.5	164.9	164.5	164.9	165.2	165.5	165.9	165.9
180°	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5	164.5

TEST NUMBER: P832091

CATALOG NUMBER: S123RDIP-S340D365U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	1047.1	1047.1	1047.1	1047.1
2.5°	930.3	928.2	927.3	926.5
5°	797.5	790.8	789.3	787.8
7.5°	684.5	681.8	672.5	663.3
10°	592.9	584.3	580.4	576.6
12.5°	516.2	508.3	507.0	505.7
15°	456.8	451.2	449.3	447.3
17.5°	417.7	413.9	411.5	409.1
20°	388.7	386.0	384.2	382.5
22.5°	366.6	364.5	363.2	361.9
25°	345.4	342.2	341.1	340.0
27.5°	325.2	322.4	321.3	320.3
30°	306.3	304.0	302.5	300.9
32.5°	285.7	282.9	282.1	281.2
35°	267.5	265.7	264.9	264.0
37.5°	248.1	246.0	244.7	243.4
40°	231.6	230.5	229.9	229.3
42.5°	214.9	212.9	212.7	212.5
45°	198.1	196.2	195.8	195.3
47.5°	182.5	180.7	180.5	180.3
50°	165.1	162.7	161.0	159.3
52.5°	145.1	143.0	141.5	140.0
55°	126.9	124.5	123.2	121.9
57.5°	113.1	112.1	111.4	110.8
60°	102.0	101.3	100.9	100.5
62.5°	91.7	91.0	91.0	91.0
65°	82.2	81.6	80.9	80.3
67.5°	70.0	68.7	68.5	68.3
70°	55.2	53.2	53.0	52.8
72.5°	43.1	42.9	42.5	42.1
75°	35.6	35.2	35.2	35.2
77.5°	28.8	28.3	28.3	28.3
80°	22.1	21.9	22.1	22.3
82.5°	16.3	16.3	16.1	15.9
85°	10.5	10.3	10.3	10.3
87.5°	5.2	5.2	5.2	5.2
90°	9.3	9.7	10.0	9.7
92.5°	19.3	18.0	18.3	17.7
95°	45.3	42.3	40.0	38.6
97.5°	103.6	90.9	82.9	79.3
100°	245.8	221.5	208.5	208.8
102.5°	368.7	350.7	340.4	330.7
105°	448.7	436.0	425.3	423.7
107.5°	498.3	492.3	488.0	484.3
110°	517.6	520.3	519.6	518.9



TEST NUMBER: P832091

CATALOG NUMBER: S123RDIP-S340D365U830-4F0-1E-UDD-G4

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
112.5°	512.6	522.3	525.6	525.9
115°	492.3	506.9	513.6	515.3
117.5°	463.3	479.6	489.6	492.0
120°	432.7	451.3	459.3	461.3
122.5°	404.7	421.0	430.0	432.7
125°	381.0	395.7	404.0	406.4
127.5°	361.4	374.0	381.7	383.7
130°	343.4	355.4	362.4	365.1
132.5°	327.1	339.1	345.1	346.7
135°	311.1	321.1	327.1	329.4
137.5°	293.8	304.1	309.1	311.1
140°	277.5	286.8	292.1	291.8
142.5°	261.5	269.5	274.1	273.8
145°	247.1	254.1	256.8	257.5
147.5°	235.5	240.5	243.1	243.5
150°	225.8	229.5	231.5	231.5
152.5°	217.2	220.5	221.5	221.5
155°	209.8	212.5	213.2	213.5
157.5°	203.2	205.2	205.8	205.8
160°	196.8	198.8	198.8	198.5
162.5°	190.5	192.2	192.2	191.9
165°	185.2	186.5	186.2	186.2
167.5°	179.9	180.9	180.5	180.5
170°	175.2	175.9	175.5	175.5
172.5°	171.2	171.9	171.2	170.9
175°	167.9	168.2	167.9	167.5
177.5°	165.5	165.9	165.2	165.2
180°	164.5	164.5	164.5	164.5



TEST NUMBER: P832091

CATALOG NUMBER: S123RDIP-S340D365U830-4F0-1E-UDD-G4

**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	9.43	10.26	10.37	11.21	12.44	14.09	14.92	15.04	15.87	17.11
	3H	10.65	11.39	11.60	12.35	13.61	15.59	16.33	16.55	17.30	18.55
	4H	11.03	11.73	12.00	12.70	13.96	16.08	16.78	17.05	17.75	19.01
	6H	11.31	11.96	12.29	12.93	14.21	16.39	17.04	17.37	18.01	19.29
	8H	11.40	12.01	12.39	13.00	14.28	16.47	17.09	17.46	18.07	19.35
	12H	11.45	12.03	12.44	13.01	14.31	16.51	17.09	17.50	18.07	19.37
4H	2H	10.15	10.85	11.13	11.82	13.08	14.09	14.79	15.06	15.75	17.02
	3H	11.52	12.10	12.50	13.10	14.38	15.75	16.33	16.73	17.32	18.60
	4H	11.98	12.51	12.97	13.50	14.80	16.35	16.88	17.34	17.87	19.18
	6H	12.35	12.80	13.35	13.81	15.12	16.79	17.25	17.79	18.26	19.56
	8H	12.47	12.90	13.48	13.90	15.22	16.92	17.35	17.93	18.35	19.67
	12H	12.55	12.93	13.57	13.95	15.27	16.98	17.37	18.01	18.39	19.71
8H	4H	12.29	12.72	13.30	13.72	15.04	16.32	16.75	17.32	17.75	19.07
	6H	12.76	13.11	13.78	14.15	15.47	16.82	17.17	17.85	18.21	19.53
	8H	12.95	13.26	13.99	14.29	15.62	17.00	17.31	18.04	18.34	19.68
	12H	13.09	13.36	14.13	14.39	15.77	17.12	17.39	18.16	18.42	19.79
12H	4H	12.30	12.68	13.32	13.71	15.03	16.27	16.65	17.29	17.67	19.00
	6H	12.81	13.12	13.85	14.16	15.49	16.79	17.10	17.83	18.13	19.47
	8H	13.03	13.30	14.07	14.33	15.71	16.98	17.26	18.02	18.28	19.66