

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: P832095

Luminaire Tested: S123RDIP-S340D365U840-4F0-1E-UDD-G

Issue Date: 05/03/2024

Test Information

Test Method: LM-79-2019
Report Number: P832095
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-S340D365U840-4F0-1E-UDD-G
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, GRAZE OPTIC
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: -

Summary

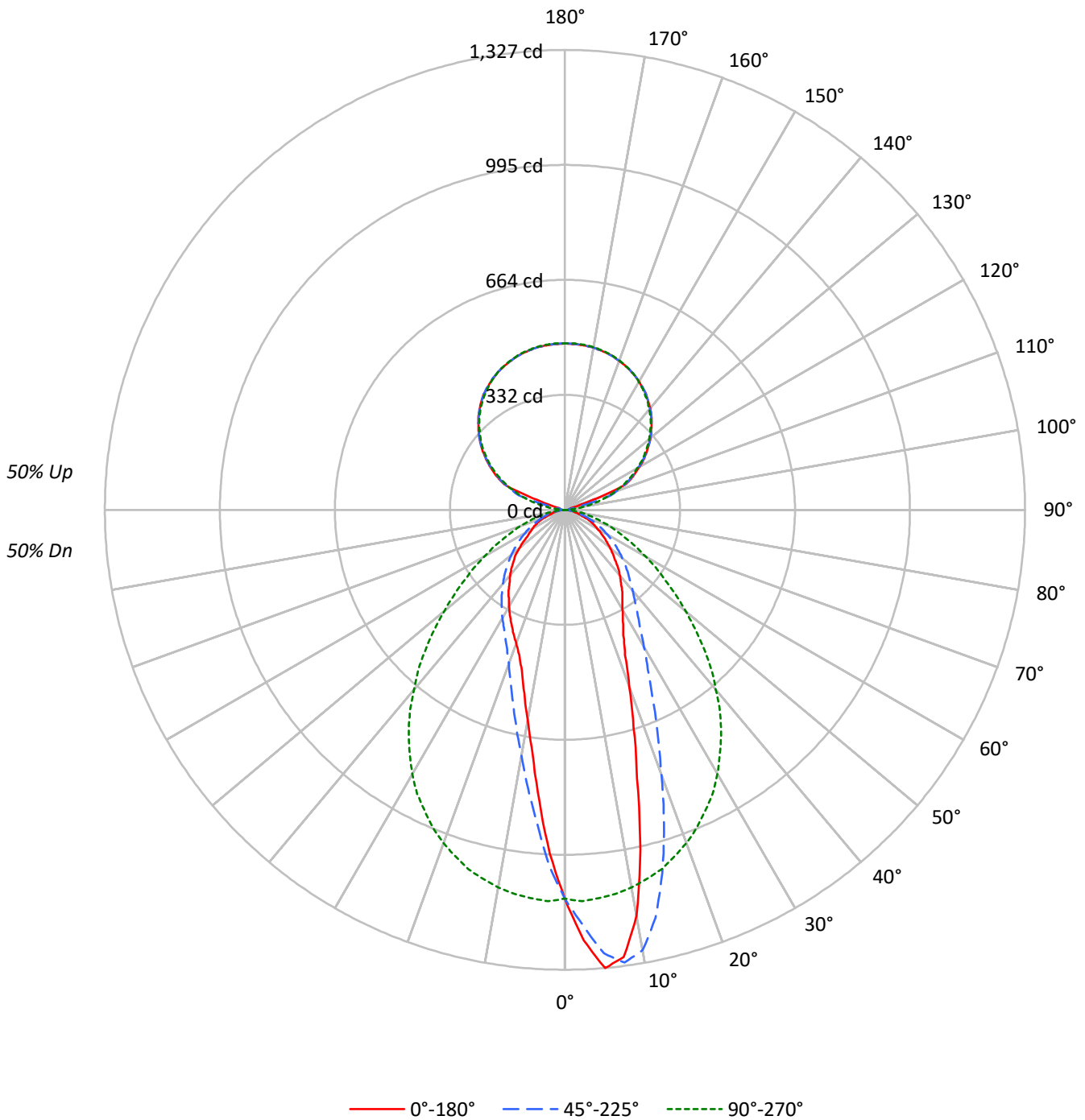
Lumens per Lamp: N/A
Luminaire Lumens: 2952.7 lumens
Efficiency: N/A
Efficacy: 131.8 lumens/watt
Spacing Criteria (0/90/45): 0.55 / 1.17 / 0.8
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')
CIE Type: General Diffuse

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					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	107	107	107	107	99	99	99	99	84	84	84	69	69	69	56	56	56	50				
1	99	95	91	88	91	88	85	82	74	72	70	62	61	59	51	50	49	44				
2	91	84	78	73	83	78	73	68	66	63	60	56	53	51	46	44	43	38				
3	83	74	67	62	77	69	63	58	59	55	51	50	47	44	42	39	37	34				
4	77	66	59	53	71	62	55	50	53	48	44	45	42	39	38	35	33	30				
5	71	60	52	46	65	56	49	44	48	43	39	41	37	34	35	32	30	26				
6	66	54	46	41	61	51	44	39	44	39	35	38	34	31	32	29	27	24				
7	61	49	42	36	56	46	39	35	40	35	31	35	31	28	30	26	24	22				
8	57	45	38	33	53	42	36	31	37	32	28	32	28	25	27	24	22	20				
9	53	41	34	29	49	39	33	28	34	29	25	30	26	23	26	23	20	18				
10	50	38	31	27	46	36	30	26	32	27	23	28	24	21	24	21	19	17				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°	135°	180°
0°	12076	12076	12076	12076	12076
5°	14338	13881	12151	9823	9121
10°	12991	14100	12091	7871	6753
15°	8945	12090	11964	6433	5341
20°	6222	9308	11724	5424	4694
25°	4742	7094	11374	4821	4327
30°	4128	5671	10936	4477	4007
35°	3790	4784	10318	4185	3717
40°	3458	4272	9507	3901	3451
45°	3124	3908	8634	3631	3186
50°	2835	3605	7603	3366	2858
55°	2563	3310	6611	3108	2451
60°	2297	3010	5744	2822	2316
65°	2122	2672	4944	2537	2190
70°	1721	2310	4315	2294	1781
75°	1510	1838	3656	1905	1568
80°	1370	1556	2994	1599	1481
85°	1247	1359	2272	1445	1359

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 80°
 Vertical Angle: 45°
 Luminance: 9109 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	3.5
10°-20°	236.6	8.0
20°-30°	271.5	9.2
30°-40°	267.6	9.1
40°-50°	236.0	8.0
50°-60°	181.6	6.1
60°-70°	119.4	4.0
70°-80°	58.0	2.0
80°-90°	15.6	0.5
90°-100°	16.9	0.6
100°-110°	81.9	2.8
110°-120°	200.7	6.8
120°-130°	254.8	8.6
130°-140°	272.2	9.2
140°-150°	254.5	8.6
150°-160°	205.3	7.0
160°-170°	132.5	4.5
170°-180°	45.7	1.5
0°-30°	610.4	20.7
0°-40°	878.0	29.7
0°-60°	1295.5	43.9
0°-90°	1488.4	50.4
90°-120°	299.5	10.1
90°-150°	1080.9	36.6
90°-180°	1464.0	49.6
0°-180°	2952.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1122	1122	1122	1122	1122	
5°	1327	1285	1125	909	844	121
15°	803	1085	1074	577	479	227
25°	399	597	958	406	364	189
35°	288	364	785	318	283	180
45°	205	257	567	238	209	159
55°	137	176	352	166	131	123
65°	83	105	194	100	86	82
75°	36	44	88	46	38	39
85°	10	11	18	12	11	11
90°	11	9	0	9	11	5
95°	14	11	22	11	14	11
105°	16	78	106	78	16	33
115°	210	205	200	205	210	197
125°	287	286	281	286	287	256
135°	354	354	350	354	354	273
145°	408	407	404	407	408	255
155°	444	445	445	445	444	205
165°	468	468	469	468	468	132
175°	478	479	480	479	478	46
180°	480	480	480	480	480	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1243.3	1239.4	1235.5	1234.4	1233.2	1229.5	1225.8	1217.6	1209.3	1200.8	1192.3
5°	1327.0	1327.5	1328.0	1326.8	1325.7	1320.8	1316.0	1305.9	1295.8	1284.7	1273.7
7.5°	1301.3	1308.6	1316.0	1317.4	1318.8	1322.4	1326.1	1323.8	1321.5	1317.4	1313.2
10°	1188.6	1188.1	1187.7	1195.9	1204.2	1228.8	1253.4	1266.1	1278.7	1290.0	1301.3
12.5°	1004.6	1005.3	1006.0	1033.1	1060.3	1083.5	1106.7	1138.9	1171.1	1205.8	1240.6
15°	802.7	813.9	825.2	849.4	873.5	908.5	943.4	986.7	1029.9	1084.9	1139.8
17.5°	659.1	664.0	668.8	692.0	715.3	748.4	781.5	830.5	879.5	950.3	1021.2
20°	543.2	547.6	552.0	568.8	585.6	617.3	649.0	695.7	742.4	812.6	882.7
22.5°	453.5	462.0	470.6	481.8	493.1	516.1	539.1	586.7	634.3	698.2	762.2
25°	399.3	403.2	407.1	416.7	426.4	448.5	470.6	502.1	533.6	597.3	661.0
27.5°	362.5	363.6	364.8	371.9	379.0	393.3	407.5	436.7	466.0	518.4	570.8
30°	332.1	334.2	336.2	341.8	347.3	357.6	368.0	388.7	409.4	456.3	503.2
32.5°	308.6	309.8	310.9	315.5	320.1	327.7	335.3	351.7	368.0	403.9	439.7
35°	288.4	288.6	288.9	292.3	295.8	303.1	310.5	324.1	337.6	364.1	390.5
37.5°	265.4	267.0	268.6	271.2	273.7	280.1	286.6	297.6	308.6	330.5	352.3
40°	246.1	247.5	248.8	251.8	254.8	259.9	264.9	275.1	285.2	304.0	322.9
42.5°	226.8	227.7	228.6	231.6	234.6	240.8	247.0	255.1	263.1	278.7	294.4
45°	205.2	207.5	209.8	213.0	216.2	221.5	226.8	235.0	243.3	256.7	270.0
47.5°	187.2	188.4	189.5	192.3	195.0	201.5	207.9	215.3	222.6	235.0	247.5
50°	169.3	169.7	170.2	172.7	175.3	181.0	186.8	195.3	203.8	215.3	226.8
52.5°	152.3	153.4	154.6	157.1	159.6	163.5	167.4	176.2	184.9	196.2	207.5
55°	136.6	137.3	138.0	139.8	141.7	146.3	150.9	158.5	166.1	176.4	186.8
57.5°	121.9	122.8	123.7	125.1	126.5	130.6	134.8	141.4	148.1	158.5	168.8
60°	106.7	107.9	109.0	110.6	112.2	115.5	118.7	124.7	130.6	139.8	149.0
62.5°	95.7	95.9	96.1	97.5	98.9	101.2	103.5	108.3	113.2	122.4	131.6
65°	83.3	83.9	84.6	85.3	86.0	87.9	89.7	93.8	98.0	104.9	111.8
67.5°	70.4	71.1	71.8	72.9	74.1	75.7	77.3	80.0	82.8	89.2	95.7
70°	54.7	54.7	54.7	56.6	58.4	61.2	63.9	66.0	68.1	73.4	78.7
72.5°	44.6	44.8	45.1	45.3	45.5	47.1	48.8	52.2	55.7	58.9	62.1
75°	36.3	36.6	36.8	37.0	37.3	37.7	38.2	39.3	40.5	44.2	47.8
77.5°	29.0	29.2	29.4	29.7	29.9	30.4	30.8	31.3	31.7	33.1	34.5
80°	22.1	22.3	22.5	22.8	23.0	23.2	23.5	23.9	24.4	25.1	25.8
82.5°	16.1	16.1	16.1	16.1	16.1	16.6	17.0	17.0	17.0	17.5	17.9
85°	10.1	10.1	10.1	10.3	10.6	10.6	10.6	10.8	11.0	11.0	11.0
87.5°	4.6	4.4	4.1	4.4	4.6	4.6	4.6	4.8	5.1	5.1	5.1
90°	10.7	10.5	10.4	10.2	10.1	9.8	9.5	9.2	8.9	8.6	7.5
92.5°	12.1	12.1	12.0	11.9	11.8	11.5	10.9	10.4	9.8	9.3	8.6
95°	13.6	13.6	13.6	13.6	13.6	13.3	12.7	12.2	11.6	11.1	10.2
97.5°	14.6	14.6	14.5	14.4	14.3	14.0	13.3	12.7	12.1	11.4	15.5
100°	15.0	14.9	14.8	14.8	14.7	14.3	13.7	13.0	12.4	11.8	24.1
102.5°	15.3	15.2	15.0	14.9	14.7	15.9	18.6	21.2	23.8	26.4	40.2
105°	15.7	15.5	15.4	15.2	15.1	22.0	36.0	50.1	64.1	78.2	85.3
107.5°	37.1	47.5	57.9	68.3	78.7	90.0	102.2	114.4	126.6	138.8	137.6
110°	98.1	109.5	120.8	132.2	143.5	150.5	153.1	155.7	158.3	160.9	160.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	185.9	186.1	186.2	186.4	186.6	186.3	185.6	184.9	184.1	183.4	182.6
115°	209.8	209.5	209.2	208.9	208.6	208.0	207.2	206.4	205.6	204.8	204.1
117.5°	229.1	229.0	228.9	228.9	228.8	228.4	227.8	227.2	226.5	225.9	225.5
120°	249.1	249.1	249.1	249.1	249.1	248.8	248.1	247.5	246.9	246.2	246.0
122.5°	268.7	268.6	268.6	268.5	268.4	268.2	267.8	267.4	267.0	266.6	266.3
125°	286.9	286.8	286.6	286.4	286.3	286.1	286.0	285.8	285.6	285.5	285.2
127.5°	304.8	304.9	305.1	305.2	305.4	305.3	305.1	304.9	304.6	304.4	304.0
130°	321.9	322.0	322.2	322.4	322.5	322.4	322.1	321.8	321.5	321.2	320.9
132.5°	337.6	337.8	338.1	338.3	338.5	338.5	338.2	337.9	337.5	337.2	337.0
135°	353.6	353.9	354.1	354.4	354.6	354.6	354.4	354.1	353.9	353.6	353.3
137.5°	369.0	369.1	369.3	369.5	369.6	369.5	369.1	368.7	368.3	367.9	367.8
140°	382.5	382.7	382.9	383.0	383.2	383.1	382.8	382.5	382.2	381.8	381.6
142.5°	395.0	395.3	395.5	395.8	396.0	396.0	395.8	395.5	395.3	395.0	394.8
145°	407.9	407.9	407.9	407.9	407.9	407.8	407.6	407.5	407.3	407.2	407.0
147.5°	417.2	417.6	418.0	418.4	418.8	418.9	418.7	418.6	418.4	418.2	418.1
150°	427.9	428.1	428.3	428.6	428.8	428.9	428.7	428.5	428.4	428.2	428.1
152.5°	436.4	436.8	437.2	437.6	438.0	438.1	437.7	437.4	437.1	436.8	436.7
155°	444.3	444.8	445.2	445.7	446.2	446.2	445.8	445.4	445.0	444.6	444.6
157.5°	451.1	451.7	452.3	453.0	453.6	453.7	453.2	452.7	452.3	451.8	451.9
160°	457.5	458.0	458.6	459.2	459.7	459.7	459.3	458.8	458.3	457.8	457.9
162.5°	463.6	464.0	464.5	465.0	465.5	465.4	464.9	464.3	463.8	463.2	463.3
165°	468.2	468.7	469.3	469.9	470.4	470.4	469.7	469.1	468.5	467.8	467.9
167.5°	471.8	472.4	473.0	473.7	474.3	474.3	473.7	473.0	472.4	471.8	471.8
170°	475.0	475.6	476.2	476.9	477.5	477.5	476.9	476.2	475.6	475.0	475.0
172.5°	476.8	477.5	478.2	478.9	479.6	479.7	479.0	478.4	477.8	477.1	477.0
175°	478.5	479.2	479.8	480.4	481.1	481.1	480.6	480.0	479.5	478.9	478.8
177.5°	478.9	479.7	480.5	481.3	482.1	482.2	481.5	480.9	480.2	479.6	479.5
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1191.1	1190.0	1178.9	1167.9	1157.1	1146.3	1138.2	1130.2	1116.6	1103.0	1094.5
5°	1264.9	1256.2	1238.7	1221.2	1195.0	1168.8	1146.7	1124.6	1096.6	1068.5	1045.1
7.5°	1306.1	1299.0	1277.8	1256.7	1221.9	1187.2	1152.7	1118.2	1076.8	1035.4	1000.0
10°	1307.3	1313.2	1295.8	1278.3	1239.2	1200.1	1153.2	1106.2	1050.6	994.9	949.2
12.5°	1266.3	1292.1	1288.4	1284.7	1244.9	1205.1	1148.1	1091.1	1022.8	954.5	897.2
15°	1189.7	1239.6	1254.4	1269.1	1236.2	1203.3	1138.4	1073.6	993.3	913.1	847.3
17.5°	1091.1	1161.0	1199.9	1238.7	1214.8	1190.9	1119.8	1048.8	958.4	868.0	796.5
20°	974.2	1065.8	1126.7	1187.7	1178.9	1170.2	1096.8	1023.5	925.9	828.4	750.9
22.5°	858.8	955.4	1039.6	1123.7	1132.7	1141.7	1067.6	993.6	886.8	780.1	701.2
25°	759.2	857.4	957.7	1058.0	1078.2	1098.4	1028.1	957.7	847.1	736.4	658.0
27.5°	664.2	757.6	868.0	978.4	1015.2	1052.0	987.6	923.2	808.0	692.7	614.5
30°	586.7	670.2	782.9	895.6	946.9	998.2	939.0	879.9	765.6	651.3	574.7
32.5°	514.5	589.2	702.4	815.5	875.1	934.7	883.6	832.6	722.6	612.7	537.0
35°	457.4	524.4	629.9	735.5	802.2	868.9	827.0	785.2	677.8	570.4	498.8
37.5°	408.5	464.6	563.7	662.8	733.7	804.5	769.5	734.6	633.6	532.7	465.0
40°	368.0	413.1	505.3	597.5	667.0	736.4	706.5	676.6	586.2	495.9	432.6
42.5°	333.3	372.1	454.9	537.7	601.4	665.1	645.4	625.6	543.7	461.8	403.2
45°	302.7	335.3	408.2	481.1	539.8	598.4	582.8	567.2	496.5	425.9	372.1
47.5°	275.5	303.6	368.7	433.8	486.4	539.1	524.6	510.1	451.7	393.3	344.3
50°	250.7	274.6	328.9	383.2	430.5	477.9	466.0	454.0	405.7	357.4	315.1
52.5°	227.2	247.0	295.8	344.5	382.7	420.9	411.7	402.5	365.2	328.0	289.6
55°	204.9	223.1	264.3	305.4	338.1	370.7	361.5	352.3	323.4	294.4	260.6
57.5°	184.7	200.6	233.9	267.2	293.2	319.2	314.9	310.5	286.3	262.2	234.4
60°	163.3	177.6	206.3	235.0	256.0	276.9	271.8	266.8	249.5	232.3	208.4
62.5°	144.2	156.9	179.9	202.9	219.9	236.9	233.2	229.5	216.4	203.3	183.5
65°	124.2	136.6	155.2	173.9	187.2	200.6	197.3	194.1	184.2	174.3	158.5
67.5°	106.0	116.4	132.5	148.6	157.5	166.5	164.7	162.8	155.2	147.7	135.2
70°	87.6	96.6	109.9	123.3	129.5	135.7	136.4	137.1	130.2	123.3	114.1
72.5°	69.2	76.4	88.8	101.2	106.0	110.9	110.6	110.4	106.3	102.1	93.8
75°	53.1	58.4	68.1	77.7	81.9	86.0	86.9	87.9	83.9	80.0	75.4
77.5°	38.2	41.9	49.2	56.6	61.2	65.8	66.2	66.7	64.9	63.0	58.6
80°	26.9	28.1	32.7	37.3	42.1	46.9	47.6	48.3	46.5	44.6	41.9
82.5°	18.6	19.3	20.9	22.5	26.4	30.4	31.3	32.2	31.3	30.4	27.4
85°	11.3	11.5	12.2	12.9	14.7	16.6	17.5	18.4	17.9	17.5	15.9
87.5°	5.1	5.1	5.3	5.5	6.0	6.4	7.6	8.7	8.0	7.4	6.7
90°	6.5	5.5	4.4	3.5	2.7	1.9	1.1	0.4	1.1	1.9	2.7
92.5°	7.9	7.1	6.4	6.3	6.8	7.3	7.7	8.2	7.7	7.3	6.8
95°	9.3	8.4	7.6	8.8	12.0	15.3	18.5	21.8	18.5	15.3	12.0
97.5°	19.5	23.6	27.6	30.7	32.9	35.2	37.4	39.6	37.4	35.2	32.9
100°	36.5	48.9	61.3	66.7	65.1	63.5	61.9	60.3	61.9	63.5	65.1
102.5°	54.0	67.8	81.6	88.0	87.0	85.9	84.9	83.9	84.9	85.9	87.0
105°	92.4	99.6	106.7	109.8	109.0	108.1	107.2	106.3	107.2	108.1	109.0
107.5°	136.4	135.2	134.1	133.1	132.4	131.7	131.0	130.3	131.0	131.7	132.4
110°	159.2	158.3	157.5	156.7	156.1	155.4	154.8	154.2	154.8	155.4	156.1



TEST NUMBER: P832095

CATALOG NUMBER: S123RDIP-S340D365U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	181.7	180.8	179.9	179.2	178.7	178.1	177.6	177.0	177.6	178.1	178.7
115°	203.4	202.7	202.0	201.4	200.9	200.4	200.0	199.5	200.0	200.4	200.9
117.5°	225.1	224.7	224.3	223.8	223.3	222.7	222.2	221.6	222.2	222.7	223.3
120°	245.8	245.5	245.3	244.8	244.1	243.4	242.7	241.9	242.7	243.4	244.1
122.5°	265.9	265.6	265.3	264.9	264.3	263.8	263.2	262.6	263.2	263.8	264.3
125°	284.9	284.5	284.2	283.7	283.1	282.5	281.8	281.2	281.8	282.5	283.1
127.5°	303.6	303.2	302.8	302.3	301.7	301.0	300.4	299.8	300.4	301.0	301.7
130°	320.5	320.2	319.9	319.4	318.8	318.2	317.5	316.9	317.5	318.2	318.8
132.5°	336.8	336.5	336.3	335.8	335.2	334.6	333.9	333.3	333.9	334.6	335.2
135°	353.0	352.7	352.4	352.0	351.5	351.0	350.6	350.1	350.6	351.0	351.5
137.5°	367.6	367.4	367.3	366.9	366.3	365.6	365.0	364.3	365.0	365.6	366.3
140°	381.4	381.1	380.9	380.5	380.1	379.6	379.1	378.6	379.1	379.6	380.1
142.5°	394.6	394.3	394.1	393.7	393.3	392.8	392.3	391.8	392.3	392.8	393.3
145°	406.9	406.7	406.5	406.2	405.6	405.1	404.5	404.0	404.5	405.1	405.6
147.5°	417.9	417.8	417.6	417.3	416.9	416.5	416.1	415.7	416.1	416.5	416.9
150°	427.9	427.8	427.6	427.4	427.2	426.9	426.7	426.4	426.7	426.9	427.2
152.5°	436.6	436.6	436.5	436.4	436.3	436.2	436.2	436.1	436.2	436.2	436.3
155°	444.5	444.4	444.3	444.4	444.5	444.7	444.8	445.0	444.8	444.7	444.5
157.5°	451.9	452.0	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1	452.1
160°	458.0	458.1	458.2	458.2	458.3	458.4	458.5	458.6	458.5	458.4	458.3
162.5°	463.4	463.4	463.5	463.7	463.9	464.2	464.4	464.6	464.4	464.2	463.9
165°	468.0	468.1	468.2	468.3	468.6	468.8	469.0	469.3	469.0	468.8	468.6
167.5°	471.8	471.8	471.8	471.9	472.2	472.6	472.9	473.2	472.9	472.6	472.2
170°	475.0	475.0	475.0	475.1	475.5	475.8	476.1	476.4	476.1	475.8	475.5
172.5°	477.0	476.9	476.8	477.0	477.4	477.8	478.1	478.5	478.1	477.8	477.4
175°	478.7	478.7	478.6	478.7	479.1	479.5	479.9	480.3	479.9	479.5	479.1
177.5°	479.5	479.4	479.3	479.5	479.9	480.2	480.6	481.0	480.6	480.2	479.9
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



TEST NUMBER: P832095

CATALOG NUMBER: S123RDIP-S340D365U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9	1121.9
2.5°	1086.0	1072.9	1059.8	1050.4	1040.9	1029.2	1017.5	1017.0	1016.6	1007.8	999.1
5°	1021.6	998.8	976.1	953.8	931.5	909.1	886.8	881.8	876.7	869.1	861.5
7.5°	964.6	928.2	891.9	863.4	834.9	812.6	790.2	775.1	759.9	748.2	736.4
10°	903.4	858.3	813.2	778.7	744.2	720.1	695.9	678.5	661.0	652.7	644.4
12.5°	839.9	790.9	741.9	708.1	674.3	645.4	616.4	600.5	584.6	573.1	561.6
15°	781.5	728.8	676.2	640.3	604.4	577.3	550.1	534.3	518.4	506.9	495.4
17.5°	724.9	671.8	618.7	582.3	546.0	521.4	496.8	481.4	466.0	458.8	451.7
20°	673.4	619.8	566.2	532.0	497.7	473.5	449.4	441.1	432.8	426.2	419.5
22.5°	622.4	570.8	519.3	486.4	453.5	436.1	418.6	411.9	405.2	400.2	395.1
25°	579.6	528.3	477.0	448.2	419.5	405.9	392.4	388.0	383.6	378.6	373.5
27.5°	536.3	487.6	438.8	415.8	392.8	381.8	370.7	365.2	359.7	355.6	351.4
30°	498.2	453.1	408.0	388.9	369.8	360.2	350.5	344.5	338.5	334.6	330.7
32.5°	461.4	421.3	381.3	365.0	348.7	339.2	329.8	324.1	318.3	313.7	309.1
35°	427.3	392.6	357.9	342.9	328.0	318.5	309.1	303.4	297.6	293.0	288.4
37.5°	397.4	365.9	334.4	320.4	306.3	298.1	289.8	283.8	277.8	273.0	268.2
40°	369.4	341.5	313.7	300.1	286.6	277.6	268.6	263.3	258.0	253.7	249.3
42.5°	344.5	319.0	293.5	280.1	266.8	258.3	249.8	243.6	237.3	234.8	232.3
45°	318.3	295.8	273.2	260.3	247.5	238.5	229.5	224.2	218.9	216.6	214.4
47.5°	295.3	274.4	253.4	240.8	228.1	220.1	212.1	207.9	203.8	200.6	197.3
50°	272.8	252.5	232.3	220.1	207.9	201.0	194.1	189.1	184.0	181.7	179.4
52.5°	251.1	232.7	214.4	201.9	189.5	182.8	176.2	171.8	167.4	162.6	157.8
55°	226.8	210.7	194.6	183.5	172.5	165.6	158.7	153.6	148.6	143.5	138.5
57.5°	206.5	190.7	174.8	164.9	155.0	148.3	141.7	136.2	130.6	126.5	122.4
60°	184.5	170.7	156.9	147.2	137.5	131.1	124.7	119.4	114.1	112.0	109.9
62.5°	163.8	150.9	138.0	129.5	121.0	114.8	108.6	105.1	101.7	100.3	98.9
65°	142.6	131.6	120.5	112.7	104.9	99.6	94.3	92.7	91.1	89.9	88.8
67.5°	122.8	113.4	104.0	97.1	90.2	86.5	82.8	81.0	79.1	77.7	76.4
70°	104.9	96.6	88.3	82.3	76.4	72.9	69.5	67.8	66.2	63.7	61.2
72.5°	85.6	79.1	72.7	68.1	63.5	60.5	57.5	54.3	51.1	48.8	46.5
75°	70.8	64.4	58.0	53.6	49.2	45.8	42.3	41.2	40.0	39.3	38.6
77.5°	54.3	48.8	43.2	39.8	36.3	34.7	33.1	32.4	31.7	31.5	31.3
80°	39.1	34.5	29.9	28.1	26.2	25.8	25.3	24.8	24.4	24.1	23.9
82.5°	24.4	22.1	19.8	19.3	18.9	18.6	18.4	18.2	17.9	17.7	17.5
85°	14.3	13.3	12.4	12.2	12.0	11.7	11.5	11.5	11.5	11.5	11.5
87.5°	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	5.7	5.5
90°	3.5	4.4	5.5	6.5	7.5	8.6	8.9	9.2	9.5	9.8	10.1
92.5°	6.3	6.4	7.1	7.9	8.6	9.3	9.8	10.4	10.9	11.5	11.8
95°	8.8	7.6	8.4	9.3	10.2	11.1	11.6	12.2	12.7	13.3	13.6
97.5°	30.7	27.6	23.6	19.5	15.5	11.4	12.1	12.7	13.3	14.0	14.3
100°	66.7	61.3	48.9	36.5	24.1	11.8	12.4	13.0	13.7	14.3	14.7
102.5°	88.0	81.6	67.8	54.0	40.2	26.4	23.8	21.2	18.6	15.9	14.7
105°	109.8	106.7	99.6	92.4	85.3	78.2	64.1	50.1	36.0	22.0	15.1
107.5°	133.1	134.1	135.2	136.4	137.6	138.8	126.6	114.4	102.2	90.0	78.7
110°	156.7	157.5	158.3	159.2	160.1	160.9	158.3	155.7	153.1	150.5	143.5



TEST NUMBER: P832095

CATALOG NUMBER: S123RDIP-S340D365U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
112.5°	179.2	179.9	180.8	181.7	182.6	183.4	184.1	184.9	185.6	186.3	186.6
115°	201.4	202.0	202.7	203.4	204.1	204.8	205.6	206.4	207.2	208.0	208.6
117.5°	223.8	224.3	224.7	225.1	225.5	225.9	226.5	227.2	227.8	228.4	228.8
120°	244.8	245.3	245.5	245.8	246.0	246.2	246.9	247.5	248.1	248.8	249.1
122.5°	264.9	265.3	265.6	265.9	266.3	266.6	267.0	267.4	267.8	268.2	268.4
125°	283.7	284.2	284.5	284.9	285.2	285.5	285.6	285.8	286.0	286.1	286.3
127.5°	302.3	302.8	303.2	303.6	304.0	304.4	304.6	304.9	305.1	305.3	305.4
130°	319.4	319.9	320.2	320.5	320.9	321.2	321.5	321.8	322.1	322.4	322.5
132.5°	335.8	336.3	336.5	336.8	337.0	337.2	337.5	337.9	338.2	338.5	338.5
135°	352.0	352.4	352.7	353.0	353.3	353.6	353.9	354.1	354.4	354.6	354.6
137.5°	366.9	367.3	367.4	367.6	367.8	367.9	368.3	368.7	369.1	369.5	369.6
140°	380.5	380.9	381.1	381.4	381.6	381.8	382.2	382.5	382.8	383.1	383.2
142.5°	393.7	394.1	394.3	394.6	394.8	395.0	395.3	395.5	395.8	396.0	396.0
145°	406.2	406.5	406.7	406.9	407.0	407.2	407.3	407.5	407.6	407.8	407.9
147.5°	417.3	417.6	417.8	417.9	418.1	418.2	418.4	418.6	418.7	418.9	418.8
150°	427.4	427.6	427.8	427.9	428.1	428.2	428.4	428.5	428.7	428.9	428.8
152.5°	436.4	436.5	436.6	436.6	436.7	436.8	437.1	437.4	437.7	438.1	438.0
155°	444.4	444.3	444.4	444.5	444.6	444.6	445.0	445.4	445.8	446.2	446.2
157.5°	452.1	452.1	452.0	451.9	451.9	451.8	452.3	452.7	453.2	453.7	453.6
160°	458.2	458.2	458.1	458.0	457.9	457.8	458.3	458.8	459.3	459.7	459.7
162.5°	463.7	463.5	463.4	463.4	463.3	463.2	463.8	464.3	464.9	465.4	465.5
165°	468.3	468.2	468.1	468.0	467.9	467.8	468.5	469.1	469.7	470.4	470.4
167.5°	471.9	471.8	471.8	471.8	471.8	471.8	472.4	473.0	473.7	474.3	474.3
170°	475.1	475.0	475.0	475.0	475.0	475.0	475.6	476.2	476.9	477.5	477.5
172.5°	477.0	476.8	476.9	477.0	477.0	477.1	477.8	478.4	479.0	479.7	479.6
175°	478.7	478.6	478.7	478.7	478.8	478.9	479.5	480.0	480.6	481.1	481.1
177.5°	479.5	479.3	479.4	479.5	479.5	479.6	480.2	480.9	481.5	482.2	482.1
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3



TEST NUMBER: P832095

CATALOG NUMBER: S123RDIP-S340D365U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	1121.9	1121.9	1121.9	1121.9
2.5°	996.8	994.5	993.6	992.6
5°	854.4	847.3	845.7	844.1
7.5°	733.4	730.4	720.6	710.7
10°	635.2	626.0	621.9	617.8
12.5°	553.1	544.6	543.2	541.9
15°	489.4	483.4	481.4	479.3
17.5°	447.6	443.4	440.9	438.4
20°	416.5	413.5	411.7	409.8
22.5°	392.8	390.5	389.1	387.8
25°	370.1	366.6	365.5	364.3
27.5°	348.4	345.4	344.3	343.1
30°	328.2	325.7	324.1	322.4
32.5°	306.1	303.1	302.2	301.3
35°	286.6	284.7	283.8	282.9
37.5°	265.9	263.6	262.2	260.8
40°	248.2	247.0	246.3	245.6
42.5°	230.2	228.1	227.9	227.7
45°	212.3	210.2	209.8	209.3
47.5°	195.5	193.7	193.4	193.2
50°	176.9	174.3	172.5	170.7
52.5°	155.5	153.2	151.6	150.0
55°	135.9	133.4	132.0	130.6
57.5°	121.2	120.1	119.4	118.7
60°	109.2	108.6	108.1	107.6
62.5°	98.2	97.5	97.5	97.5
65°	88.1	87.4	86.7	86.0
67.5°	75.0	73.6	73.4	73.1
70°	59.1	57.0	56.8	56.6
72.5°	46.2	46.0	45.5	45.1
75°	38.2	37.7	37.7	37.7
77.5°	30.8	30.4	30.4	30.4
80°	23.7	23.5	23.7	23.9
82.5°	17.5	17.5	17.2	17.0
85°	11.3	11.0	11.0	11.0
87.5°	5.5	5.5	5.5	5.5
90°	10.2	10.4	10.5	10.7
92.5°	11.9	12.0	12.1	12.1
95°	13.6	13.6	13.6	13.6
97.5°	14.4	14.5	14.6	14.6
100°	14.8	14.8	14.9	15.0
102.5°	14.9	15.0	15.2	15.3
105°	15.2	15.4	15.5	15.7
107.5°	68.3	57.9	47.5	37.1
110°	132.2	120.8	109.5	98.1



TEST NUMBER: P832095

CATALOG NUMBER: S123RDIP-S340D365U840-4F0-1E-UDD-G

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
112.5°	186.4	186.2	186.1	185.9
115°	208.9	209.2	209.5	209.8
117.5°	228.9	228.9	229.0	229.1
120°	249.1	249.1	249.1	249.1
122.5°	268.5	268.6	268.6	268.7
125°	286.4	286.6	286.8	286.9
127.5°	305.2	305.1	304.9	304.8
130°	322.4	322.2	322.0	321.9
132.5°	338.3	338.1	337.8	337.6
135°	354.4	354.1	353.9	353.6
137.5°	369.5	369.3	369.1	369.0
140°	383.0	382.9	382.7	382.5
142.5°	395.8	395.5	395.3	395.0
145°	407.9	407.9	407.9	407.9
147.5°	418.4	418.0	417.6	417.2
150°	428.6	428.3	428.1	427.9
152.5°	437.6	437.2	436.8	436.4
155°	445.7	445.2	444.8	444.3
157.5°	453.0	452.3	451.7	451.1
160°	459.2	458.6	458.0	457.5
162.5°	465.0	464.5	464.0	463.6
165°	469.9	469.3	468.7	468.2
167.5°	473.7	473.0	472.4	471.8
170°	476.9	476.2	475.6	475.0
172.5°	478.9	478.2	477.5	476.8
175°	480.4	479.8	479.2	478.5
177.5°	481.3	480.5	479.7	478.9
180°	480.3	480.3	480.3	480.3



TEST NUMBER: P832095

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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	9.44	10.25	10.40	11.22	12.49	14.10	14.92	15.07	15.89	17.16
	3H	10.66	11.38	11.64	12.36	13.66	15.60	16.33	16.58	17.31	18.60
	4H	11.04	11.72	12.03	12.71	14.01	16.09	16.78	17.08	17.76	19.06
	6H	11.32	11.95	12.32	12.94	14.25	16.40	17.03	17.40	18.02	19.33
	8H	11.41	12.01	12.41	13.01	14.32	16.48	17.08	17.49	18.09	19.39
	12H	11.46	12.03	12.47	13.03	14.36	16.51	17.08	17.52	18.08	19.41
4H	2H	10.16	10.84	11.16	11.83	13.13	14.10	14.78	15.09	15.77	17.07
	3H	11.53	12.10	12.53	13.11	14.42	15.75	16.32	16.76	17.34	18.65
	4H	11.98	12.50	12.99	13.51	14.85	16.36	16.88	17.37	17.89	19.22
	6H	12.35	12.79	13.37	13.82	15.16	16.80	17.24	17.82	18.27	19.61
	8H	12.47	12.89	13.50	13.91	15.26	16.93	17.34	17.95	18.37	19.72
	12H	12.55	12.92	13.59	13.96	15.32	16.99	17.36	18.03	18.40	19.76
8H	4H	12.30	12.71	13.32	13.73	15.08	16.33	16.74	17.35	17.76	19.11
	6H	12.76	13.10	13.81	14.17	15.51	16.82	17.16	17.87	18.23	19.58
	8H	12.95	13.25	14.01	14.30	15.67	17.01	17.31	18.06	18.36	19.73
	12H	13.09	13.36	14.15	14.40	15.81	17.12	17.39	18.18	18.43	19.84
12H	4H	12.31	12.68	13.35	13.72	15.07	16.27	16.65	17.32	17.69	19.04
	6H	12.82	13.12	13.87	14.17	15.54	16.80	17.10	17.85	18.15	19.51
	8H	13.04	13.30	14.09	14.35	15.75	16.99	17.25	18.05	18.30	19.71