

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332303-840

Luminaire Tested: **S123RDIP-S775D365U840-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332303-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D365U840-4F0-1E-UDD-F
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4411.5 lumens
Efficiency: N/A
Efficacy: 126.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

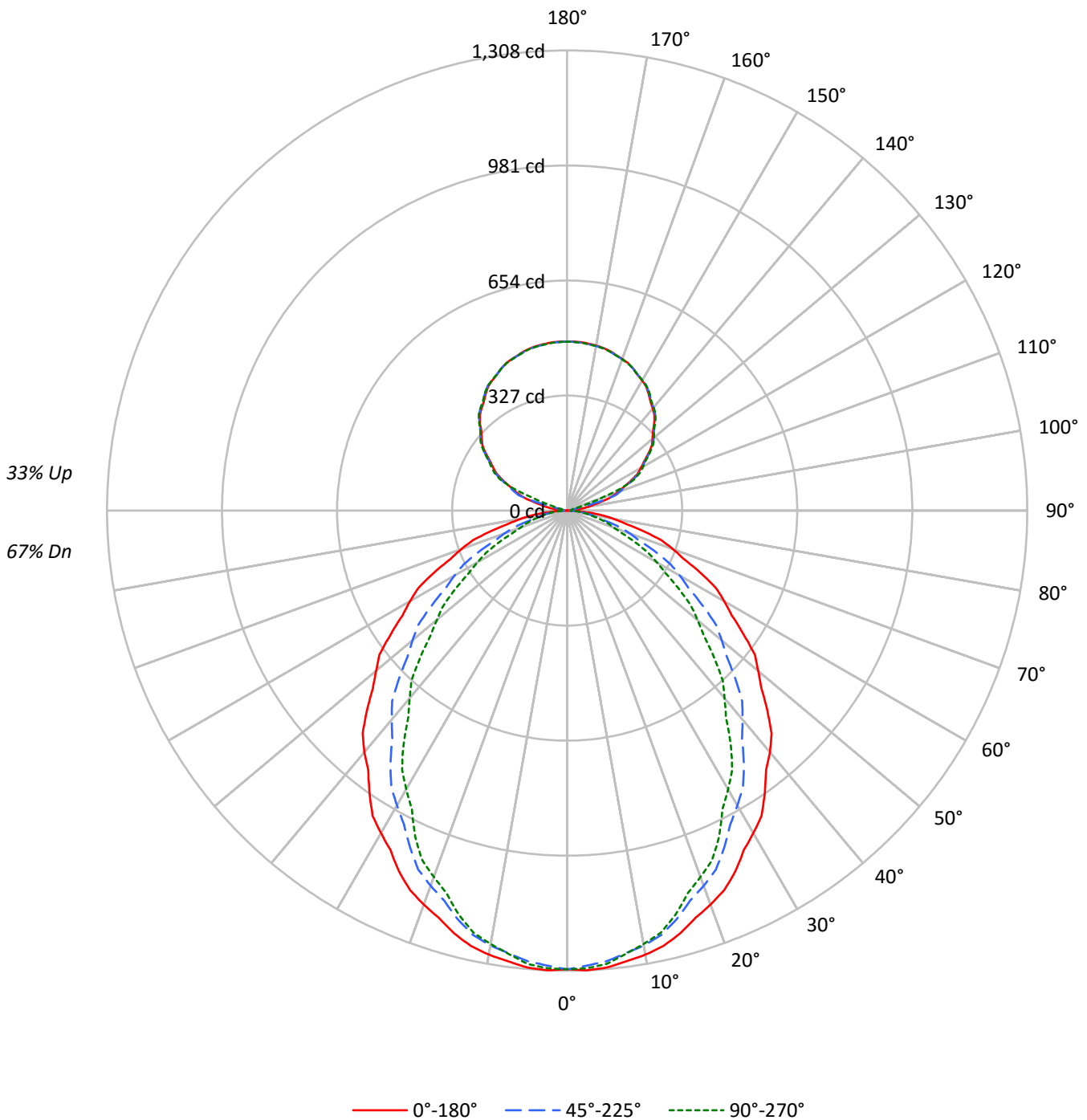
Input Watts (W): 35
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332303-840

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-F

Luminous Intensity Polar Plot





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CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-F

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	0
RCR																		
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	72	72	72	67
1	102	98	94	90	96	92	89	86	82	79	77	73	71	69	64	63	61	57
2	93	86	80	75	88	81	76	71	72	68	65	64	61	58	57	54	52	49
3	85	76	69	63	80	72	65	60	64	59	55	57	53	50	51	48	45	42
4	78	67	60	53	74	64	57	51	57	52	47	51	47	43	46	42	39	36
5	72	60	52	46	68	57	50	44	52	46	41	46	41	38	41	37	34	32
6	67	54	46	40	63	52	44	39	47	41	36	42	37	33	38	34	30	28
7	62	49	41	36	58	47	40	34	43	36	32	38	33	30	34	30	27	25
8	57	45	37	32	54	43	36	31	39	33	29	35	30	27	32	28	25	22
9	54	41	34	29	51	39	32	28	36	30	26	33	28	24	29	25	22	20
10	50	38	31	26	47	36	30	25	33	27	23	30	25	22	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14034	14034	14034
5°	14088	13894	13973
10°	14008	13719	13672
15°	13857	13397	13256
20°	13651	12997	12693
25°	13438	12545	12144
30°	13155	12026	11368
35°	12867	11506	10657
40°	12600	10891	9777
45°	12250	10286	8983
50°	11863	9597	8092
55°	11470	8811	7263
60°	11108	7967	6351
65°	10639	7055	5440
70°	10049	5923	4393
75°	9191	4662	4134
80°	8195	4135	3800
85°	6916	3656	3396



TEST NUMBER: P332303-840

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.4	2.8
10°-20°	340.6	7.7
20°-30°	490.5	11.1
30°-40°	552.5	12.5
40°-50°	528.6	12.0
50°-60°	432.9	9.8
60°-70°	292.0	6.6
70°-80°	146.9	3.3
80°-90°	40.2	0.9
90°-100°	17.5	0.4
100°-110°	83.2	1.9
110°-120°	199.9	4.5
120°-130°	254.6	5.8
130°-140°	272.0	6.2
140°-150°	254.4	5.8
150°-160°	205.2	4.7
160°-170°	132.4	3.0
170°-180°	45.6	1.0
0°-30°	953.6	21.6
0°-40°	1506.1	34.1
0°-60°	2467.5	55.9
0°-90°	2946.7	66.8
90°-120°	300.6	6.8
90°-150°	1081.5	24.5
90°-180°	1465.0	33.2
0°-180°	4411.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1304	1304	1304	1304	1304	
5°	1304	1298	1286	1295	1293	124
15°	1244	1231	1202	1197	1190	350
25°	1132	1104	1056	1035	1022	520
35°	979	940	876	832	811	613
45°	805	755	676	617	590	621
55°	611	557	470	410	387	548
65°	418	358	277	227	214	413
75°	221	170	112	102	99	236
85°	56	34	30	28	28	63
90°	0	4	9	10	11	4
95°	22	8	11	13	14	27
105°	106	108	78	18	16	113
115°	199	202	205	208	210	197
125°	281	284	286	286	287	251
135°	350	352	354	355	354	269
145°	404	406	407	408	408	253
155°	445	444	445	446	444	205
165°	469	468	468	470	468	133
175°	480	479	479	481	479	46
180°	480	480	480	480	480	



TEST NUMBER: P332303-840

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1308.0	1307.3	1306.5	1305.8	1305.0	1303.5	1301.2	1299.0	1296.8	1294.4	1296.6
5°	1303.8	1302.6	1301.4	1300.3	1299.1	1297.1	1294.2	1291.4	1288.6	1285.9	1287.9
7.5°	1291.7	1290.5	1289.2	1287.9	1286.7	1284.1	1280.5	1276.9	1273.2	1269.5	1270.7
10°	1281.6	1279.9	1278.3	1276.7	1275.0	1272.0	1267.8	1263.6	1259.4	1255.2	1255.4
12.5°	1267.2	1265.4	1263.5	1261.7	1259.9	1256.4	1251.2	1246.1	1240.8	1235.7	1235.6
15°	1243.5	1240.9	1238.3	1235.8	1233.1	1228.6	1222.0	1215.5	1208.8	1202.2	1201.1
17.5°	1213.7	1210.7	1207.7	1204.7	1201.6	1196.0	1187.6	1179.2	1170.8	1162.6	1160.0
20°	1191.7	1187.9	1184.2	1180.4	1176.7	1170.3	1161.3	1152.5	1143.6	1134.6	1131.6
22.5°	1167.2	1162.9	1158.5	1154.2	1149.8	1143.0	1133.5	1124.0	1114.5	1105.0	1101.2
25°	1131.5	1125.6	1119.6	1113.8	1107.9	1099.5	1088.7	1077.9	1067.1	1056.3	1051.4
27.5°	1088.0	1081.6	1075.1	1068.6	1062.2	1052.9	1040.9	1028.9	1016.7	1004.7	997.8
30°	1058.4	1051.4	1044.4	1037.3	1030.3	1020.2	1007.0	993.8	980.7	967.6	959.6
32.5°	1028.9	1020.9	1012.9	1004.9	996.9	985.9	972.0	958.2	944.2	930.3	921.6
35°	979.2	970.7	962.2	953.8	945.3	933.8	919.3	904.6	890.1	875.6	865.5
37.5°	928.9	919.4	910.0	900.6	891.2	878.8	863.2	847.7	832.1	816.6	805.1
40°	896.7	886.4	876.0	865.7	855.4	841.8	825.2	808.5	791.7	775.1	762.9
42.5°	860.3	850.0	839.6	829.3	819.0	805.2	787.9	770.6	753.5	736.2	722.9
45°	804.7	794.2	783.6	773.0	762.3	748.1	729.9	711.9	693.8	675.7	662.3
47.5°	749.1	737.5	725.9	714.3	702.7	687.8	669.7	651.6	633.5	615.4	600.9
50°	708.4	697.4	686.4	675.3	664.3	649.2	630.3	611.2	592.2	573.1	558.6
52.5°	672.1	660.1	648.1	636.1	624.2	608.7	589.9	571.1	552.2	533.3	518.3
55°	611.2	599.7	588.1	576.6	565.1	549.4	529.4	509.5	489.5	469.5	455.9
57.5°	554.9	542.4	529.9	517.3	504.7	488.5	468.4	448.3	428.2	408.2	395.3
60°	516.0	503.1	490.2	477.3	464.3	448.1	428.6	409.1	389.6	370.1	357.4
62.5°	477.1	464.1	451.2	438.3	425.5	409.2	389.7	370.2	350.7	331.1	319.2
65°	417.7	404.8	391.8	378.9	366.0	350.3	332.0	313.7	295.4	277.0	265.5
67.5°	358.3	345.2	332.1	319.0	306.0	290.6	273.1	255.5	237.9	220.4	211.8
70°	319.3	306.7	294.0	281.2	268.6	254.0	237.5	221.2	204.7	188.2	180.0
72.5°	280.4	267.9	255.4	242.9	230.5	216.7	201.8	186.8	171.9	156.9	150.2
75°	221.0	209.7	198.4	187.1	175.9	163.8	150.9	137.9	125.0	112.1	109.8
77.5°	166.8	156.6	146.4	136.2	126.0	116.8	108.5	100.2	91.9	83.5	82.3
80°	132.2	122.5	112.9	103.3	93.6	86.3	81.4	76.4	71.6	66.7	65.9
82.5°	99.2	90.9	82.5	74.2	65.9	60.6	58.3	55.9	53.7	51.4	50.7
85°	56.0	50.9	45.7	40.5	35.3	32.4	31.7	31.0	30.3	29.6	29.2
87.5°	20.4	18.5	16.6	14.6	12.7	11.9	12.1	12.3	12.5	12.7	12.6
90°	0.4	1.1	1.9	2.7	3.5	4.4	5.5	6.5	7.6	8.6	8.9
92.5°	6.7	6.5	6.2	6.0	5.8	6.1	6.8	7.6	8.4	9.1	9.6
95°	21.8	18.5	15.2	12.0	8.8	7.6	8.5	9.3	10.2	11.1	11.6
97.5°	43.7	42.3	40.8	39.4	37.9	34.3	28.6	22.9	17.2	11.5	12.1
100°	60.3	61.9	63.5	65.0	66.7	61.3	48.9	36.6	24.1	11.8	12.4
102.5°	79.2	80.3	81.4	82.6	83.7	77.6	64.0	50.5	37.0	23.5	21.5
105°	106.3	107.2	108.1	109.0	109.9	106.7	99.6	92.4	85.3	78.2	64.1
107.5°	135.0	135.7	136.4	137.1	137.8	138.8	139.9	141.0	142.1	143.2	132.9
110°	154.2	154.8	155.4	156.0	156.7	157.4	158.3	159.2	160.1	161.0	158.3



TEST NUMBER: P332303-840

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	172.4	173.0	173.6	174.1	174.7	175.4	176.3	177.2	178.0	178.9	178.9
115°	199.4	200.0	200.5	200.9	201.4	202.0	202.7	203.4	204.1	204.8	205.6
117.5°	225.7	226.3	226.8	227.4	228.0	228.5	228.8	229.2	229.6	229.9	230.6
120°	242.0	242.7	243.4	244.1	244.8	245.3	245.5	245.8	246.0	246.2	246.9
122.5°	258.5	259.1	259.6	260.2	260.8	261.3	261.6	261.9	262.2	262.5	263.0
125°	281.2	281.9	282.5	283.1	283.8	284.2	284.6	284.9	285.2	285.5	285.7
127.5°	303.2	303.9	304.5	305.1	305.7	306.2	306.6	307.0	307.4	307.7	308.0
130°	316.9	317.5	318.1	318.8	319.4	319.9	320.2	320.5	320.8	321.1	321.4
132.5°	330.0	330.6	331.3	331.9	332.5	333.0	333.3	333.6	333.8	334.1	334.4
135°	350.1	350.5	351.0	351.5	351.9	352.3	352.6	353.0	353.4	353.7	353.9
137.5°	367.2	367.8	368.4	369.0	369.6	370.0	370.2	370.3	370.5	370.7	371.1
140°	378.6	379.1	379.6	380.0	380.5	380.9	381.1	381.3	381.6	381.8	382.1
142.5°	389.2	389.7	390.1	390.6	391.1	391.4	391.7	391.9	392.1	392.4	392.6
145°	403.9	404.6	405.1	405.7	406.2	406.6	406.7	406.9	407.0	407.2	407.4
147.5°	417.9	418.3	418.6	419.0	419.3	419.6	419.8	419.9	420.1	420.2	420.4
150°	426.5	426.7	426.9	427.2	427.4	427.6	427.8	427.9	428.1	428.2	428.4
152.5°	434.1	434.2	434.3	434.4	434.5	434.7	434.7	434.8	434.9	435.0	435.4
155°	445.0	444.8	444.6	444.5	444.3	444.3	444.4	444.4	444.5	444.6	445.0
157.5°	453.4	453.4	453.4	453.3	453.3	453.3	453.2	453.1	453.0	453.0	453.4
160°	458.6	458.5	458.4	458.3	458.3	458.2	458.1	458.0	458.0	457.9	458.3
162.5°	463.4	463.2	463.0	462.8	462.6	462.4	462.3	462.3	462.2	462.1	462.6
165°	469.3	469.0	468.8	468.6	468.3	468.2	468.1	468.0	467.9	467.9	468.5
167.5°	473.8	473.5	473.2	472.9	472.5	472.4	472.4	472.4	472.4	472.4	473.0
170°	476.4	476.1	475.7	475.4	475.1	474.9	474.9	474.9	474.9	474.9	475.6
172.5°	478.1	477.8	477.4	477.0	476.6	476.5	476.5	476.6	476.7	476.7	477.4
175°	480.3	479.9	479.5	479.2	478.8	478.6	478.7	478.8	478.8	478.9	479.5
177.5°	480.9	480.6	480.3	480.0	479.6	479.5	479.6	479.6	479.7	479.8	480.3
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: P332303-840

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8	1303.8
2.5°	1298.6	1300.7	1302.7	1303.6	1303.2	1302.8	1302.4	1302.1
5°	1290.0	1292.1	1294.2	1295.1	1294.6	1294.1	1293.6	1293.2
7.5°	1271.9	1273.0	1274.2	1274.4	1273.6	1272.8	1272.0	1271.2
10°	1255.7	1255.9	1256.1	1255.7	1254.5	1253.2	1252.1	1250.9
12.5°	1235.4	1235.3	1235.2	1234.4	1233.0	1231.6	1230.3	1228.9
15°	1199.9	1198.7	1197.6	1196.2	1194.6	1192.9	1191.2	1189.6
17.5°	1157.5	1155.1	1152.6	1150.1	1147.6	1145.2	1142.8	1140.3
20°	1128.5	1125.4	1122.4	1119.4	1116.6	1113.8	1111.0	1108.1
22.5°	1097.4	1093.6	1089.7	1086.5	1083.9	1081.3	1078.6	1076.0
25°	1046.5	1041.6	1036.6	1032.9	1030.3	1027.6	1025.1	1022.5
27.5°	991.0	984.2	977.3	971.9	968.0	964.0	960.1	956.1
30°	951.6	943.5	935.5	929.7	925.9	922.2	918.4	914.6
32.5°	912.8	904.1	895.3	889.0	885.0	881.1	877.2	873.2
35°	855.4	845.3	835.2	828.0	823.7	819.5	815.3	811.0
37.5°	793.6	782.1	770.6	762.3	757.1	751.8	746.7	741.4
40°	750.6	738.4	726.2	717.4	712.0	706.6	701.1	695.8
42.5°	709.4	696.1	682.8	673.7	668.8	664.0	659.1	654.3
45°	648.9	635.5	622.1	612.6	606.9	601.3	595.7	590.1
47.5°	586.2	571.7	557.1	547.3	542.3	537.2	532.3	527.3
50°	544.0	529.4	514.8	504.8	499.5	494.0	488.7	483.2
52.5°	503.1	488.0	472.8	462.8	458.0	453.1	448.3	443.4
55°	442.2	428.6	415.0	405.8	401.1	396.4	391.7	387.0
57.5°	382.4	369.5	356.7	348.2	344.3	340.2	336.2	332.2
60°	344.7	332.0	319.3	311.0	307.0	303.0	299.0	295.0
62.5°	307.3	295.4	283.5	275.4	271.1	267.0	262.9	258.6
65°	254.0	242.5	231.0	223.9	221.4	218.7	216.2	213.6
67.5°	203.2	194.6	185.9	180.3	177.5	174.7	172.0	169.2
70°	171.8	163.5	155.3	150.0	147.3	144.7	142.2	139.6
72.5°	143.5	136.7	130.1	126.1	125.0	124.0	122.9	121.8
75°	107.3	105.0	102.7	101.3	100.8	100.4	99.9	99.4
77.5°	81.0	79.7	78.5	77.6	77.2	76.6	76.1	75.7
80°	65.2	64.5	63.8	63.2	62.7	62.3	61.8	61.3
82.5°	50.0	49.3	48.6	48.2	48.1	48.0	47.9	47.8
85°	28.7	28.2	27.8	27.5	27.5	27.5	27.5	27.5
87.5°	12.4	12.3	12.2	12.1	11.9	11.7	11.6	11.4
90°	9.2	9.5	9.8	10.1	10.2	10.4	10.5	10.7
92.5°	10.2	10.7	11.2	11.5	11.5	11.6	11.7	11.8
95°	12.2	12.7	13.3	13.5	13.5	13.5	13.5	13.5
97.5°	12.7	13.4	14.0	14.3	14.4	14.5	14.6	14.7
100°	13.0	13.6	14.3	14.6	14.7	14.8	14.9	14.9
102.5°	19.6	17.6	15.7	14.7	14.8	14.9	15.1	15.2
105°	50.1	36.1	22.0	15.0	15.2	15.3	15.6	15.7
107.5°	122.7	112.4	102.1	91.6	81.1	70.5	59.9	49.3
110°	155.7	153.1	150.5	143.5	132.2	120.8	109.5	98.2



TEST NUMBER: P332303-840

CATALOG NUMBER: S123RDIP-S775D365U840-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	179.0	179.0	179.2	177.9	175.5	173.2	170.8	168.3
115°	206.4	207.2	208.0	208.5	208.8	209.2	209.5	209.8
117.5°	231.3	231.9	232.5	232.9	232.9	233.0	233.1	233.1
120°	247.5	248.1	248.7	249.1	249.1	249.1	249.1	249.1
122.5°	263.4	263.9	264.3	264.5	264.6	264.7	264.7	264.8
125°	285.8	286.0	286.1	286.3	286.4	286.6	286.8	286.9
127.5°	308.2	308.5	308.8	308.8	308.6	308.5	308.3	308.2
130°	321.8	322.1	322.4	322.6	322.3	322.2	322.0	321.8
132.5°	334.7	335.0	335.3	335.4	335.1	334.9	334.7	334.5
135°	354.2	354.4	354.6	354.6	354.4	354.2	353.9	353.7
137.5°	371.4	371.8	372.2	372.3	372.1	372.0	371.8	371.7
140°	382.4	382.7	383.1	383.1	383.0	382.8	382.7	382.5
142.5°	392.9	393.1	393.4	393.4	393.2	392.9	392.7	392.5
145°	407.5	407.7	407.8	407.9	407.9	407.9	407.9	407.9
147.5°	420.5	420.7	420.9	420.8	420.4	420.0	419.7	419.3
150°	428.6	428.7	428.9	428.8	428.6	428.4	428.1	427.9
152.5°	435.7	436.0	436.3	436.2	435.9	435.5	435.0	434.7
155°	445.5	445.9	446.3	446.2	445.8	445.2	444.7	444.2
157.5°	453.9	454.4	454.9	454.8	454.2	453.6	452.9	452.3
160°	458.8	459.3	459.8	459.7	459.2	458.6	458.1	457.5
162.5°	463.2	463.7	464.2	464.3	463.8	463.3	462.8	462.3
165°	469.1	469.8	470.4	470.4	469.9	469.3	468.8	468.2
167.5°	473.6	474.3	474.9	474.9	474.3	473.6	473.0	472.4
170°	476.3	476.9	477.5	477.5	476.9	476.3	475.6	474.9
172.5°	478.0	478.6	479.2	479.2	478.5	477.8	477.1	476.4
175°	480.0	480.6	481.1	481.1	480.5	479.8	479.2	478.6
177.5°	480.8	481.3	481.8	481.7	481.1	480.5	479.8	479.2
180°	480.3	480.3	480.3	480.3	480.3	480.3	480.3	480.3

(END OF REPORT)