

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: P333683-830

Luminaire Tested: **S125RDIW-S850D470U830-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333683-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-11,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125RDIW-S850D470U830-4F0-1E-UDD-F1
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4594.9 lumens
Efficiency: N/A
Efficacy: 121.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.11 / 1.25
Luminous Opening: Rectangular (W 0.42' x L: 4' x H: 0')
CIE Type: Semi-Direct

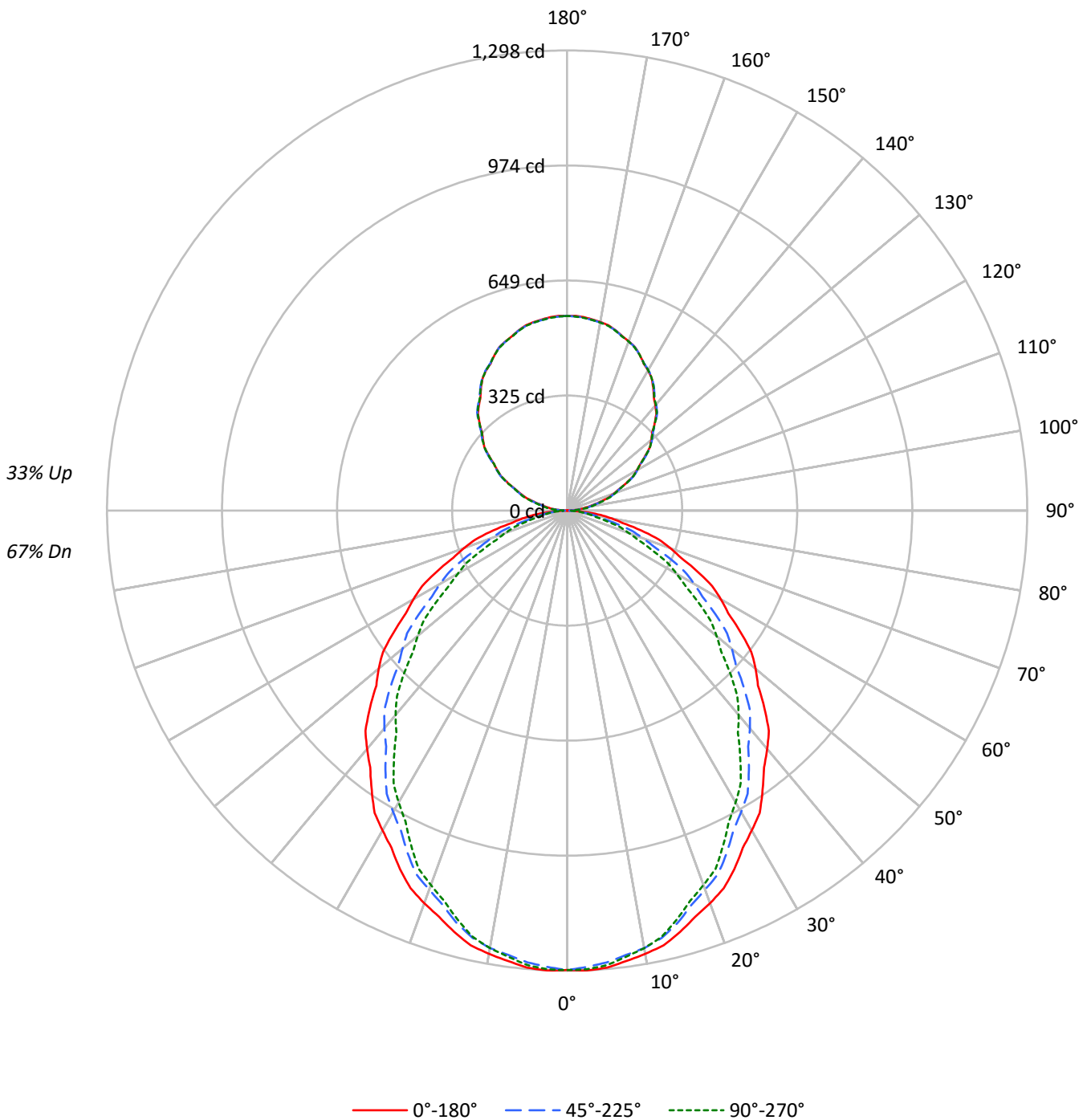
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	111	111	111	111	105	105	105	105	93	93	93	82	82	82	71	71	71	67
1	102	98	94	90	96	92	89	86	82	79	77	72	70	69	64	62	61	57
2	93	85	79	74	87	81	75	71	72	68	64	64	61	58	56	54	52	48
3	85	75	68	62	80	71	65	59	64	59	54	57	53	49	50	47	44	41
4	78	67	59	53	73	63	56	51	57	51	47	51	46	42	45	41	38	35
5	72	60	52	46	67	57	49	44	51	45	40	46	41	37	41	37	34	31
6	66	54	46	40	62	51	44	38	46	40	35	41	36	33	37	33	30	27
7	61	49	41	35	58	47	39	34	42	36	31	38	33	29	34	30	27	24
8	57	45	37	31	54	42	35	30	38	32	28	35	30	26	31	27	24	22
9	53	41	33	28	50	39	32	27	35	29	25	32	27	23	29	25	22	20
10	50	38	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8371	8371	8371
5°	8390	8294	8345
10°	8326	8217	8217
15°	8227	8050	7985
20°	8100	7818	7724
25°	7953	7590	7422
30°	7767	7322	7088
35°	7579	7046	6714
40°	7403	6759	6347
45°	7188	6437	5945
50°	6973	6089	5528
55°	6723	5754	5082
60°	6473	5349	4602
65°	6178	4876	4053
70°	5840	4288	3493
75°	5375	3616	2907
80°	4731	2838	2440
85°	3987	2319	2179



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.9	2.7
10°-20°	340.6	7.4
20°-30°	493.9	10.7
30°-40°	562.9	12.2
40°-50°	548.6	11.9
50°-60°	461.8	10.1
60°-70°	323.7	7.0
70°-80°	166.4	3.6
80°-90°	43.2	0.9
90°-100°	36.8	0.8
100°-110°	108.6	2.4
110°-120°	183.9	4.0
120°-130°	242.0	5.3
130°-140°	271.2	5.9
140°-150°	265.8	5.8
150°-160°	223.2	4.9
160°-170°	148.4	3.2
170°-180°	51.9	1.1
0°-30°	956.3	20.8
0°-40°	1519.2	33.1
0°-60°	2529.7	55.1
0°-90°	3063.1	66.7
90°-120°	329.3	7.2
90°-150°	1108.3	24.1
90°-180°	1532.0	33.3
0°-180°	4594.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1296	1296	1296	1296	1296	
5°	1294	1290	1279	1289	1287	123
15°	1230	1224	1204	1203	1194	347
25°	1116	1100	1065	1052	1042	513
35°	961	937	894	866	852	602
45°	787	757	705	667	651	607
55°	597	564	511	468	451	534
65°	404	370	319	281	265	400
75°	215	185	145	124	116	228
85°	54	37	31	30	29	60
90°	0	4	7	9	10	4
95°	28	29	33	36	37	30
105°	97	100	102	105	106	104
115°	184	186	187	186	186	182
125°	269	271	272	271	270	241
135°	349	352	352	352	351	269
145°	423	425	426	426	425	265
155°	484	484	485	486	484	223
165°	527	526	526	528	526	149
175°	548	546	546	548	546	52
180°	549	549	549	549	549	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1
2.5°	1298.4	1297.9	1297.3	1296.8	1296.3	1295.1	1293.5	1291.7	1290.0	1288.2	1290.0
5°	1294.1	1293.3	1292.3	1291.5	1290.6	1289.0	1286.6	1284.2	1281.8	1279.4	1281.6
7.5°	1281.4	1280.5	1279.7	1278.8	1278.1	1276.2	1273.4	1270.5	1267.6	1264.7	1266.2
10°	1269.6	1268.9	1268.3	1267.6	1267.0	1265.2	1262.2	1259.0	1256.0	1253.0	1253.6
12.5°	1256.3	1255.5	1254.6	1253.9	1253.0	1250.6	1246.4	1242.4	1238.3	1234.2	1234.6
15°	1230.5	1229.2	1227.9	1226.5	1225.2	1222.3	1217.8	1213.1	1208.6	1204.0	1203.8
17.5°	1201.3	1199.3	1197.3	1195.3	1193.3	1189.4	1183.6	1177.9	1172.1	1166.4	1165.4
20°	1178.6	1176.4	1174.2	1172.1	1169.9	1165.3	1158.4	1151.4	1144.4	1137.5	1136.4
22.5°	1153.5	1151.3	1149.1	1147.0	1144.8	1140.1	1132.7	1125.5	1118.1	1110.9	1108.7
25°	1116.0	1112.7	1109.4	1106.2	1102.9	1097.2	1089.2	1081.1	1073.1	1065.1	1062.2
27.5°	1072.9	1068.9	1065.0	1061.0	1057.1	1050.7	1042.2	1033.5	1024.9	1016.2	1012.3
30°	1041.5	1037.4	1033.3	1029.2	1025.0	1018.3	1009.3	1000.1	991.0	981.8	976.9
32.5°	1011.0	1006.2	1001.4	996.6	991.6	984.6	975.3	966.0	956.7	947.3	941.9
35°	961.3	956.0	950.8	945.6	940.4	932.8	923.1	913.3	903.5	893.7	887.4
37.5°	912.5	906.2	899.8	893.4	887.1	878.9	868.8	858.7	848.6	838.5	830.9
40°	878.1	871.6	865.0	858.5	852.0	843.5	833.0	822.6	812.2	801.7	793.4
42.5°	842.1	835.4	828.7	821.9	815.2	806.5	795.7	784.9	774.1	763.4	755.4
45°	787.0	780.7	774.4	768.1	761.8	752.6	740.6	728.8	716.8	704.8	696.1
47.5°	730.1	723.4	716.7	710.1	703.4	694.1	682.0	670.0	657.9	645.8	636.9
50°	694.0	686.8	679.7	672.5	665.3	655.5	643.1	630.7	618.3	606.0	596.8
52.5°	654.9	647.5	640.2	632.8	625.5	616.0	604.3	592.6	580.8	569.1	559.3
55°	597.1	590.1	583.2	576.3	569.3	559.7	547.5	535.4	523.2	511.0	501.1
57.5°	538.8	531.3	523.9	516.4	509.1	499.5	487.7	475.9	464.2	452.4	442.9
60°	501.1	493.6	486.0	478.3	470.7	461.1	449.3	437.5	425.8	414.1	404.5
62.5°	461.3	454.0	446.8	439.4	432.2	422.6	410.7	398.8	386.8	374.9	366.1
65°	404.3	396.9	389.5	382.1	374.7	365.2	353.7	342.1	330.6	319.1	310.4
67.5°	347.7	340.3	332.9	325.6	318.1	308.9	297.8	286.8	275.8	264.7	256.7
70°	309.3	301.9	294.5	287.1	279.7	270.6	259.8	248.8	238.0	227.1	220.4
72.5°	271.7	264.5	257.3	250.1	242.9	234.1	223.9	213.8	203.6	193.4	187.2
75°	215.4	208.9	202.3	195.8	189.3	181.4	172.3	163.2	154.0	144.9	140.1
77.5°	159.4	154.1	148.9	143.7	138.5	132.2	124.9	117.6	110.3	103.0	99.6
80°	127.2	122.1	116.8	111.6	106.4	100.8	94.6	88.5	82.5	76.3	74.4
82.5°	96.0	91.2	86.5	81.8	77.1	72.7	68.5	64.4	60.1	56.0	55.0
85°	53.8	50.0	46.0	42.1	38.2	35.6	34.6	33.5	32.4	31.3	31.1
87.5°	18.1	17.1	15.9	14.9	13.9	13.3	13.2	13.2	13.2	13.1	13.2
90°	0.5	1.2	2.0	2.7	3.5	4.1	4.8	5.5	6.1	6.9	7.4
92.5°	10.4	10.8	11.4	12.0	12.4	13.1	13.9	14.8	15.6	16.4	17.1
95°	27.8	28.0	28.2	28.4	28.6	29.1	30.1	31.0	32.0	32.9	33.6
97.5°	46.1	46.2	46.3	46.4	46.5	47.1	48.4	49.8	51.1	52.4	53.0
100°	59.9	59.9	59.9	59.9	59.9	60.4	61.6	62.9	64.1	65.3	66.3
102.5°	74.5	74.8	75.3	75.7	76.1	76.5	77.2	77.8	78.4	79.0	79.9
105°	97.4	97.8	98.3	98.8	99.3	99.8	100.4	100.9	101.5	102.1	102.6
107.5°	122.7	123.2	123.7	124.1	124.6	125.1	125.5	125.9	126.4	126.8	127.1
110°	140.2	140.6	141.1	141.6	142.0	142.4	142.7	143.0	143.3	143.5	143.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	157.9	158.2	158.3	158.6	158.9	159.2	159.6	159.9	160.2	160.6	160.8
115°	184.1	184.5	184.9	185.3	185.7	186.0	186.2	186.3	186.5	186.7	186.6
117.5°	210.5	210.6	210.8	210.9	211.1	211.3	211.5	211.6	211.8	212.0	212.1
120°	226.9	227.3	227.8	228.3	228.8	229.0	229.1	229.2	229.3	229.4	229.4
122.5°	244.6	244.8	245.0	245.2	245.2	245.5	245.7	246.0	246.3	246.5	246.4
125°	268.7	269.3	269.8	270.4	271.0	271.4	271.5	271.5	271.6	271.7	271.5
127.5°	294.4	294.6	295.0	295.3	295.7	295.9	296.0	296.1	296.1	296.3	296.2
130°	309.7	310.2	310.7	311.1	311.6	312.0	312.2	312.4	312.5	312.7	312.6
132.5°	325.1	325.8	326.7	327.4	328.2	328.6	328.6	328.5	328.5	328.4	328.3
135°	349.4	350.1	350.6	351.2	351.8	352.0	352.1	352.2	352.3	352.4	352.4
137.5°	372.3	372.9	373.4	374.0	374.6	374.9	375.1	375.3	375.5	375.8	375.9
140°	387.0	387.5	388.0	388.4	388.9	389.4	389.6	389.9	390.2	390.5	390.7
142.5°	401.7	402.1	402.6	402.9	403.3	403.7	404.1	404.4	404.8	405.2	405.3
145°	423.4	423.8	424.1	424.5	424.9	425.2	425.5	425.7	426.0	426.3	426.3
147.5°	443.4	443.6	443.7	443.9	444.2	444.4	444.6	444.9	445.1	445.4	445.5
150°	456.7	456.6	456.5	456.4	456.3	456.5	456.9	457.2	457.6	458.0	458.0
152.5°	467.6	467.8	467.9	468.0	468.2	468.3	468.4	468.6	468.7	468.9	469.1
155°	484.5	484.5	484.5	484.5	484.5	484.5	484.6	484.7	484.7	484.8	485.2
157.5°	499.5	499.3	499.1	498.9	498.6	498.6	498.7	498.8	498.9	499.0	499.4
160°	508.4	508.1	507.7	507.5	507.2	507.1	507.2	507.3	507.4	507.5	507.9
162.5°	516.2	516.0	515.9	515.6	515.4	515.3	515.3	515.3	515.4	515.4	515.9
165°	526.7	526.5	526.3	526.1	525.9	525.9	526.0	526.1	526.2	526.3	526.7
167.5°	535.6	535.3	534.9	534.5	534.1	534.0	534.0	534.0	534.0	534.0	534.5
170°	540.4	540.0	539.6	539.2	538.9	538.7	538.7	538.7	538.7	538.7	539.2
172.5°	543.8	543.5	543.1	542.7	542.3	542.2	542.2	542.2	542.2	542.2	542.7
175°	547.7	547.2	546.9	546.5	546.1	545.9	545.9	545.9	545.9	545.9	546.5
177.5°	549.6	549.3	549.0	548.7	548.4	548.2	548.2	548.1	548.0	547.9	548.4
180°	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1	1296.1
2.5°	1291.7	1293.5	1295.1	1296.0	1295.8	1295.6	1295.4	1295.2
5°	1283.7	1285.9	1288.1	1289.0	1288.5	1288.1	1287.7	1287.2
7.5°	1267.8	1269.3	1270.8	1271.3	1270.8	1270.4	1269.9	1269.4
10°	1254.2	1254.9	1255.6	1255.6	1254.9	1254.2	1253.6	1253.0
12.5°	1235.1	1235.6	1236.1	1235.9	1234.8	1233.8	1232.8	1231.8
15°	1203.6	1203.3	1203.2	1202.1	1200.1	1198.2	1196.2	1194.2
17.5°	1164.2	1163.2	1162.1	1160.7	1159.1	1157.5	1155.9	1154.3
20°	1135.3	1134.2	1133.1	1131.6	1129.6	1127.7	1125.7	1123.8
22.5°	1106.5	1104.5	1102.3	1100.4	1098.8	1097.2	1095.6	1094.0
25°	1059.4	1056.6	1053.8	1051.1	1048.7	1046.3	1044.0	1041.5
27.5°	1008.3	1004.4	1000.4	997.3	995.0	992.7	990.4	988.1
30°	971.9	966.9	961.8	958.4	956.4	954.4	952.4	950.5
32.5°	936.3	930.8	925.3	921.2	918.8	916.3	913.8	911.3
35°	881.1	874.8	868.5	863.8	860.7	857.7	854.7	851.6
37.5°	823.4	815.8	808.2	803.0	800.0	797.0	794.1	791.2
40°	785.1	776.9	768.6	763.2	760.6	758.0	755.4	752.8
42.5°	747.5	739.6	731.7	725.8	722.0	718.1	714.3	710.5
45°	687.4	678.7	670.0	664.0	660.7	657.5	654.2	650.9
47.5°	627.9	619.0	610.0	603.7	600.1	596.5	592.9	589.3
50°	587.7	578.5	569.4	563.2	560.0	556.7	553.4	550.2
52.5°	549.5	539.6	529.8	523.2	520.0	516.7	513.5	510.2
55°	491.4	481.6	471.8	465.1	461.8	458.3	454.8	451.3
57.5°	433.3	423.8	414.2	407.8	404.7	401.6	398.6	395.5
60°	394.9	385.3	375.8	369.4	366.1	362.9	359.6	356.3
62.5°	357.1	348.3	339.4	333.4	330.1	326.8	323.6	320.3
65°	301.7	293.0	284.3	278.3	275.0	271.8	268.5	265.2
67.5°	248.7	240.8	232.8	227.5	225.0	222.3	219.7	217.2
70°	213.6	206.9	200.1	195.5	192.8	190.2	187.7	185.0
72.5°	181.0	174.7	168.5	164.6	162.8	161.1	159.4	157.6
75°	135.3	130.5	125.7	122.6	121.0	119.5	118.0	116.5
77.5°	96.2	92.9	89.5	87.4	86.2	85.1	84.0	82.8
80°	72.5	70.5	68.5	67.3	66.9	66.4	66.0	65.6
82.5°	54.2	53.3	52.3	51.7	51.5	51.3	51.0	50.7
85°	30.9	30.6	30.4	30.3	30.0	29.8	29.6	29.4
87.5°	13.3	13.4	13.5	13.5	13.4	13.3	13.1	13.0
90°	7.8	8.3	8.8	9.1	9.4	9.7	10.0	10.3
92.5°	17.6	18.3	18.9	19.3	19.5	19.7	20.0	20.2
95°	34.2	34.9	35.5	36.0	36.2	36.4	36.6	36.8
97.5°	53.6	54.3	54.9	55.2	55.3	55.5	55.6	55.7
100°	67.1	68.0	68.8	69.3	69.5	69.7	69.8	70.0
102.5°	80.9	81.8	82.8	83.3	83.6	83.9	84.2	84.5
105°	103.2	103.8	104.3	104.8	105.1	105.4	105.7	105.9
107.5°	127.3	127.6	127.9	128.1	128.1	128.0	128.0	128.0
110°	144.1	144.4	144.7	144.8	144.7	144.6	144.5	144.4



TEST NUMBER: P333683-830

CATALOG NUMBER: S125RDIW-S850D470U830-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	160.9	161.0	161.2	161.2	161.0	160.8	160.6	160.4
115°	186.5	186.4	186.3	186.2	186.2	186.1	186.0	185.9
117.5°	212.2	212.2	212.3	212.2	211.8	211.4	210.9	210.6
120°	229.4	229.4	229.4	229.2	228.8	228.5	228.1	227.7
122.5°	246.4	246.3	246.2	246.0	245.7	245.4	245.1	244.8
125°	271.4	271.2	271.0	270.8	270.7	270.6	270.5	270.4
127.5°	296.1	296.1	296.0	295.8	295.6	295.4	295.2	295.0
130°	312.5	312.5	312.4	312.2	312.0	311.8	311.6	311.4
132.5°	328.2	328.1	328.0	327.9	327.6	327.3	327.1	326.8
135°	352.4	352.4	352.4	352.2	351.9	351.5	351.1	350.7
137.5°	376.0	376.1	376.3	376.1	375.6	375.1	374.6	374.1
140°	390.9	391.1	391.2	391.1	390.6	390.1	389.6	389.2
142.5°	405.4	405.5	405.6	405.4	404.9	404.4	404.0	403.5
145°	426.3	426.3	426.3	426.2	425.9	425.7	425.4	425.1
147.5°	445.7	446.0	446.2	446.0	445.4	444.7	444.0	443.5
150°	458.0	458.0	458.0	457.9	457.7	457.5	457.3	457.1
152.5°	469.4	469.6	469.8	469.8	469.4	469.1	468.7	468.3
155°	485.6	486.0	486.4	486.4	485.9	485.4	484.9	484.5
157.5°	499.7	500.1	500.5	500.4	499.7	499.1	498.5	497.9
160°	508.3	508.7	509.1	509.0	508.5	508.0	507.6	507.1
162.5°	516.3	516.7	517.2	517.2	516.6	516.0	515.5	514.9
165°	527.1	527.4	527.8	527.7	527.2	526.6	526.0	525.5
167.5°	535.1	535.6	536.2	536.2	535.6	535.0	534.4	533.9
170°	539.8	540.4	541.0	540.9	540.3	539.6	538.9	538.3
172.5°	543.3	543.8	544.4	544.4	543.8	543.2	542.6	542.1
175°	547.1	547.7	548.3	548.2	547.5	546.9	546.2	545.5
177.5°	548.8	549.3	549.8	549.7	549.2	548.7	548.1	547.6
180°	548.9	548.9	548.9	548.9	548.9	548.9	548.9	548.9

(END OF REPORT)