

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: P333687-840

Luminaire Tested: **S125RDIW-S850D770U840-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333687-840
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-S850D770U840-4F0-1E-UDD-F1
Description: DEFINE 5 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 850 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 770 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5970.7 lumens
Efficiency: N/A
Efficacy: 132.7 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: General Diffuse

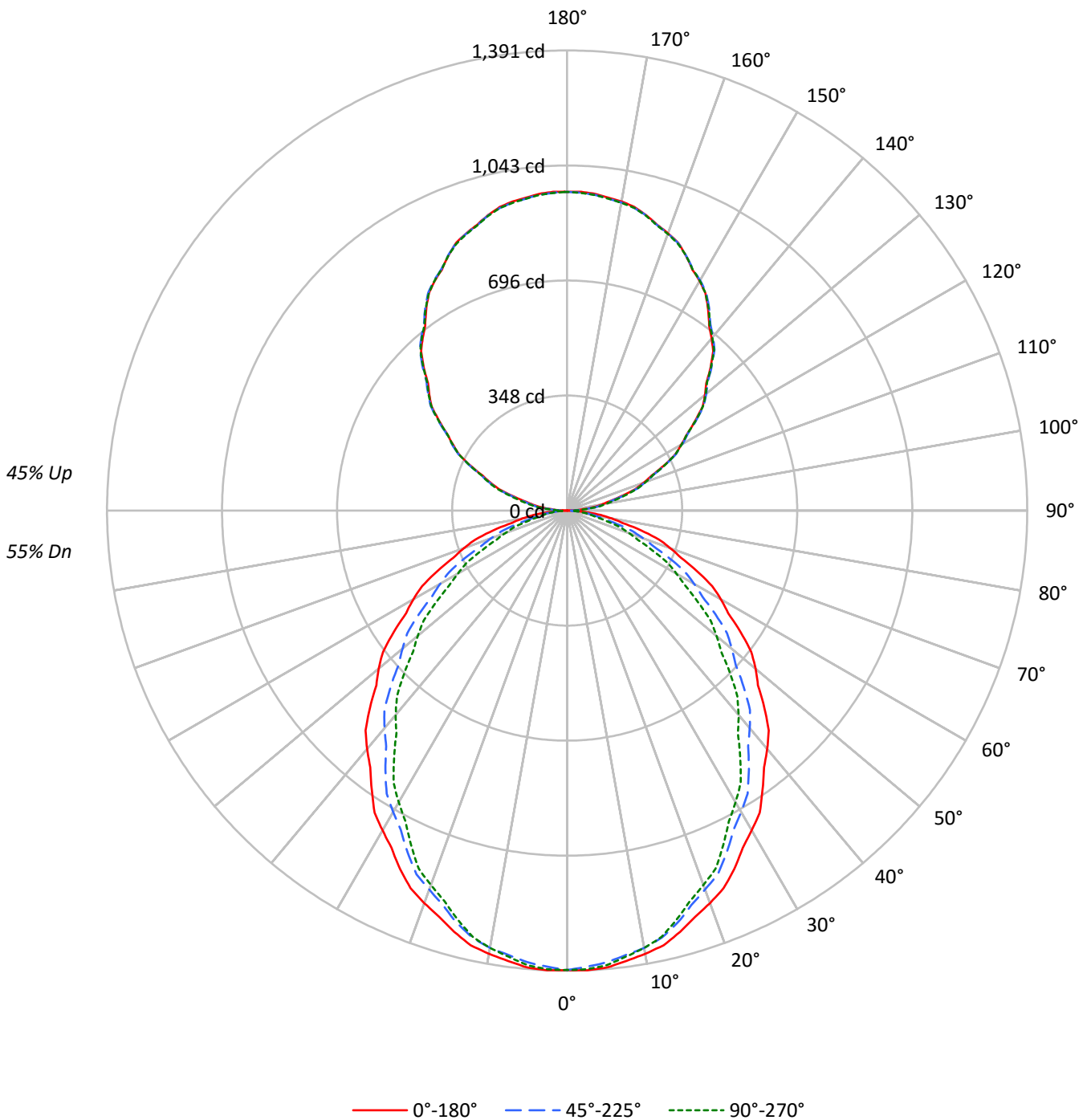
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P333687-840

CATALOG NUMBER: S125RDIW-S850D770U840-4F0-1E-UDD-F1

Luminous Intensity Polar Plot





TEST NUMBER: P333687-840

CATALOG NUMBER: S125RDIW-S850D770U840-4F0-1E-UDD-F1

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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	95	91	88	92	88	85	82	76	73	71	65	63	61	54	53	52	47
2	90	83	77	72	84	77	72	68	67	63	59	57	54	51	48	46	44	40
3	83	73	66	60	77	68	62	57	59	54	50	51	47	44	43	40	38	34
4	76	65	57	51	70	61	54	48	53	47	43	45	41	38	38	35	33	29
5	70	58	50	44	64	54	47	42	47	42	37	41	36	33	34	31	29	25
6	64	52	44	38	59	49	42	36	43	37	33	37	32	29	31	28	25	22
7	59	47	39	34	55	44	37	32	39	33	29	34	29	26	29	25	22	20
8	55	43	35	30	51	40	33	28	35	30	26	31	26	23	26	23	20	18
9	51	39	32	27	48	37	30	25	32	27	23	28	24	21	24	21	18	16
10	48	36	29	24	45	34	27	23	30	25	21	26	22	19	23	19	17	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8969	8969	8969
5°	8989	8887	8941
10°	8921	8804	8804
15°	8815	8625	8555
20°	8678	8376	8276
25°	8521	8131	7952
30°	8322	7845	7594
35°	8121	7550	7194
40°	7932	7242	6800
45°	7701	6898	6370
50°	7471	6523	5923
55°	7203	6164	5444
60°	6935	5730	4930
65°	6619	5225	4343
70°	6258	4594	3743
75°	5759	3873	3114
80°	5069	3042	2615
85°	4276	2482	2334



TEST NUMBER: P333687-840

CATALOG NUMBER: S125RDIW-S850D770U840-4F0-1E-UDD-F1

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.6	2.2
10°-20°	364.9	6.1
20°-30°	529.2	8.9
30°-40°	603.1	10.1
40°-50°	587.8	9.8
50°-60°	494.8	8.3
60°-70°	346.9	5.8
70°-80°	178.3	3.0
80°-90°	47.1	0.8
90°-100°	64.5	1.1
100°-110°	190.5	3.2
110°-120°	322.7	5.4
120°-130°	424.7	7.1
130°-140°	475.9	8.0
140°-150°	466.4	7.8
150°-160°	391.7	6.6
160°-170°	260.4	4.4
170°-180°	91.1	1.5
0°-30°	1024.6	17.2
0°-40°	1627.7	27.3
0°-60°	2710.4	45.4
0°-90°	3282.6	55.0
90°-120°	577.8	9.7
90°-150°	1944.8	32.6
90°-180°	2688.0	45.0
0°-180°	5970.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1389	1389	1389	1389	1389	
5°	1386	1382	1371	1381	1379	131
15°	1318	1311	1290	1289	1280	371
25°	1196	1179	1141	1128	1116	550
35°	1030	1004	958	928	912	645
45°	843	811	755	715	697	650
55°	640	605	547	502	484	572
65°	433	396	342	301	284	429
75°	231	199	155	133	125	244
85°	58	40	34	32	32	65
90°	1	7	12	16	18	5
95°	49	51	58	63	64	52
105°	171	175	179	184	186	183
115°	323	326	328	327	326	319
125°	472	476	477	475	474	422
135°	613	618	618	618	616	472
145°	743	746	748	748	746	464
155°	850	850	851	853	850	391
165°	924	923	924	926	922	261
175°	961	958	958	962	957	91
180°	963	963	963	963	963	



TEST NUMBER: P333687-840

CATALOG NUMBER: S125RDIW-S850D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7
2.5°	1391.1	1390.6	1390.0	1389.5	1388.9	1387.7	1385.8	1383.9	1382.1	1380.2	1382.1
5°	1386.5	1385.6	1384.6	1383.7	1382.8	1381.1	1378.5	1375.9	1373.3	1370.8	1373.1
7.5°	1372.9	1372.0	1371.1	1370.2	1369.4	1367.4	1364.3	1361.2	1358.2	1355.0	1356.7
10°	1360.3	1359.6	1358.9	1358.2	1357.5	1355.5	1352.3	1349.0	1345.7	1342.5	1343.1
12.5°	1346.0	1345.1	1344.2	1343.4	1342.5	1339.9	1335.4	1331.1	1326.8	1322.3	1322.8
15°	1318.4	1317.0	1315.6	1314.1	1312.7	1309.6	1304.7	1299.8	1294.9	1290.0	1289.8
17.5°	1287.1	1285.0	1282.8	1280.7	1278.5	1274.3	1268.2	1262.0	1255.9	1249.7	1248.6
20°	1262.7	1260.4	1258.1	1255.8	1253.4	1248.5	1241.1	1233.7	1226.2	1218.7	1217.6
22.5°	1235.9	1233.6	1231.2	1228.9	1226.6	1221.5	1213.7	1205.9	1198.0	1190.2	1187.9
25°	1195.7	1192.1	1188.6	1185.2	1181.6	1175.6	1167.0	1158.3	1149.7	1141.1	1138.1
27.5°	1149.5	1145.3	1141.0	1136.8	1132.6	1125.8	1116.6	1107.3	1098.1	1088.8	1084.6
30°	1115.9	1111.5	1107.1	1102.7	1098.2	1091.1	1081.4	1071.6	1061.8	1052.0	1046.6
32.5°	1083.2	1078.0	1072.9	1067.7	1062.5	1054.9	1045.0	1035.0	1025.0	1015.0	1009.2
35°	1030.0	1024.3	1018.8	1013.1	1007.5	999.5	989.1	978.6	968.1	957.6	950.8
37.5°	977.7	970.9	964.1	957.3	950.5	941.7	930.9	920.0	909.2	898.4	890.3
40°	940.8	933.8	926.8	919.8	912.8	903.7	892.5	881.3	870.2	859.0	850.1
42.5°	902.2	895.0	887.9	880.6	873.4	864.1	852.5	841.0	829.4	817.9	809.4
45°	843.2	836.5	829.7	822.9	816.2	806.4	793.6	780.8	768.0	755.2	745.8
47.5°	782.2	775.1	767.9	760.8	753.7	743.7	730.7	717.8	704.9	692.0	682.4
50°	743.6	735.9	728.2	720.5	712.9	702.4	689.0	675.8	662.5	649.2	639.4
52.5°	701.7	693.8	685.9	678.0	670.1	659.9	647.4	634.9	622.3	609.8	599.3
55°	639.7	632.3	624.9	617.4	610.0	599.7	586.6	573.6	560.6	547.4	536.9
57.5°	577.2	569.3	561.3	553.3	545.4	535.1	522.5	509.9	497.4	484.7	474.5
60°	536.9	528.9	520.7	512.5	504.3	494.0	481.4	468.8	456.3	443.6	433.4
62.5°	494.2	486.5	478.7	470.8	463.0	452.8	440.0	427.3	414.4	401.7	392.2
65°	433.1	425.3	417.3	409.4	401.4	391.3	379.0	366.6	354.3	341.9	332.5
67.5°	372.5	364.6	356.7	348.8	340.8	330.9	319.1	307.3	295.5	283.6	275.1
70°	331.4	323.5	315.6	307.6	299.7	289.9	278.3	266.6	255.0	243.3	236.1
72.5°	291.1	283.4	275.7	267.9	260.2	250.9	239.9	229.0	218.1	207.2	200.6
75°	230.8	223.8	216.7	209.7	202.8	194.4	184.6	174.8	165.0	155.2	150.1
77.5°	170.8	165.1	159.6	154.0	148.3	141.7	133.8	126.0	118.2	110.4	106.7
80°	136.3	130.8	125.1	119.6	114.0	108.0	101.4	94.8	88.4	81.8	79.7
82.5°	102.8	97.8	92.7	87.7	82.6	77.9	73.4	69.0	64.4	60.0	59.0
85°	57.7	53.5	49.3	45.1	40.9	38.2	37.1	35.9	34.7	33.5	33.3
87.5°	19.5	18.4	17.4	16.4	15.2	14.8	14.8	14.8	14.9	14.9	15.1
90°	0.7	2.1	3.4	4.7	6.1	7.4	8.5	9.7	10.8	12.0	12.8
92.5°	18.2	19.1	20.0	20.9	21.9	23.0	24.5	26.0	27.4	28.8	29.9
95°	48.8	49.1	49.4	49.7	50.1	51.1	52.7	54.4	56.0	57.8	58.9
97.5°	81.0	81.1	81.2	81.4	81.5	82.7	85.0	87.4	89.6	91.9	93.0
100°	104.9	104.9	104.9	104.9	104.9	106.0	108.2	110.4	112.5	114.7	116.2
102.5°	130.8	131.4	132.1	132.7	133.4	134.3	135.4	136.5	137.5	138.7	140.4
105°	171.0	171.8	172.6	173.4	174.3	175.2	176.2	177.1	178.1	179.2	180.2
107.5°	215.3	216.1	217.0	217.8	218.6	219.4	220.3	221.0	221.8	222.5	223.0
110°	245.9	246.7	247.5	248.4	249.2	249.8	250.3	250.9	251.4	251.9	252.4



TEST NUMBER: P333687-840

CATALOG NUMBER: S125RDIW-S850D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	277.1	277.5	277.9	278.4	278.8	279.3	279.9	280.6	281.2	281.9	282.2
115°	323.2	323.8	324.5	325.1	325.8	326.3	326.6	326.9	327.3	327.6	327.4
117.5°	369.3	369.6	369.9	370.2	370.5	370.8	371.1	371.4	371.7	372.0	372.1
120°	398.1	398.9	399.7	400.6	401.4	401.9	402.0	402.2	402.4	402.5	402.5
122.5°	429.3	429.6	429.9	430.2	430.5	430.8	431.2	431.7	432.1	432.5	432.4
125°	471.5	472.5	473.5	474.5	475.5	476.2	476.3	476.5	476.7	476.8	476.5
127.5°	516.5	517.1	517.7	518.3	518.8	519.2	519.4	519.6	519.8	520.0	519.8
130°	543.5	544.3	545.2	546.0	546.8	547.4	547.8	548.1	548.5	548.8	548.6
132.5°	570.5	571.9	573.2	574.6	575.9	576.6	576.5	576.4	576.4	576.3	576.2
135°	613.2	614.2	615.2	616.2	617.2	617.8	617.9	618.1	618.3	618.4	618.4
137.5°	653.4	654.4	655.3	656.3	657.3	657.9	658.3	658.6	659.0	659.4	659.6
140°	679.2	680.0	680.9	681.7	682.6	683.2	683.7	684.2	684.7	685.2	685.5
142.5°	705.0	705.7	706.4	707.1	707.8	708.4	709.1	709.7	710.3	710.9	711.1
145°	743.0	743.6	744.3	744.9	745.6	746.2	746.7	747.2	747.7	748.2	748.2
147.5°	778.0	778.4	778.7	779.1	779.5	779.8	780.2	780.6	781.0	781.4	781.8
150°	801.4	801.2	801.0	800.9	800.7	801.0	801.6	802.3	802.9	803.7	803.7
152.5°	820.6	820.8	821.0	821.3	821.5	821.7	822.0	822.3	822.5	822.8	823.2
155°	850.1	850.1	850.1	850.1	850.1	850.2	850.4	850.5	850.7	850.9	851.5
157.5°	876.6	876.2	875.8	875.5	875.0	874.9	875.1	875.3	875.5	875.7	876.3
160°	892.1	891.6	891.1	890.6	890.1	889.9	890.1	890.3	890.4	890.6	891.3
162.5°	905.9	905.5	905.1	904.8	904.4	904.2	904.3	904.3	904.3	904.4	905.2
165°	924.3	924.0	923.7	923.3	923.0	922.9	923.1	923.2	923.4	923.6	924.2
167.5°	940.0	939.3	938.6	938.0	937.3	937.0	937.0	937.0	937.0	937.0	938.0
170°	948.4	947.7	947.0	946.3	945.6	945.3	945.3	945.3	945.3	945.3	946.3
172.5°	954.3	953.6	953.0	952.3	951.7	951.3	951.3	951.3	951.3	951.3	952.3
175°	961.1	960.4	959.8	959.1	958.4	958.1	958.1	958.1	958.1	958.1	959.1
177.5°	964.5	964.0	963.4	962.9	962.4	962.1	961.9	961.8	961.7	961.5	962.3
180°	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3



TEST NUMBER: P333687-840

CATALOG NUMBER: S125RDIW-S850D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7	1388.7
2.5°	1383.9	1385.8	1387.7	1388.6	1388.4	1388.2	1388.0	1387.8
5°	1375.4	1377.8	1380.1	1381.1	1380.6	1380.1	1379.7	1379.2
7.5°	1358.4	1360.0	1361.6	1362.1	1361.6	1361.1	1360.6	1360.1
10°	1343.8	1344.5	1345.2	1345.2	1344.5	1343.8	1343.1	1342.5
12.5°	1323.3	1323.8	1324.3	1324.1	1323.0	1321.9	1320.9	1319.8
15°	1289.6	1289.3	1289.1	1288.0	1285.9	1283.7	1281.6	1279.5
17.5°	1247.4	1246.3	1245.1	1243.6	1241.9	1240.2	1238.5	1236.8
20°	1216.4	1215.2	1214.1	1212.4	1210.3	1208.2	1206.1	1204.1
22.5°	1185.6	1183.4	1181.0	1179.0	1177.3	1175.6	1173.9	1172.2
25°	1135.1	1132.1	1129.0	1126.2	1123.6	1121.1	1118.5	1115.9
27.5°	1080.4	1076.1	1071.9	1068.5	1066.1	1063.6	1061.2	1058.6
30°	1041.3	1035.9	1030.5	1026.8	1024.7	1022.6	1020.5	1018.3
32.5°	1003.2	997.2	991.4	987.0	984.4	981.8	979.1	976.4
35°	944.0	937.3	930.5	925.5	922.2	919.0	915.7	912.4
37.5°	882.2	874.0	866.0	860.3	857.2	853.9	850.8	847.7
40°	841.2	832.4	823.5	817.7	815.0	812.1	809.3	806.6
42.5°	800.9	792.4	784.0	777.6	773.6	769.4	765.3	761.2
45°	736.5	727.2	717.8	711.4	707.9	704.5	700.9	697.4
47.5°	672.8	663.2	653.6	646.8	643.0	639.1	635.2	631.4
50°	629.7	619.9	610.1	603.4	600.0	596.4	592.9	589.5
52.5°	588.8	578.1	567.6	560.6	557.1	553.6	550.2	546.6
55°	526.5	516.0	505.5	498.4	494.7	491.0	487.3	483.5
57.5°	464.2	454.0	443.7	437.0	433.6	430.3	427.1	423.7
60°	423.1	412.8	402.6	395.8	392.2	388.8	385.3	381.7
62.5°	382.6	373.1	363.7	357.2	353.7	350.1	346.7	343.2
65°	323.3	314.0	304.6	298.2	294.7	291.2	287.7	284.2
67.5°	266.5	258.0	249.4	243.8	241.1	238.2	235.4	232.7
70°	228.8	221.7	214.4	209.4	206.6	203.8	201.1	198.2
72.5°	193.9	187.2	180.6	176.3	174.4	172.6	170.8	168.8
75°	145.0	139.9	134.7	131.4	129.7	128.1	126.4	124.8
77.5°	103.1	99.6	95.9	93.6	92.4	91.2	90.0	88.8
80°	77.7	75.5	73.4	72.1	71.7	71.2	70.7	70.3
82.5°	58.1	57.1	56.0	55.4	55.1	54.9	54.6	54.3
85°	33.1	32.8	32.6	32.4	32.1	31.9	31.7	31.5
87.5°	15.3	15.5	15.7	15.7	15.7	15.6	15.5	15.3
90°	13.6	14.5	15.3	16.0	16.5	17.0	17.5	18.0
92.5°	31.0	32.1	33.2	33.9	34.3	34.6	35.0	35.3
95°	60.1	61.2	62.4	63.1	63.5	63.8	64.1	64.4
97.5°	94.1	95.2	96.3	96.9	97.1	97.4	97.6	97.8
100°	117.6	119.2	120.7	121.6	122.0	122.3	122.6	122.9
102.5°	142.0	143.6	145.2	146.2	146.7	147.2	147.6	148.1
105°	181.2	182.2	183.2	183.9	184.4	184.9	185.4	185.9
107.5°	223.5	224.0	224.5	224.7	224.7	224.7	224.6	224.6
110°	252.9	253.4	253.9	254.1	253.9	253.7	253.6	253.4



TEST NUMBER: P333687-840

CATALOG NUMBER: S125RDIW-S850D770U840-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	282.4	282.6	282.8	282.8	282.5	282.2	281.9	281.6
115°	327.3	327.1	326.9	326.8	326.6	326.5	326.3	326.1
117.5°	372.2	372.3	372.5	372.2	371.6	370.9	370.2	369.6
120°	402.5	402.5	402.5	402.2	401.6	400.9	400.2	399.6
122.5°	432.3	432.1	432.0	431.7	431.1	430.6	430.1	429.6
125°	476.2	475.7	475.4	475.2	475.0	474.8	474.7	474.5
127.5°	519.7	519.5	519.3	519.1	518.8	518.4	518.1	517.8
130°	548.5	548.3	548.1	547.9	547.5	547.1	546.8	546.5
132.5°	576.0	575.8	575.7	575.3	574.9	574.4	574.0	573.5
135°	618.4	618.4	618.4	618.1	617.4	616.8	616.1	615.5
137.5°	659.8	660.0	660.2	659.8	659.0	658.2	657.4	656.5
140°	685.9	686.2	686.5	686.3	685.5	684.6	683.8	683.0
142.5°	711.3	711.6	711.8	711.4	710.6	709.8	708.9	708.1
145°	748.2	748.2	748.2	747.9	747.4	746.9	746.4	745.9
147.5°	782.2	782.6	783.0	782.6	781.5	780.4	779.3	778.2
150°	803.7	803.7	803.7	803.4	803.1	802.8	802.4	802.1
152.5°	823.6	824.0	824.5	824.4	823.7	823.1	822.5	821.9
155°	852.2	852.8	853.5	853.4	852.6	851.8	850.9	850.1
157.5°	877.0	877.6	878.3	878.1	877.0	875.9	874.7	873.6
160°	891.9	892.6	893.2	893.2	892.3	891.5	890.7	889.9
162.5°	906.1	906.8	907.6	907.6	906.6	905.5	904.6	903.6
165°	924.9	925.6	926.2	926.0	925.1	924.1	923.1	922.1
167.5°	939.0	940.0	940.9	940.9	939.9	938.9	937.9	936.8
170°	947.4	948.4	949.4	949.3	948.1	947.0	945.7	944.6
172.5°	953.3	954.3	955.3	955.3	954.3	953.2	952.2	951.2
175°	960.1	961.1	962.1	962.0	960.8	959.7	958.5	957.4
177.5°	963.1	963.9	964.7	964.6	963.7	962.8	961.9	960.9
180°	963.3	963.3	963.3	963.3	963.3	963.3	963.3	963.3

(END OF REPORT)