

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: P333686-840

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P333686-840
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-7,
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-F
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, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6382.4 lumens
Efficiency: N/A
Efficacy: 141.8 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

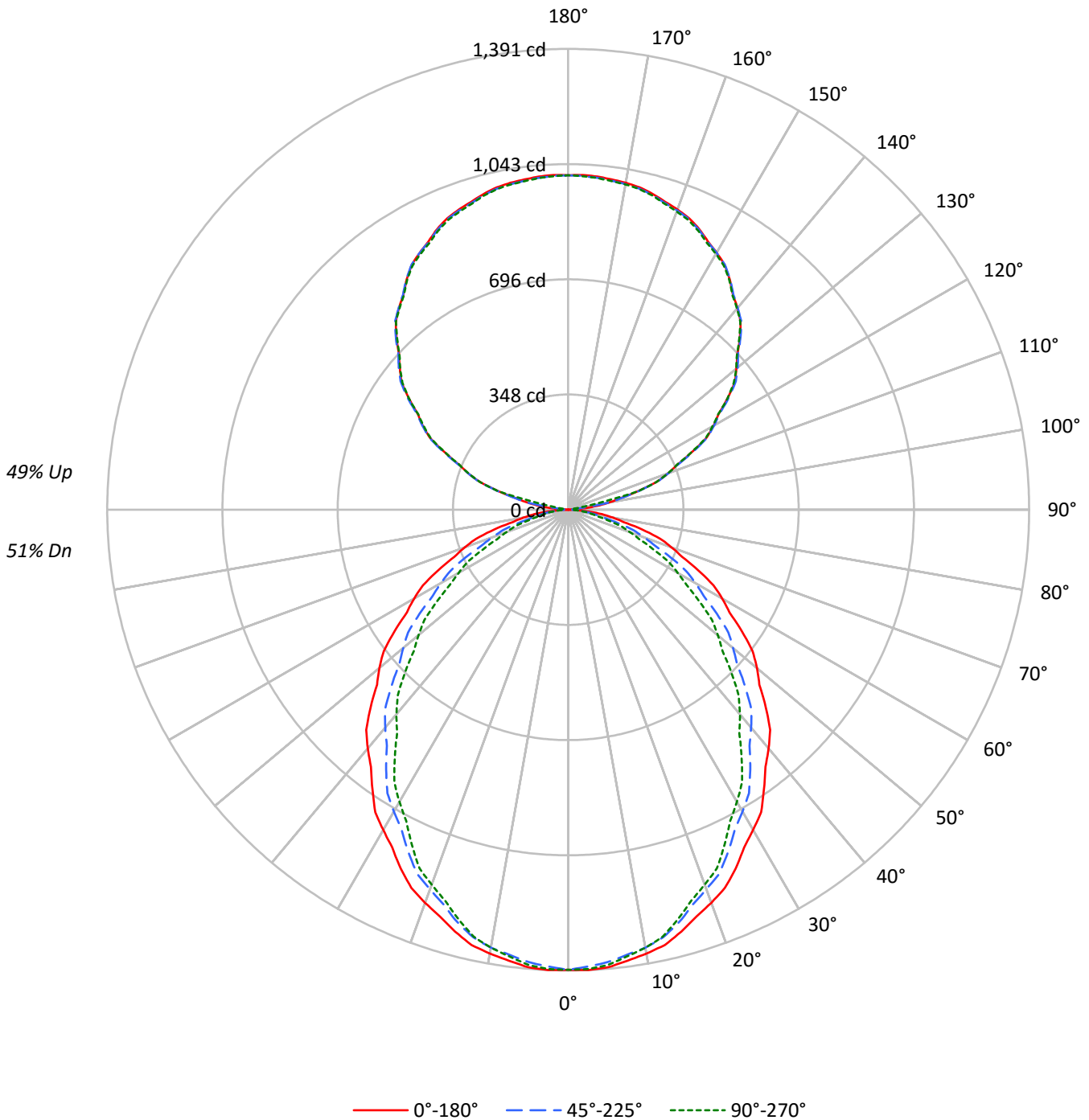
Input Watts (W): 45
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	98	94	90	87	91	87	84	81	74	72	70	62	60	59	51	50	49	44
2	90	82	76	71	83	76	71	67	65	61	58	55	52	50	45	43	42	37
3	82	73	65	60	76	67	61	56	58	53	49	49	45	42	40	38	36	32
4	75	64	57	51	69	60	53	48	51	46	42	43	39	36	36	33	31	27
5	69	57	49	43	64	54	46	41	46	40	36	39	35	32	33	29	27	24
6	64	52	44	38	59	48	41	36	42	36	32	35	31	28	30	26	24	21
7	59	47	39	33	54	44	36	31	38	32	28	32	28	25	27	24	21	19
8	55	42	35	29	50	40	33	28	34	29	25	30	25	22	25	22	19	17
9	51	39	31	26	47	36	30	25	32	26	22	27	23	20	23	20	17	15
10	48	36	28	24	44	33	27	22	29	24	20	25	21	18	21	18	16	14

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.6	2.0
10°-20°	364.9	5.7
20°-30°	529.2	8.3
30°-40°	603.1	9.4
40°-50°	587.8	9.2
50°-60°	494.8	7.8
60°-70°	346.9	5.4
70°-80°	178.3	2.8
80°-90°	47.1	0.7
90°-100°	36.7	0.6
100°-110°	226.1	3.5
110°-120°	410.0	6.4
120°-130°	526.2	8.2
130°-140°	566.0	8.9
140°-150°	531.3	8.3
150°-160°	429.7	6.7
160°-170°	277.9	4.4
170°-180°	95.9	1.5
0°-30°	1024.6	16.1
0°-40°	1627.7	25.5
0°-60°	2710.4	42.5
0°-90°	3282.6	51.4
90°-120°	672.8	10.5
90°-150°	2296.2	36.0
90°-180°	3100.0	48.6
0°-180°	6382.4	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	4
95°	43	39	12	16	16	54
105°	220	223	223	223	222	233
115°	413	417	418	414	410	409
125°	587	592	593	590	587	524
135°	733	737	736	734	730	564
145°	849	851	851	851	847	531
155°	935	931	932	934	929	431
165°	987	983	983	987	982	279
175°	1010	1005	1006	1011	1005	96
180°	1010	1010	1010	1010	1010	



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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	7.3	8.5	9.7	10.8	12.0	12.8
92.5°	11.5	10.6	9.7	8.7	7.8	7.9	8.9	9.9	10.9	12.0	12.8
95°	42.6	42.1	41.6	41.2	40.7	37.3	30.9	24.6	18.3	12.0	12.8
97.5°	89.1	90.0	90.9	91.7	92.6	86.8	74.3	61.8	49.3	36.9	32.1
100°	124.9	125.4	125.9	126.4	126.9	127.5	128.3	128.9	129.6	130.2	105.4
102.5°	161.5	162.1	162.8	163.4	164.0	164.5	164.9	165.3	165.7	166.1	161.5
105°	219.9	220.7	221.4	222.0	222.7	223.0	223.0	223.0	223.0	223.0	223.0
107.5°	280.7	280.7	280.7	280.7	280.7	280.9	281.2	281.6	282.0	282.3	282.3
110°	320.2	320.2	320.2	320.2	320.2	320.4	320.7	321.1	321.4	321.7	321.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	357.4	357.8	358.2	358.6	359.0	359.3	359.5	359.7	359.9	360.1	359.4
115°	413.0	413.8	414.8	415.6	416.4	416.9	417.1	417.2	417.4	417.6	416.9
117.5°	470.7	470.6	470.6	470.6	470.5	470.8	471.5	472.1	472.7	473.3	472.5
120°	506.5	506.4	506.2	506.0	505.9	506.0	506.5	507.1	507.6	508.1	507.8
122.5°	538.3	539.0	539.6	540.2	540.9	541.3	541.5	541.7	542.0	542.2	541.9
125°	587.4	588.5	589.8	590.9	592.1	592.6	592.6	592.6	592.6	592.6	592.0
127.5°	634.2	635.1	635.9	636.7	637.5	637.9	637.8	637.7	637.6	637.5	637.1
130°	663.0	663.8	664.6	665.5	666.3	666.8	666.9	667.1	667.3	667.4	666.9
132.5°	691.7	692.7	693.7	694.6	695.6	695.9	695.5	695.1	694.8	694.4	694.3
135°	732.6	733.6	734.6	735.6	736.6	736.9	736.6	736.2	735.9	735.6	735.2
137.5°	770.1	771.0	771.8	772.7	773.6	773.9	773.6	773.3	773.0	772.6	772.7
140°	794.7	795.0	795.4	795.7	796.0	796.1	795.9	795.8	795.6	795.4	795.8
142.5°	816.8	817.0	817.2	817.4	817.6	817.8	818.1	818.3	818.5	818.8	818.8
145°	849.3	849.6	850.0	850.3	850.6	850.8	850.8	850.8	850.8	850.8	850.9
147.5°	877.8	877.7	877.6	877.6	877.5	877.6	877.8	877.9	878.1	878.3	878.5
150°	895.6	895.3	895.0	894.6	894.3	894.3	894.6	895.0	895.3	895.6	896.1
152.5°	913.0	912.3	911.6	910.9	910.1	909.9	910.3	910.6	910.9	911.2	911.6
155°	935.3	934.3	933.3	932.3	931.4	931.0	931.4	931.7	932.0	932.3	932.8
157.5°	952.5	952.0	951.4	950.8	950.2	949.9	949.9	950.0	950.0	950.0	950.6
160°	964.5	963.5	962.5	961.5	960.6	960.1	960.3	960.5	960.6	960.8	961.5
162.5°	974.1	973.1	972.1	971.1	970.1	969.7	969.9	970.1	970.2	970.4	971.3
165°	986.9	985.9	985.0	984.0	983.0	982.6	982.7	982.9	983.1	983.2	984.2
167.5°	996.5	995.5	994.5	993.5	992.4	992.0	992.2	992.3	992.5	992.7	993.8
170°	1002.0	1000.8	999.6	998.5	997.2	996.7	996.9	997.1	997.2	997.4	998.8
172.5°	1005.5	1004.4	1003.2	1002.0	1000.9	1000.5	1000.8	1001.1	1001.4	1001.7	1002.8
175°	1009.5	1008.5	1007.4	1006.4	1005.4	1005.0	1005.2	1005.3	1005.5	1005.7	1007.0
177.5°	1011.2	1010.4	1009.7	1008.9	1008.0	1007.6	1007.8	1007.9	1008.0	1008.2	1009.2
180°	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5



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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	15.6	15.6	15.5	15.3
90°	13.6	14.4	15.2	16.0	16.5	17.0	17.5	18.0
92.5°	13.6	14.4	15.2	15.9	16.1	16.3	16.6	16.8
95°	13.6	14.4	15.2	15.8	15.8	15.8	15.8	15.8
97.5°	27.5	22.7	18.1	15.8	15.8	15.8	15.8	15.8
100°	80.7	55.8	31.1	18.4	17.7	17.1	16.4	15.8
102.5°	156.7	152.1	147.3	139.4	128.1	116.7	105.4	94.1
105°	223.0	223.0	223.0	222.9	222.8	222.6	222.4	222.3
107.5°	282.4	282.4	282.4	282.2	281.7	281.1	280.6	280.1
110°	320.7	320.2	319.7	319.6	319.7	319.9	320.1	320.2



TEST NUMBER: P333686-840

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

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	358.8	358.2	357.5	357.1	356.9	356.7	356.4	356.2
115°	416.2	415.6	414.9	414.0	413.0	412.0	411.0	410.0
117.5°	471.6	470.8	469.9	469.3	468.8	468.4	468.0	467.6
120°	507.5	507.1	506.8	506.1	505.3	504.5	503.7	502.8
122.5°	541.5	541.2	540.9	540.2	539.3	538.3	537.3	536.3
125°	591.3	590.7	590.0	589.4	588.9	588.3	587.9	587.4
127.5°	636.8	636.4	636.1	635.3	634.0	632.8	631.6	630.4
130°	666.5	666.0	665.5	664.8	664.0	663.2	662.3	661.5
132.5°	694.2	694.1	694.0	693.6	692.7	691.9	691.1	690.2
135°	734.9	734.6	734.3	733.6	732.6	731.5	730.5	729.5
137.5°	772.8	772.8	773.0	772.5	771.6	770.8	769.9	769.1
140°	796.1	796.4	796.8	796.4	795.4	794.5	793.5	792.4
142.5°	818.9	819.0	819.0	818.6	817.6	816.6	815.6	814.6
145°	851.1	851.3	851.4	851.0	850.0	849.0	848.1	847.1
147.5°	878.7	878.9	879.1	878.6	877.5	876.3	875.0	873.8
150°	896.4	896.7	897.1	896.6	895.1	893.8	892.5	891.2
152.5°	911.9	912.2	912.6	912.1	910.9	909.8	908.6	907.4
155°	933.3	933.8	934.3	933.9	932.6	931.3	930.0	928.6
157.5°	951.1	951.6	952.1	951.7	950.4	949.1	947.8	946.4
160°	962.1	962.8	963.4	963.1	961.8	960.5	959.2	957.8
162.5°	972.2	973.1	974.1	973.8	972.4	970.9	969.5	968.0
165°	985.2	986.2	987.2	987.0	985.7	984.4	983.1	981.7
167.5°	995.0	996.2	997.4	997.3	995.8	994.3	992.8	991.3
170°	1000.1	1001.5	1002.8	1002.7	1001.2	999.7	998.2	996.7
172.5°	1004.0	1005.2	1006.4	1006.2	1004.8	1003.3	1001.8	1000.3
175°	1008.4	1009.7	1011.0	1010.9	1009.5	1007.9	1006.4	1004.9
177.5°	1010.1	1011.0	1012.0	1011.9	1010.8	1009.8	1008.7	1007.6
180°	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5	1009.5

(END OF REPORT)