

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: P331832

Luminaire Tested: **S122RDIW-S865D710U835-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331832
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S865D710U835-4F0-1E-UDD-F1
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 710 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5478.0 lumens
Efficiency: N/A
Efficacy: 102.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

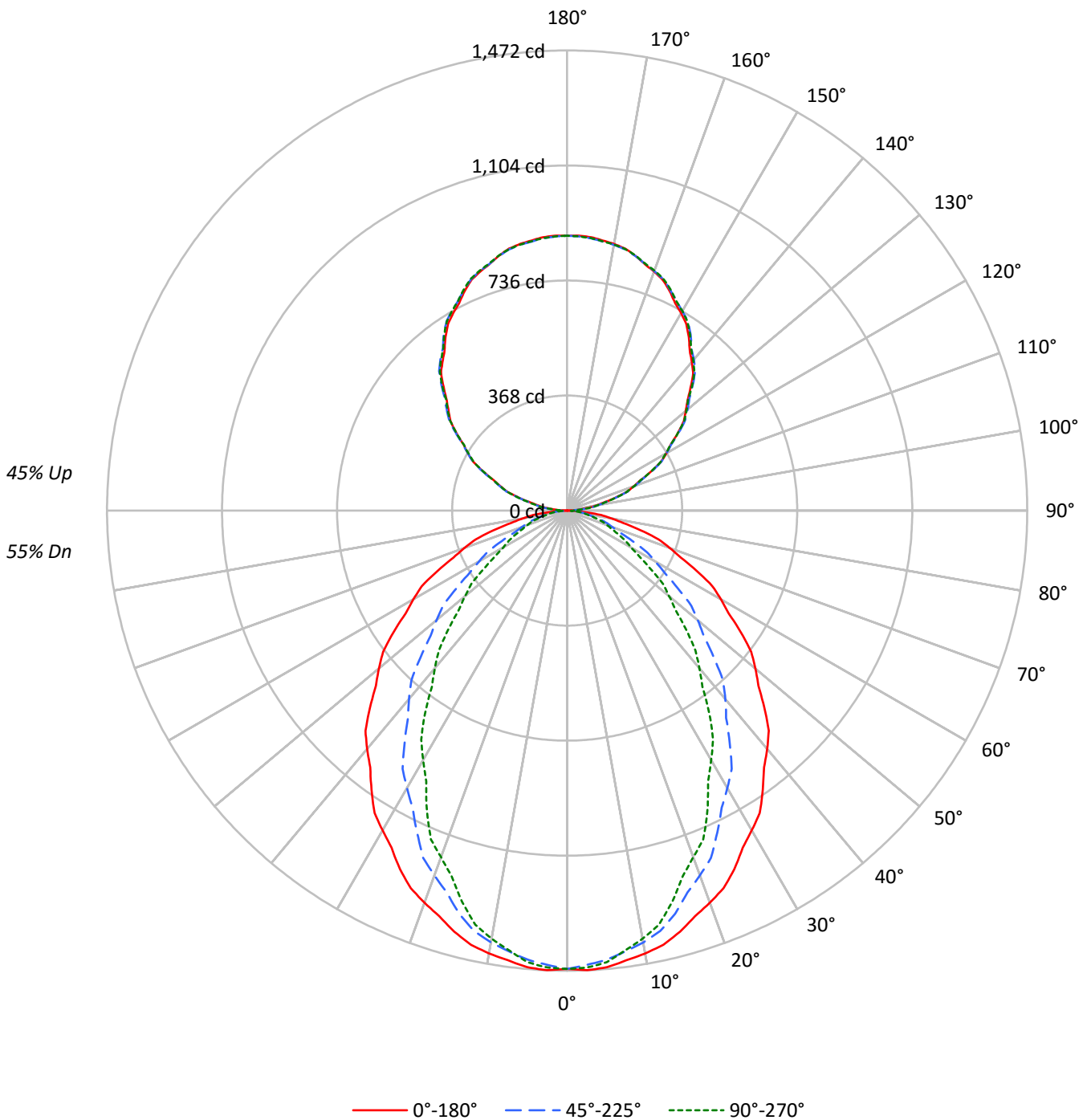
Input Watts (W): 53.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	95	92	88	92	89	85	83	76	74	72	65	63	62	55	53	52	47
2	91	84	78	73	84	78	73	69	68	64	60	58	55	52	49	47	45	41
3	83	74	67	61	77	69	63	58	60	55	51	52	48	45	44	41	39	35
4	77	66	58	52	71	62	55	50	54	48	44	46	42	39	39	36	34	31
5	70	59	51	45	65	55	48	43	48	43	39	42	38	34	36	32	30	27
6	65	53	45	40	60	50	43	38	44	38	34	38	34	30	33	29	27	24
7	60	48	40	35	56	45	38	33	40	34	30	35	30	27	30	26	24	21
8	56	44	36	31	52	41	35	30	37	31	27	32	27	24	28	24	22	19
9	52	40	33	28	49	38	31	27	34	28	24	29	25	22	26	22	20	18
10	49	37	30	25	46	35	29	24	31	26	22	27	23	20	24	20	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	23675	23675	23675
5°	23765	23378	23506
10°	23582	22996	22799
15°	23311	22313	21670
20°	22936	21340	20270
25°	22552	20236	18912
30°	22018	19099	17169
35°	21498	17864	15640
40°	20976	16585	13873
45°	20361	15150	12271
50°	19733	13700	10698
55°	19088	12141	9188
60°	18338	10498	7627
65°	17490	8821	6946
70°	16475	7265	6387
75°	15234	6625	5958
80°	13445	5923	5430
85°	10578	4668	4668



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	137.2	2.5
10°-20°	376.8	6.9
20°-30°	529.2	9.7
30°-40°	577.1	10.5
40°-50°	530.6	9.7
50°-60°	416.7	7.6
60°-70°	271.7	5.0
70°-80°	140.1	2.6
80°-90°	39.9	0.7
90°-100°	55.7	1.0
100°-110°	173.1	3.2
110°-120°	295.8	5.4
120°-130°	389.0	7.1
130°-140°	436.6	8.0
140°-150°	428.1	7.8
150°-160°	359.1	6.6
160°-170°	238.2	4.3
170°-180°	83.2	1.5
0°-30°	1043.3	19.0
0°-40°	1620.3	29.6
0°-60°	2567.6	46.9
0°-90°	3019.3	55.1
90°-120°	524.6	9.6
90°-150°	1778.3	32.5
90°-180°	2459.0	44.9
0°-180°	5478.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1466	1466	1466	1466	1466	
5°	1466	1459	1442	1453	1450	139
15°	1395	1378	1335	1310	1296	393
25°	1266	1221	1136	1083	1062	582
35°	1091	1020	906	826	794	682
45°	892	800	664	573	537	688
55°	678	572	431	355	326	606
65°	458	350	231	188	182	454
75°	244	154	106	97	96	258
85°	57	31	25	25	25	67
90°	1	10	26	25	25	4
95°	39	46	48	47	46	44
105°	160	162	163	165	165	168
115°	297	301	300	299	297	294
125°	432	438	436	434	433	386
135°	559	567	568	568	565	431
145°	678	683	688	688	686	424
155°	775	778	780	783	781	357
165°	844	843	843	848	844	238
175°	878	876	874	879	875	83
180°	879	879	879	879	879	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3
2.5°	1471.6	1470.4	1469.2	1468.0	1466.9	1465.0	1462.4	1459.8	1457.2	1454.6	1457.0
5°	1466.3	1464.8	1463.3	1461.8	1460.4	1457.7	1453.9	1450.1	1446.2	1442.4	1445.0
7.5°	1451.1	1449.3	1447.5	1445.7	1443.8	1440.7	1436.2	1431.7	1427.2	1422.7	1423.5
10°	1438.4	1436.3	1434.3	1432.2	1430.1	1426.2	1420.3	1414.4	1408.5	1402.6	1401.7
12.5°	1422.5	1419.9	1417.4	1414.9	1412.3	1407.3	1399.7	1392.2	1384.6	1377.1	1375.5
15°	1394.6	1391.4	1388.1	1384.9	1381.6	1375.0	1365.0	1355.0	1344.9	1334.9	1329.3
17.5°	1360.4	1355.4	1350.5	1345.5	1340.6	1331.7	1318.8	1305.9	1293.1	1280.2	1273.6
20°	1334.9	1329.0	1323.1	1317.2	1311.3	1301.0	1286.2	1271.5	1256.8	1242.0	1234.6
22.5°	1307.3	1300.7	1294.1	1287.5	1280.9	1269.3	1252.6	1236.0	1219.4	1202.7	1193.2
25°	1265.9	1256.5	1247.0	1237.6	1228.2	1213.7	1194.2	1174.8	1155.3	1135.9	1123.8
27.5°	1216.0	1205.7	1195.5	1185.2	1175.0	1158.9	1136.9	1115.0	1093.0	1071.1	1057.0
30°	1181.0	1169.8	1158.6	1147.4	1136.2	1118.8	1095.2	1071.6	1048.0	1024.4	1009.4
32.5°	1147.0	1133.9	1120.8	1107.7	1094.6	1076.1	1052.0	1027.9	1003.9	979.8	962.7
35°	1090.7	1075.7	1060.7	1045.6	1030.6	1010.1	984.1	958.2	932.3	906.3	887.7
37.5°	1034.5	1018.0	1001.5	984.9	968.4	946.3	918.7	891.0	863.4	835.7	815.2
40°	995.2	977.5	959.8	942.1	924.4	901.3	872.7	844.1	815.5	786.9	765.9
42.5°	954.9	936.2	917.6	899.0	880.3	856.2	826.7	797.1	767.6	738.0	716.4
45°	891.7	871.9	852.2	832.4	812.7	787.3	756.4	725.4	694.4	663.5	642.5
47.5°	830.1	809.2	788.3	767.3	746.4	719.9	688.0	656.0	624.0	592.1	571.3
50°	785.6	764.6	743.7	722.7	701.8	675.1	642.7	610.2	577.8	545.4	525.0
52.5°	742.0	720.1	698.3	676.4	654.5	627.7	596.0	564.2	532.5	500.8	481.1
55°	678.1	655.1	632.1	609.1	586.1	558.6	526.8	494.9	463.1	431.3	413.6
57.5°	612.5	588.9	565.3	541.7	518.2	491.1	460.4	429.8	399.2	368.6	352.4
60°	567.9	544.3	520.8	497.2	473.6	446.6	416.2	385.8	355.5	325.1	310.1
62.5°	524.4	500.8	477.2	453.6	430.0	403.8	374.8	345.9	316.9	287.9	273.6
65°	457.8	433.9	410.0	386.1	362.3	337.0	310.5	284.0	257.4	230.9	220.9
67.5°	393.6	369.9	346.2	322.4	298.7	274.9	251.1	227.2	203.3	179.4	174.8
70°	349.0	326.0	303.0	280.0	257.0	235.3	215.0	194.6	174.3	153.9	151.0
72.5°	306.5	284.5	262.4	240.4	218.3	199.1	182.8	166.4	150.1	133.8	131.3
75°	244.2	223.5	202.9	182.2	161.6	146.3	136.2	126.2	116.2	106.2	104.1
77.5°	182.9	164.7	146.6	128.5	110.4	99.0	94.1	89.3	84.5	79.6	78.4
80°	144.6	129.6	114.6	99.5	84.5	75.5	72.5	69.6	66.6	63.7	62.5
82.5°	109.6	97.9	86.1	74.4	62.7	55.8	53.8	51.8	49.8	47.8	47.1
85°	57.1	50.9	44.7	38.5	32.3	28.8	27.9	27.0	26.1	25.2	25.2
87.5°	17.1	15.6	14.2	12.7	11.2	10.8	11.5	12.2	13.0	13.7	13.4
90°	0.7	2.7	4.7	6.7	8.7	11.5	15.1	18.7	22.3	26.0	25.6
92.5°	13.2	14.7	16.1	17.6	19.0	20.2	21.0	21.9	22.7	23.6	23.7
95°	38.6	40.2	41.9	43.5	45.2	46.2	46.5	46.8	47.2	47.5	47.5
97.5°	70.5	71.9	73.4	74.8	76.3	77.3	78.0	78.6	79.2	79.8	79.8
100°	94.2	95.6	96.9	98.2	99.5	100.4	100.9	101.4	101.9	102.4	102.4
102.5°	119.2	120.2	121.3	122.3	123.4	124.2	124.9	125.5	126.1	126.7	126.9
105°	159.5	160.0	160.5	161.0	161.5	161.9	162.3	162.6	162.9	163.3	163.6
107.5°	200.2	200.9	201.7	202.4	203.1	203.5	203.5	203.5	203.5	203.5	203.6
110°	226.3	227.3	228.3	229.3	230.3	230.8	230.8	230.8	230.8	230.8	230.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	254.8	255.8	256.8	257.8	258.8	259.2	259.1	258.9	258.8	258.7	258.3
115°	296.8	297.8	298.8	299.8	300.8	301.1	300.8	300.4	300.1	299.8	299.6
117.5°	338.7	340.0	341.3	342.6	343.9	344.1	343.2	342.3	341.4	340.5	340.1
120°	366.6	367.9	369.2	370.5	371.8	371.8	370.5	369.2	367.9	366.6	366.6
122.5°	392.1	393.7	395.3	396.8	398.4	398.8	397.8	396.9	396.0	395.1	394.7
125°	431.9	433.4	434.8	436.3	437.8	438.3	437.8	437.3	436.8	436.3	435.8
127.5°	470.6	472.5	474.4	476.2	478.1	478.8	478.2	477.6	477.0	476.4	475.8
130°	494.9	497.1	499.2	501.4	503.5	504.4	504.1	503.8	503.4	503.1	502.8
132.5°	522.3	524.0	525.8	527.5	529.2	530.2	530.2	530.3	530.4	530.4	529.7
135°	558.8	560.6	562.4	564.2	566.0	567.1	567.4	567.8	568.1	568.4	568.2
137.5°	597.2	598.7	600.2	601.7	603.1	604.1	604.5	605.0	605.4	605.8	605.7
140°	620.4	621.8	623.3	624.8	626.3	627.4	628.3	629.1	629.9	630.7	630.7
142.5°	644.1	645.6	647.1	648.6	650.0	651.1	651.6	652.2	652.7	653.3	653.4
145°	678.2	679.4	680.5	681.7	682.9	683.9	684.9	685.9	686.9	687.9	688.0
147.5°	708.7	710.0	711.4	712.8	714.2	715.2	715.9	716.5	717.2	717.9	718.2
150°	729.4	730.4	731.4	732.4	733.4	734.2	734.9	735.5	736.2	736.9	737.4
152.5°	747.8	748.8	749.8	750.8	751.8	752.7	753.5	754.3	755.1	755.9	756.5
155°	775.4	775.9	776.4	776.9	777.4	777.9	778.4	778.9	779.4	779.9	780.7
157.5°	799.0	799.4	799.7	800.0	800.4	800.7	801.0	801.3	801.6	801.9	803.0
160°	813.3	813.6	813.9	814.3	814.6	814.9	815.0	815.2	815.3	815.5	816.5
162.5°	826.3	826.4	826.5	826.5	826.6	826.7	826.9	827.1	827.2	827.4	828.5
165°	843.7	843.5	843.4	843.2	843.1	843.0	843.0	843.0	843.0	843.0	844.1
167.5°	858.3	857.8	857.3	856.8	856.3	856.0	856.0	855.9	855.9	855.9	857.0
170°	866.0	865.5	865.0	864.5	864.0	863.7	863.5	863.3	863.2	863.0	864.2
172.5°	871.3	870.8	870.3	869.8	869.3	869.0	868.8	868.7	868.5	868.3	869.5
175°	877.8	877.4	876.9	876.4	875.9	875.5	875.1	874.8	874.5	874.1	875.3
177.5°	880.5	880.1	879.7	879.3	878.9	878.6	878.3	878.1	877.8	877.5	878.3
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3	1466.3
2.5°	1459.3	1461.7	1464.0	1465.0	1464.5	1464.0	1463.6	1463.1
5°	1447.7	1450.3	1453.0	1453.9	1453.0	1452.1	1451.2	1450.3
7.5°	1424.3	1425.0	1425.8	1425.4	1423.9	1422.4	1420.8	1419.3
10°	1400.8	1399.9	1399.0	1397.7	1395.9	1394.2	1392.4	1390.6
12.5°	1373.9	1372.3	1370.7	1368.5	1365.5	1362.6	1359.6	1356.7
15°	1323.7	1318.1	1312.5	1308.2	1305.3	1302.3	1299.4	1296.4
17.5°	1266.9	1260.2	1253.6	1247.7	1242.6	1237.6	1232.5	1227.4
20°	1227.3	1219.9	1212.5	1205.6	1199.1	1192.6	1186.1	1179.7
22.5°	1183.8	1174.3	1164.8	1157.6	1152.8	1147.9	1143.1	1138.3
25°	1111.7	1099.6	1087.5	1079.2	1074.8	1070.4	1066.0	1061.6
27.5°	1042.9	1028.8	1014.7	1004.2	997.2	990.1	983.1	976.1
30°	994.3	979.3	964.2	952.7	944.8	936.8	928.9	920.9
32.5°	945.5	928.3	911.2	898.8	891.4	883.9	876.4	868.9
35°	869.1	850.6	832.0	819.5	813.0	806.5	800.0	793.5
37.5°	794.8	774.3	753.9	739.9	732.5	725.0	717.6	710.2
40°	745.0	724.1	703.1	688.8	681.2	673.5	665.8	658.2
42.5°	694.8	673.1	651.5	636.9	629.5	622.1	614.6	607.2
45°	621.6	600.7	579.7	565.7	558.6	551.6	544.5	537.4
47.5°	550.4	529.6	508.8	495.2	488.8	482.3	475.9	469.5
50°	504.7	484.3	464.0	450.7	444.5	438.3	432.1	425.9
52.5°	461.5	441.9	422.2	409.6	403.8	398.1	392.4	386.7
55°	395.9	378.2	360.5	348.8	343.2	337.6	332.0	326.4
57.5°	336.2	320.0	303.8	293.3	288.6	283.8	279.1	274.4
60°	295.0	280.0	264.9	255.1	250.3	245.6	240.9	236.2
62.5°	259.3	245.0	230.6	222.0	219.2	216.4	213.5	210.7
65°	210.8	200.8	190.8	185.3	184.4	183.6	182.7	181.8
67.5°	170.2	165.6	161.0	158.2	157.3	156.3	155.4	154.5
70°	148.0	145.1	142.1	140.1	138.9	137.7	136.5	135.3
72.5°	128.8	126.3	123.8	122.3	121.5	120.8	120.1	119.4
75°	102.0	100.0	97.9	96.7	96.4	96.1	95.8	95.5
77.5°	77.3	76.1	74.9	74.1	73.6	73.1	72.7	72.2
80°	61.3	60.2	59.0	58.4	58.4	58.4	58.4	58.4
82.5°	46.4	45.6	44.9	44.6	44.6	44.6	44.6	44.6
85°	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2
87.5°	13.1	12.8	12.5	12.3	12.4	12.4	12.4	12.5
90°	25.3	25.0	24.7	24.6	24.7	24.9	25.1	25.2
92.5°	23.7	23.8	23.9	23.9	23.9	24.0	24.0	24.0
95°	47.5	47.5	47.5	47.3	47.0	46.7	46.3	46.0
97.5°	79.8	79.8	79.8	79.8	79.8	79.8	79.7	79.7
100°	102.4	102.4	102.4	102.3	102.2	102.0	101.8	101.7
102.5°	127.0	127.1	127.3	127.3	127.1	126.9	126.8	126.6
105°	163.9	164.2	164.6	164.7	164.7	164.7	164.7	164.7
107.5°	203.7	203.9	204.0	203.7	202.9	202.2	201.4	200.7
110°	230.8	230.8	230.8	230.5	230.0	229.5	229.0	228.6



TEST NUMBER: P331832

CATALOG NUMBER: S122RDIW-S865D710U835-4F0-1E-UDD-F1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.9	257.5	257.1	256.7	256.4	256.0	255.6	255.3
115°	299.5	299.3	299.1	298.8	298.3	297.8	297.3	296.8
117.5°	339.7	339.3	338.9	338.4	337.9	337.4	336.9	336.4
120°	366.6	366.6	366.6	366.3	365.8	365.3	364.8	364.3
122.5°	394.3	393.9	393.5	393.1	392.7	392.4	392.0	391.7
125°	435.3	434.8	434.3	434.0	433.9	433.7	433.5	433.4
127.5°	475.2	474.6	474.0	473.5	472.9	472.4	471.9	471.4
130°	502.5	502.1	501.8	501.3	500.6	500.0	499.3	498.7
132.5°	529.0	528.2	527.5	526.9	526.4	525.8	525.3	524.8
135°	568.1	567.9	567.8	567.4	566.9	566.4	565.9	565.4
137.5°	605.5	605.4	605.3	604.9	604.2	603.6	602.9	602.2
140°	630.7	630.7	630.7	630.4	629.8	629.1	628.4	627.8
142.5°	653.6	653.7	653.8	653.6	652.9	652.2	651.6	650.9
145°	688.2	688.4	688.5	688.3	687.6	687.0	686.3	685.7
147.5°	718.6	718.9	719.3	719.2	718.6	717.9	717.3	716.7
150°	737.8	738.3	738.8	738.8	738.3	737.8	737.4	736.9
152.5°	757.1	757.7	758.4	758.4	757.7	757.1	756.5	755.9
155°	781.5	782.4	783.2	783.4	782.9	782.4	781.9	781.4
157.5°	804.1	805.2	806.3	806.5	805.7	804.9	804.1	803.3
160°	817.5	818.5	819.5	819.6	819.0	818.3	817.7	817.0
162.5°	829.6	830.8	831.9	832.0	831.2	830.5	829.7	828.9
165°	845.3	846.4	847.6	847.8	846.9	846.1	845.3	844.5
167.5°	858.2	859.3	860.5	860.6	859.8	858.9	858.1	857.2
170°	865.3	866.5	867.6	867.7	866.7	865.7	864.7	863.7
172.5°	870.7	871.8	873.0	873.0	872.1	871.1	870.1	869.1
175°	876.4	877.6	878.8	878.8	877.8	876.9	875.9	874.9
177.5°	879.1	879.9	880.7	880.7	879.9	879.1	878.3	877.5
180°	879.3	879.3	879.3	879.3	879.3	879.3	879.3	879.3

(END OF REPORT)