

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: P331804-940

Luminaire Tested: **S122RDIW-S485D1440U940-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331804-940  
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-S485D1440U940-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1440 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5974.2 lumens  
Efficiency: N/A  
Efficacy: 98.6 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: Semi-Indirect

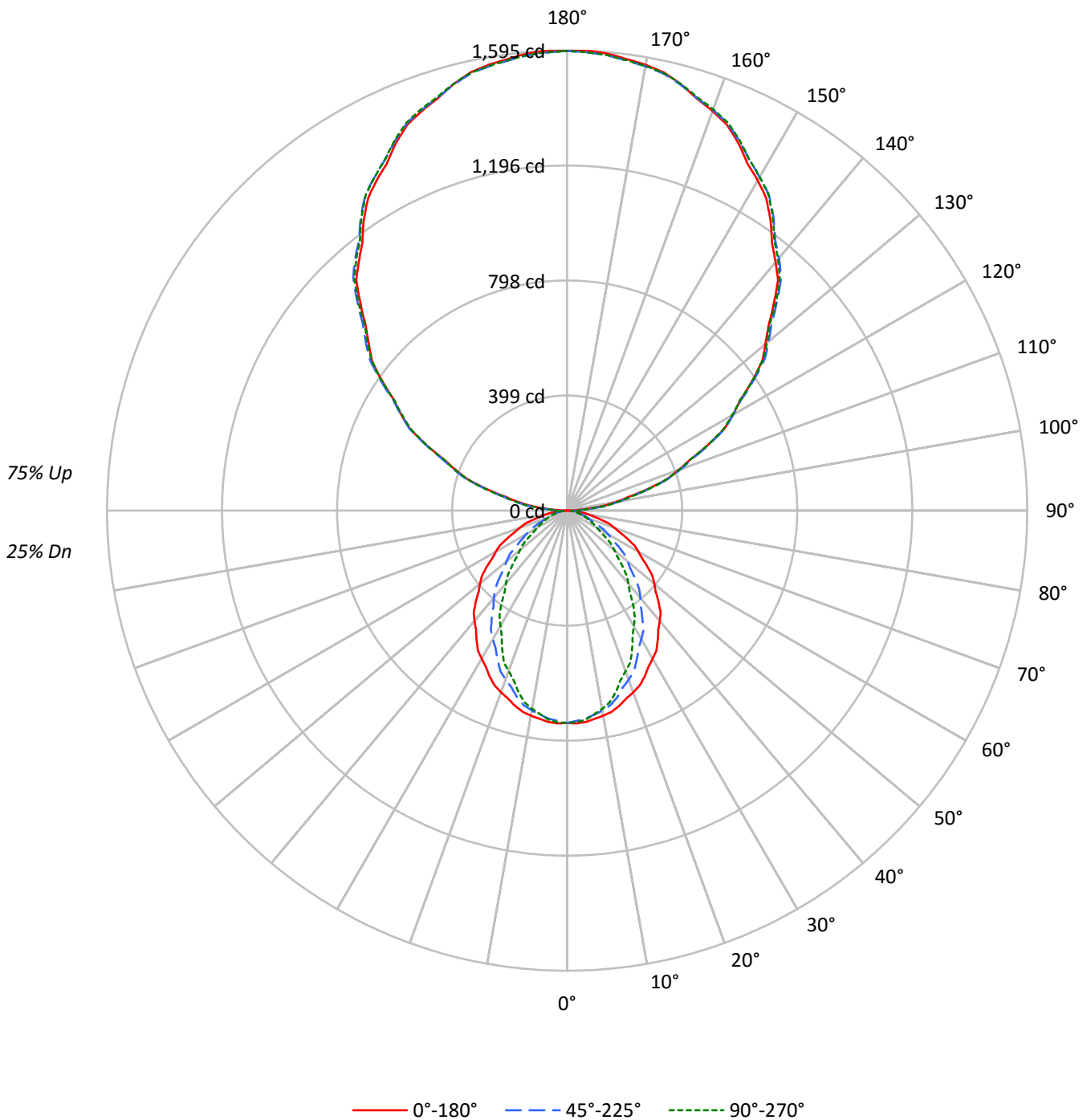
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	25
1	92	88	85	81	82	79	76	73	61	59	57	45	44	43	30	29	29	22
2	84	77	72	67	75	69	64	60	54	51	48	40	38	36	27	26	25	19
3	77	68	61	56	68	61	55	51	48	44	40	35	33	31	24	22	21	16
4	71	60	53	47	63	54	48	43	42	38	35	32	29	26	21	20	18	14
5	65	54	46	40	57	48	42	37	38	33	30	28	25	23	19	18	16	12
6	60	48	40	35	53	43	37	32	34	29	26	26	22	20	18	16	14	11
7	55	43	36	31	49	39	33	28	31	26	23	23	20	18	16	14	13	10
8	51	39	32	27	45	35	29	25	28	24	20	21	18	16	15	13	11	9
9	47	36	29	24	42	32	26	22	26	21	18	20	16	14	14	12	10	8
10	44	33	26	21	39	30	24	20	24	19	16	18	15	13	13	11	9	7

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11880	11880	11880
5°	11925	11733	11797
10°	11835	11540	11442
15°	11699	11198	10877
20°	11510	10710	10172
25°	11318	10156	9492
30°	11050	9587	8617
35°	10789	8966	7849
40°	10526	8323	6962
45°	10218	7604	6158
50°	9902	6875	5368
55°	9579	6092	4611
60°	9203	5270	3827
65°	8779	4424	3484
70°	8266	3644	3205
75°	7642	3319	2994
80°	6750	2966	2724
85°	5298	2353	2353



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.9	1.2
10°-20°	189.1	3.2
20°-30°	265.6	4.4
30°-40°	289.6	4.8
40°-50°	266.3	4.5
50°-60°	209.1	3.5
60°-70°	136.4	2.3
70°-80°	70.3	1.2
80°-90°	24.6	0.4
90°-100°	100.9	1.7
100°-110°	313.5	5.2
110°-120°	535.9	9.0
120°-130°	704.7	11.8
130°-140°	791.0	13.2
140°-150°	775.6	13.0
150°-160°	650.5	10.9
160°-170°	431.5	7.2
170°-180°	150.8	2.5
0°-30°	523.6	8.8
0°-40°	813.2	13.6
0°-60°	1288.6	21.6
0°-90°	1519.9	25.4
90°-120°	950.3	15.9
90°-150°	3221.6	53.9
90°-180°	4454.0	74.6
0°-180°	5974.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	736	736	736	736	736	
5°	736	732	724	729	728	70
15°	700	692	670	658	651	197
25°	635	613	570	544	533	292
35°	547	512	455	414	398	342
45°	448	402	333	287	270	345
55°	340	287	216	178	164	304
65°	230	176	116	94	91	228
75°	122	77	53	49	48	130
85°	29	15	13	13	13	34
90°	1	18	47	45	46	5
95°	70	83	86	86	83	80
105°	289	293	296	298	298	305
115°	538	545	543	542	538	532
125°	782	794	790	787	785	699
135°	1012	1026	1030	1028	1024	782
145°	1229	1238	1246	1247	1242	767
155°	1405	1409	1413	1419	1416	646
165°	1528	1527	1527	1536	1530	431
175°	1590	1586	1584	1592	1585	151
180°	1593	1593	1593	1593	1593	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8
2.5°	738.5	738.0	737.4	736.7	736.2	735.2	734.0	732.6	731.3	730.0	731.2
5°	735.8	735.1	734.4	733.7	732.9	731.6	729.7	727.7	725.9	723.9	725.2
7.5°	728.3	727.4	726.5	725.5	724.6	723.0	720.8	718.5	716.3	714.1	714.4
10°	721.9	720.9	719.8	718.8	717.7	715.8	712.8	709.8	706.9	703.9	703.5
12.5°	713.9	712.7	711.3	710.1	708.8	706.3	702.5	698.7	694.9	691.2	690.4
15°	699.9	698.3	696.7	695.0	693.4	690.1	685.0	680.0	675.0	669.9	667.2
17.5°	682.8	680.3	677.8	675.3	672.8	668.3	661.9	655.4	649.0	642.5	639.2
20°	669.9	667.0	664.1	661.1	658.1	652.9	645.5	638.1	630.7	623.3	619.6
22.5°	656.1	652.8	649.4	646.1	642.8	637.0	628.7	620.3	612.0	603.6	598.9
25°	635.3	630.6	625.9	621.1	616.4	609.1	599.3	589.6	579.8	570.1	564.0
27.5°	610.3	605.1	599.9	594.9	589.7	581.6	570.6	559.5	548.6	537.5	530.5
30°	592.7	587.1	581.5	575.9	570.2	561.5	549.7	537.8	525.9	514.2	506.6
32.5°	575.7	569.1	562.5	556.0	549.4	540.0	528.0	515.9	503.8	491.8	483.1
35°	547.4	539.8	532.4	524.8	517.2	506.9	493.9	480.9	467.9	454.9	445.5
37.5°	519.2	510.9	502.6	494.3	486.1	474.9	461.1	447.2	433.3	419.5	409.1
40°	499.4	490.6	481.7	472.9	464.0	452.4	438.0	423.7	409.3	394.9	384.4
42.5°	479.2	469.8	460.5	451.2	441.8	429.7	414.9	400.0	385.2	370.4	359.5
45°	447.5	437.7	427.7	417.8	407.9	395.1	379.6	364.1	348.5	333.0	322.4
47.5°	416.6	406.1	395.7	385.1	374.6	361.3	345.3	329.2	313.2	297.1	286.7
50°	394.2	383.7	373.3	362.7	352.2	338.9	322.5	306.3	290.0	273.7	263.5
52.5°	372.4	361.4	350.4	339.5	328.5	315.0	299.1	283.2	267.2	251.4	241.5
55°	340.3	328.8	317.2	305.7	294.2	280.4	264.4	248.4	232.4	216.4	207.6
57.5°	307.4	295.6	283.7	271.9	260.0	246.5	231.1	215.7	200.4	185.0	176.8
60°	285.0	273.2	261.4	249.5	237.6	224.2	208.9	193.7	178.4	163.2	155.6
62.5°	263.1	251.4	239.5	227.7	215.8	202.7	188.2	173.6	159.1	144.5	137.3
65°	229.8	217.8	205.8	193.8	181.8	169.2	155.9	142.5	129.2	115.8	110.8
67.5°	197.5	185.7	173.7	161.8	149.9	137.9	126.0	114.0	102.0	90.1	87.7
70°	175.1	163.6	152.0	140.5	128.9	118.1	107.9	97.6	87.5	77.2	75.8
72.5°	153.8	142.8	131.7	120.6	109.6	100.0	91.8	83.6	75.3	67.1	65.9
75°	122.5	112.2	101.8	91.5	81.1	73.4	68.4	63.3	58.3	53.2	52.3
77.5°	91.8	82.7	73.6	64.5	55.5	49.7	47.3	44.9	42.4	39.9	39.3
80°	72.6	65.0	57.5	49.9	42.4	37.9	36.4	35.0	33.4	31.9	31.4
82.5°	55.0	49.1	43.2	37.4	31.5	28.0	27.0	25.9	25.0	24.0	23.6
85°	28.6	25.5	22.4	19.4	16.2	14.4	14.0	13.6	13.1	12.7	12.7
87.5°	8.8	8.6	8.3	8.1	7.8	8.4	9.7	11.1	12.4	13.6	13.5
90°	1.3	4.9	8.5	12.1	15.7	20.8	27.4	33.9	40.5	47.1	46.5
92.5°	23.9	26.6	29.2	31.8	34.4	36.6	38.1	39.7	41.2	42.7	42.9
95°	69.9	72.9	75.9	78.8	81.9	83.6	84.3	84.8	85.4	86.1	86.1
97.5°	127.7	130.4	133.0	135.6	138.2	140.1	141.2	142.4	143.5	144.6	144.6
100°	170.8	173.1	175.5	177.9	180.3	181.9	182.8	183.7	184.6	185.5	185.5
102.5°	215.9	217.8	219.7	221.6	223.6	225.1	226.2	227.3	228.5	229.6	229.9
105°	289.0	289.9	290.8	291.7	292.6	293.4	294.0	294.5	295.2	295.8	296.3
107.5°	362.7	364.0	365.3	366.7	367.9	368.6	368.6	368.6	368.6	368.6	368.8
110°	410.0	411.8	413.6	415.4	417.1	418.1	418.1	418.1	418.1	418.1	418.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	461.6	463.4	465.2	467.0	468.8	469.6	469.3	469.1	468.9	468.6	467.9
115°	537.7	539.5	541.3	543.1	544.9	545.5	544.9	544.3	543.7	543.1	542.8
117.5°	613.6	615.9	618.3	620.7	623.1	623.5	621.8	620.1	618.4	616.8	616.1
120°	664.1	666.5	668.9	671.3	673.7	673.7	671.3	668.9	666.5	664.1	664.1
122.5°	710.3	713.2	716.0	718.9	721.8	722.4	720.8	719.1	717.4	715.7	715.0
125°	782.4	785.1	787.7	790.4	793.2	794.1	793.2	792.3	791.4	790.4	789.5
127.5°	852.6	856.0	859.3	862.8	866.2	867.4	866.3	865.2	864.2	863.1	861.9
130°	896.6	900.5	904.5	908.3	912.2	913.8	913.2	912.7	912.0	911.4	910.9
132.5°	946.1	949.3	952.4	955.6	958.8	960.5	960.6	960.6	960.8	960.9	959.6
135°	1012.3	1015.6	1018.9	1022.1	1025.4	1027.3	1028.0	1028.6	1029.1	1029.7	1029.5
137.5°	1081.9	1084.6	1087.3	1089.9	1092.6	1094.4	1095.2	1095.9	1096.7	1097.5	1097.3
140°	1123.8	1126.5	1129.3	1131.9	1134.6	1136.7	1138.2	1139.7	1141.2	1142.6	1142.6
142.5°	1166.9	1169.6	1172.2	1174.9	1177.6	1179.5	1180.4	1181.5	1182.5	1183.6	1183.7
145°	1228.7	1230.8	1232.9	1234.9	1237.1	1239.0	1240.8	1242.6	1244.4	1246.2	1246.4
147.5°	1283.8	1286.3	1288.8	1291.4	1293.9	1295.7	1296.9	1298.1	1299.3	1300.5	1301.2
150°	1321.4	1323.2	1325.1	1326.9	1328.6	1330.1	1331.3	1332.5	1333.7	1334.9	1335.8
152.5°	1354.8	1356.6	1358.3	1360.1	1362.0	1363.6	1365.0	1366.5	1367.9	1369.3	1370.5
155°	1404.8	1405.7	1406.6	1407.5	1408.4	1409.3	1410.2	1411.0	1411.9	1412.8	1414.3
157.5°	1447.5	1448.1	1448.8	1449.4	1449.9	1450.5	1451.1	1451.6	1452.2	1452.7	1454.6
160°	1473.4	1474.0	1474.5	1475.2	1475.8	1476.2	1476.5	1476.8	1477.1	1477.4	1479.2
162.5°	1497.0	1497.2	1497.3	1497.4	1497.5	1497.7	1498.0	1498.3	1498.6	1498.9	1500.9
165°	1528.5	1528.2	1527.9	1527.6	1527.3	1527.1	1527.1	1527.1	1527.1	1527.1	1529.2
167.5°	1554.8	1553.9	1553.0	1552.1	1551.2	1550.8	1550.7	1550.7	1550.6	1550.5	1552.6
170°	1568.8	1567.9	1567.0	1566.1	1565.2	1564.6	1564.3	1564.1	1563.7	1563.4	1565.5
172.5°	1578.5	1577.6	1576.7	1575.8	1574.9	1574.3	1574.0	1573.7	1573.4	1573.1	1575.2
175°	1590.3	1589.4	1588.5	1587.6	1586.7	1586.0	1585.4	1584.7	1584.2	1583.6	1585.7
177.5°	1595.2	1594.5	1593.8	1593.0	1592.3	1591.7	1591.2	1590.7	1590.3	1589.7	1591.2
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	735.8	735.8	735.8	735.8	735.8	735.8	735.8	735.8
2.5°	732.4	733.6	734.8	735.2	735.0	734.8	734.5	734.3
5°	726.6	727.9	729.2	729.7	729.2	728.8	728.3	727.9
7.5°	714.8	715.2	715.6	715.4	714.6	713.8	713.1	712.3
10°	703.0	702.6	702.1	701.5	700.6	699.7	698.8	697.9
12.5°	689.6	688.8	688.0	686.8	685.3	683.9	682.3	680.9
15°	664.3	661.6	658.7	656.6	655.1	653.6	652.1	650.7
17.5°	635.8	632.5	629.1	626.2	623.7	621.1	618.6	616.0
20°	615.9	612.2	608.5	605.0	601.8	598.5	595.3	592.0
22.5°	594.1	589.3	584.6	580.9	578.5	576.1	573.7	571.2
25°	557.9	551.9	545.8	541.6	539.4	537.2	535.0	532.8
27.5°	523.4	516.3	509.3	504.0	500.4	497.0	493.4	489.9
30°	499.0	491.5	483.9	478.1	474.1	470.2	466.2	462.2
32.5°	474.5	465.9	457.3	451.1	447.4	443.6	439.8	436.0
35°	436.2	426.9	417.6	411.3	408.0	404.7	401.5	398.2
37.5°	398.9	388.6	378.4	371.3	367.7	363.9	360.2	356.4
40°	373.9	363.4	352.8	345.7	341.9	338.0	334.1	330.3
42.5°	348.7	337.8	327.0	319.7	315.9	312.2	308.4	304.7
45°	311.9	301.5	291.0	283.9	280.4	276.8	273.2	269.7
47.5°	276.3	265.8	255.4	248.5	245.3	242.1	238.8	235.6
50°	253.2	243.1	232.8	226.2	223.1	220.0	216.9	213.7
52.5°	231.6	221.8	211.9	205.5	202.7	199.8	196.9	194.0
55°	198.7	189.8	180.9	175.0	172.3	169.4	166.7	163.8
57.5°	168.7	160.6	152.5	147.2	144.8	142.5	140.1	137.7
60°	148.0	140.5	133.0	128.0	125.6	123.2	120.9	118.5
62.5°	130.1	123.0	115.7	111.5	110.0	108.6	107.2	105.8
65°	105.8	100.8	95.8	93.0	92.6	92.1	91.7	91.2
67.5°	85.4	83.1	80.8	79.5	78.9	78.5	78.0	77.5
70°	74.3	72.9	71.3	70.3	69.7	69.1	68.5	67.9
72.5°	64.6	63.4	62.2	61.3	61.0	60.6	60.3	59.9
75°	51.2	50.2	49.1	48.5	48.4	48.2	48.1	48.0
77.5°	38.8	38.2	37.6	37.2	36.9	36.7	36.5	36.2
80°	30.8	30.2	29.6	29.3	29.3	29.3	29.3	29.3
82.5°	23.3	22.9	22.6	22.4	22.4	22.4	22.4	22.4
85°	12.7	12.7	12.7	12.7	12.7	12.7	12.7	12.7
87.5°	13.2	12.9	12.8	12.7	12.7	12.8	12.8	12.8
90°	45.8	45.3	44.7	44.5	44.9	45.1	45.4	45.7
92.5°	43.0	43.1	43.2	43.3	43.3	43.4	43.5	43.5
95°	86.1	86.1	86.1	85.7	85.2	84.5	83.9	83.4
97.5°	144.6	144.6	144.6	144.6	144.5	144.5	144.5	144.4
100°	185.5	185.5	185.5	185.4	185.0	184.8	184.5	184.1
102.5°	230.1	230.3	230.6	230.5	230.2	230.0	229.6	229.3
105°	296.9	297.6	298.1	298.5	298.5	298.5	298.5	298.5
107.5°	369.1	369.3	369.5	369.0	367.7	366.2	364.9	363.5
110°	418.1	418.1	418.1	417.6	416.7	415.8	414.9	414.0





TEST NUMBER: P331804-940

CATALOG NUMBER: S122RDIW-S485D1440U940-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	467.2	466.5	465.7	465.0	464.4	463.8	463.1	462.4
115°	542.5	542.2	541.9	541.3	540.4	539.5	538.6	537.7
117.5°	615.4	614.7	613.9	613.1	612.2	611.3	610.4	609.5
120°	664.1	664.1	664.1	663.6	662.7	661.8	660.9	660.0
122.5°	714.3	713.5	712.8	712.1	711.5	710.9	710.2	709.5
125°	788.6	787.7	786.8	786.3	786.0	785.7	785.4	785.1
127.5°	860.9	859.8	858.7	857.7	856.8	855.8	854.9	853.9
130°	910.3	909.6	909.0	908.1	907.0	905.8	904.6	903.4
132.5°	958.3	957.0	955.6	954.5	953.6	952.6	951.6	950.7
135°	1029.1	1028.9	1028.6	1028.0	1027.1	1026.2	1025.3	1024.4
137.5°	1097.0	1096.8	1096.5	1095.8	1094.7	1093.4	1092.3	1091.0
140°	1142.6	1142.6	1142.6	1142.1	1140.9	1139.7	1138.4	1137.3
142.5°	1184.0	1184.3	1184.5	1184.0	1182.9	1181.6	1180.4	1179.2
145°	1246.8	1247.1	1247.3	1246.9	1245.7	1244.6	1243.3	1242.2
147.5°	1301.8	1302.4	1303.1	1302.9	1301.7	1300.6	1299.5	1298.3
150°	1336.7	1337.6	1338.5	1338.5	1337.6	1336.7	1335.8	1334.9
152.5°	1371.5	1372.7	1373.9	1373.9	1372.7	1371.5	1370.5	1369.3
155°	1415.9	1417.4	1418.8	1419.2	1418.3	1417.4	1416.5	1415.6
157.5°	1456.7	1458.7	1460.8	1461.1	1459.6	1458.2	1456.8	1455.4
160°	1481.0	1482.7	1484.5	1484.9	1483.6	1482.5	1481.3	1480.1
162.5°	1503.0	1505.0	1507.0	1507.3	1505.9	1504.5	1503.1	1501.6
165°	1531.3	1533.4	1535.5	1535.8	1534.3	1532.9	1531.3	1529.8
167.5°	1554.7	1556.8	1558.9	1559.2	1557.6	1556.0	1554.5	1552.9
170°	1567.6	1569.7	1571.8	1571.9	1570.1	1568.3	1566.6	1564.8
172.5°	1577.3	1579.4	1581.4	1581.6	1579.8	1578.1	1576.3	1574.5
175°	1587.8	1589.8	1592.0	1592.1	1590.3	1588.5	1586.7	1584.9
177.5°	1592.7	1594.1	1595.5	1595.5	1594.1	1592.7	1591.2	1589.7
180°	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0	1593.0

(END OF REPORT)