

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: P331799-940

Luminaire Tested: **S122RDIW-S485D1240U940-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331799-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122RDIW-S485D1240U940-4F0-1E-UDD-F
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 1240 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5935.0 lumens
Efficiency: N/A
Efficacy: 110.3 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

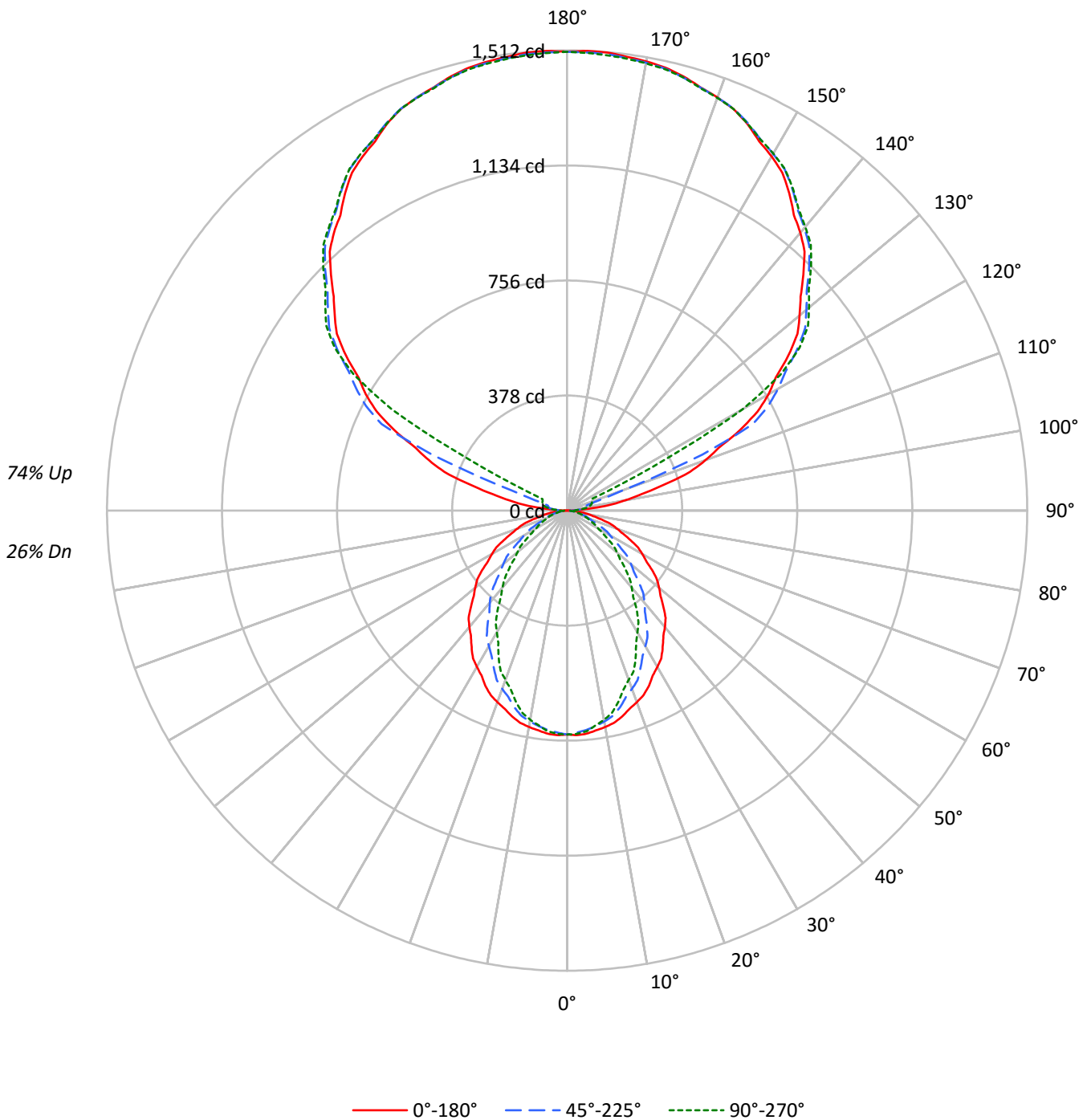
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	101	101	101	101	90	90	90	90	70	70	70	51	51	51	34	34	34	26				
1	93	88	85	82	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	69	61	55	51	48	44	41	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	41	58	48	42	37	38	33	30	28	25	23	19	18	16	12				
6	60	48	41	35	53	43	37	32	34	30	26	26	23	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	12	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	4.5
30°-40°	289.6	4.9
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°	22.0	0.4
90°-100°	50.3	0.8
100°-110°	184.4	3.1
110°-120°	492.9	8.3
120°-130°	813.7	13.7
130°-140°	865.3	14.6
140°-150°	804.3	13.6
150°-160°	646.7	10.9
160°-170°	416.7	7.0
170°-180°	143.4	2.4
0°-30°	523.6	8.8
0°-40°	813.2	13.7
0°-60°	1288.6	21.7
0°-90°	1517.3	25.6
90°-120°	727.6	12.3
90°-150°	3210.9	54.1
90°-180°	4418.0	74.4
0°-180°	5935.0	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	13	22	27	29	5
95°	71	37	42	48	47	87
105°	332	346	66	78	83	354
115°	627	646	673	192	89	617
125°	887	901	922	929	933	790
135°	1097	1114	1125	1135	1133	847
145°	1273	1273	1290	1297	1293	796
155°	1402	1393	1405	1411	1403	646
165°	1477	1471	1474	1480	1474	417
175°	1511	1504	1505	1512	1502	144
180°	1507	1507	1507	1507	1507	



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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°	8.7	8.3	7.9	7.5	7.0	7.0	7.5	7.8	8.2	8.6	8.7
90°	1.1	3.7	6.4	9.1	11.8	14.1	16.0	17.9	19.9	21.8	23.0
92.5°	22.0	21.8	21.6	21.3	21.0	21.4	22.4	23.4	24.3	25.3	25.9
95°	70.9	62.9	54.9	46.9	38.9	35.8	37.5	39.1	40.8	42.5	43.8
97.5°	140.7	118.2	95.6	73.1	50.6	41.2	45.1	49.0	53.1	57.0	57.9
100°	193.1	159.9	126.6	93.5	60.3	45.7	49.8	53.9	58.1	62.2	64.1
102.5°	250.7	243.6	236.6	229.6	222.6	201.8	167.3	132.9	98.4	63.9	66.4
105°	331.6	338.9	346.2	353.4	360.7	331.3	265.1	198.9	132.7	66.5	69.2
107.5°	423.9	429.7	435.6	441.5	447.4	410.6	331.3	251.9	172.5	93.2	90.4
110°	483.2	488.3	493.4	498.5	503.5	471.1	401.1	331.0	260.9	190.9	166.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	539.0	543.6	548.0	552.6	557.1	550.7	533.4	516.1	498.8	481.4	393.1
115°	627.2	631.3	635.4	639.5	643.7	648.8	654.9	660.9	667.0	673.1	560.8
117.5°	706.0	710.6	715.2	719.8	724.4	728.8	732.9	737.1	741.3	745.5	718.3
120°	763.6	767.2	770.8	774.5	778.1	782.1	786.5	790.9	795.2	799.5	802.5
122.5°	812.4	816.3	820.1	823.9	827.8	832.1	836.8	841.5	846.3	851.0	852.7
125°	886.8	889.9	893.1	896.3	899.4	903.3	907.9	912.5	917.1	921.8	923.5
127.5°	954.2	957.7	961.2	964.7	968.2	971.7	975.1	978.6	982.0	985.4	987.9
130°	997.0	1000.9	1004.8	1008.6	1012.5	1015.7	1018.4	1021.1	1023.8	1026.4	1029.1
132.5°	1040.6	1043.9	1047.2	1050.5	1053.8	1056.8	1059.4	1062.1	1064.8	1067.5	1069.7
135°	1097.3	1101.2	1105.1	1108.9	1112.9	1115.9	1118.0	1120.3	1122.4	1124.6	1127.0
137.5°	1154.7	1157.4	1160.1	1162.9	1165.6	1168.1	1170.6	1173.1	1175.5	1178.0	1180.4
140°	1192.2	1194.2	1196.1	1198.0	1200.0	1202.3	1205.0	1207.6	1210.3	1213.0	1215.1
142.5°	1223.7	1225.4	1227.2	1228.9	1230.7	1233.1	1236.1	1239.1	1242.2	1245.3	1247.2
145°	1272.9	1272.7	1272.5	1272.2	1272.0	1273.9	1278.1	1282.2	1286.3	1290.4	1292.1
147.5°	1315.9	1315.0	1314.1	1313.1	1312.2	1313.8	1317.9	1322.0	1326.1	1330.1	1331.4
150°	1343.9	1342.2	1340.5	1338.7	1337.0	1338.2	1342.0	1345.9	1349.8	1353.7	1355.1
152.5°	1367.4	1365.6	1363.6	1361.7	1359.9	1360.8	1364.4	1368.2	1371.8	1375.5	1377.0
155°	1401.7	1399.5	1397.3	1395.1	1392.9	1393.3	1396.2	1399.1	1402.0	1405.0	1406.4
157.5°	1428.5	1426.6	1424.8	1423.0	1421.1	1421.2	1423.3	1425.3	1427.4	1429.4	1431.0
160°	1444.2	1442.8	1441.3	1439.8	1438.4	1438.4	1439.8	1441.3	1442.8	1444.2	1445.6
162.5°	1458.2	1456.7	1455.3	1453.8	1452.3	1452.2	1453.5	1454.7	1456.1	1457.3	1458.9
165°	1476.9	1475.5	1474.0	1472.6	1471.1	1470.8	1471.5	1472.2	1472.9	1473.6	1475.3
167.5°	1490.9	1489.4	1488.0	1486.6	1485.1	1484.7	1485.4	1486.0	1486.7	1487.4	1489.1
170°	1498.8	1497.3	1495.8	1494.4	1492.9	1492.5	1492.9	1493.4	1493.9	1494.4	1496.1
172.5°	1504.0	1502.5	1501.1	1499.6	1498.2	1497.7	1498.2	1498.6	1499.1	1499.6	1501.3
175°	1510.7	1509.0	1507.3	1505.7	1504.0	1503.3	1503.9	1504.3	1504.9	1505.3	1507.0
177.5°	1511.8	1510.5	1509.1	1507.8	1506.4	1505.8	1506.0	1506.2	1506.4	1506.6	1508.0
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4



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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°	8.9	9.0	9.1	9.3	9.4	9.5	9.5	9.6
90°	24.3	25.4	26.7	27.6	28.0	28.4	29.0	29.4
92.5°	26.6	27.2	27.8	28.3	28.5	28.9	29.2	29.4
95°	44.9	46.2	47.3	47.9	47.6	47.3	47.2	46.9
97.5°	58.9	59.8	60.8	61.4	61.7	62.1	62.3	62.6
100°	66.1	67.9	69.9	71.2	71.6	72.1	72.6	73.1
102.5°	68.9	71.5	74.0	75.6	76.2	77.0	77.7	78.3
105°	71.9	74.5	77.2	79.0	80.0	81.0	81.9	82.9
107.5°	87.7	85.0	82.3	81.4	82.4	83.4	84.4	85.3
110°	142.4	118.2	93.9	82.3	83.3	84.3	85.2	86.1



TEST NUMBER: P331799-940

CATALOG NUMBER: S122RDIW-S485D1240U940-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	304.6	216.2	127.8	83.9	84.7	85.5	86.2	87.0
115°	448.5	336.4	224.1	159.3	141.8	124.4	106.9	89.4
117.5°	691.2	664.0	636.9	594.6	537.3	479.9	422.6	365.2
120°	805.4	808.2	811.2	796.3	763.6	730.8	698.1	665.4
122.5°	854.5	856.3	858.0	855.7	849.4	843.0	836.7	830.3
125°	925.1	926.8	928.5	929.7	930.4	931.2	931.9	932.6
127.5°	990.3	992.8	995.3	996.7	996.8	996.9	997.0	997.2
130°	1031.8	1034.5	1037.1	1038.3	1038.0	1037.9	1037.6	1037.3
132.5°	1072.0	1074.2	1076.6	1077.5	1077.4	1077.1	1076.8	1076.7
135°	1129.4	1131.8	1134.3	1135.2	1134.8	1134.3	1133.8	1133.4
137.5°	1182.8	1185.2	1187.6	1188.3	1187.5	1186.7	1185.9	1185.0
140°	1217.4	1219.5	1221.7	1222.2	1220.9	1219.8	1218.5	1217.4
142.5°	1249.2	1251.2	1253.2	1253.6	1252.4	1251.2	1249.9	1248.8
145°	1293.8	1295.5	1297.2	1297.4	1296.2	1295.0	1293.8	1292.6
147.5°	1332.7	1333.9	1335.2	1335.2	1334.3	1333.2	1332.2	1331.2
150°	1356.6	1358.1	1359.5	1359.6	1358.4	1357.2	1355.9	1354.8
152.5°	1378.4	1379.8	1381.3	1381.3	1379.7	1378.0	1376.4	1374.8
155°	1407.8	1409.3	1410.8	1410.5	1408.5	1406.7	1404.7	1402.8
157.5°	1432.7	1434.3	1436.0	1435.8	1434.0	1432.1	1430.2	1428.3
160°	1447.2	1448.6	1450.0	1449.9	1448.2	1446.5	1444.8	1443.1
162.5°	1460.6	1462.2	1463.9	1463.7	1461.6	1459.5	1457.4	1455.4
165°	1477.0	1478.7	1480.4	1480.4	1478.7	1477.0	1475.3	1473.6
167.5°	1490.8	1492.5	1494.2	1494.0	1491.7	1489.6	1487.4	1485.2
170°	1497.8	1499.5	1501.2	1500.9	1498.8	1496.6	1494.4	1492.2
172.5°	1503.0	1504.7	1506.4	1506.2	1504.0	1501.8	1499.6	1497.4
175°	1508.7	1510.4	1512.1	1511.7	1509.3	1506.9	1504.4	1502.0
177.5°	1509.3	1510.6	1512.1	1511.8	1510.1	1508.3	1506.6	1504.9
180°	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4	1507.4

(END OF REPORT)