

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: P333049-935

Luminaire Tested: **S124RDIW-S575D1340U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333049-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-6,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124RDIW-S575D1340U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1340 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6644.6 lumens  
Efficiency: N/A  
Efficacy: 123.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

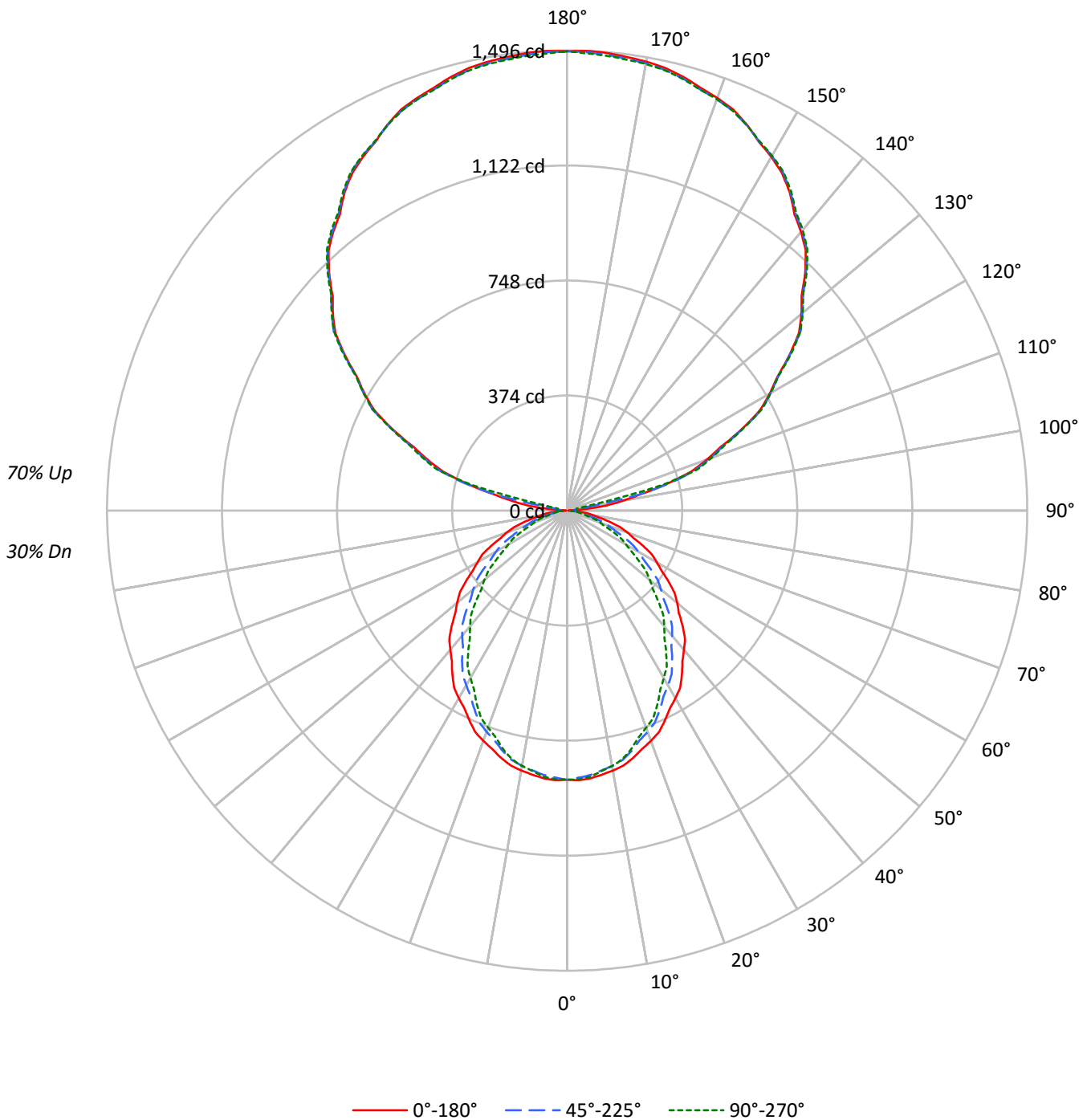
Input Watts (W): 53.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	102	102	102	102	92	92	92	92	72	72	72	55	55	55	38	38	38
1	94	89	86	82	84	80	77	75	64	62	60	48	47	46	34	33	33
2	85	78	72	67	76	70	66	61	56	53	50	42	40	38	30	29	28
3	78	69	62	56	70	62	56	51	49	45	42	38	35	33	27	25	24
4	71	61	53	48	64	55	49	44	44	39	36	34	30	28	24	22	20
5	65	54	46	41	58	49	42	37	39	34	31	30	27	24	22	20	18
6	60	49	41	35	54	44	37	32	35	30	27	27	24	21	20	17	16
7	56	44	36	31	50	40	33	28	32	27	23	25	21	19	18	16	14
8	51	40	32	27	46	36	29	25	29	24	21	23	19	17	16	14	13
9	48	36	29	24	43	33	26	22	27	22	19	21	17	15	15	13	11
10	45	33	26	21	40	30	24	20	24	20	17	19	16	13	14	12	10

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

	0°	45°	90°
0°	7064	7064	7064
5°	7080	6994	7037
10°	7035	6909	6909
15°	6955	6764	6714
20°	6844	6574	6453
25°	6702	6350	6188
30°	6564	6114	5858
35°	6412	5870	5527
40°	6227	5592	5168
45°	6058	5316	4804
50°	5865	4999	4417
55°	5658	4669	3997
60°	5430	4306	3570
65°	5223	3851	3148
70°	4919	3354	2672
75°	4535	2779	2174
80°	3956	2115	1994
85°	3353	1927	1806



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.2	1.2
10°-20°	229.2	3.4
20°-30°	331.0	5.0
30°-40°	375.2	5.6
40°-50°	362.3	5.5
50°-60°	301.3	4.5
60°-70°	208.0	3.1
70°-80°	105.4	1.6
80°-90°	31.4	0.5
90°-100°	51.1	0.8
100°-110°	325.6	4.9
110°-120°	622.9	9.4
120°-130°	790.7	11.9
130°-140°	846.0	12.7
140°-150°	791.1	11.9
150°-160°	638.0	9.6
160°-170°	411.5	6.2
170°-180°	141.8	2.1
0°-30°	642.4	9.7
0°-40°	1017.6	15.3
0°-60°	1681.1	25.3
0°-90°	2025.9	30.5
90°-120°	999.5	15.0
90°-150°	3427.4	51.6
90°-180°	4619.0	69.5
0°-180°	6644.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	874	871	863	869	868	83
15°	832	825	809	808	803	234
25°	752	740	713	702	695	347
35°	651	628	596	573	561	406
45°	531	505	466	434	421	409
55°	402	374	332	298	284	359
65°	273	244	202	174	165	270
75°	145	120	89	74	70	154
85°	36	23	21	20	20	41
90°	3	15	24	31	34	5
95°	61	26	24	31	32	79
105°	336	343	348	356	318	352
115°	628	631	630	632	632	617
125°	882	886	884	888	889	787
135°	1094	1094	1098	1100	1102	843
145°	1262	1265	1265	1266	1269	788
155°	1384	1385	1382	1385	1383	638
165°	1460	1454	1454	1462	1453	412
175°	1493	1487	1488	1496	1484	142
180°	1493	1493	1493	1493	1493	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	877.2	876.7	876.2	875.7	875.3	874.3	873.1	871.8	870.4	869.1	870.4
5°	873.7	873.1	872.5	871.8	871.3	870.1	868.3	866.5	864.7	863.0	864.4
7.5°	865.7	865.1	864.5	863.9	863.2	861.8	859.5	857.1	854.8	852.5	853.4
10°	858.2	857.6	856.8	856.0	855.3	853.6	850.9	848.2	845.5	842.8	843.4
12.5°	848.6	847.7	846.9	846.0	845.2	843.2	840.0	836.8	833.7	830.5	830.9
15°	832.2	830.8	829.5	828.1	826.7	824.2	820.5	816.8	813.0	809.3	809.1
17.5°	812.2	810.2	808.3	806.3	804.4	801.2	796.8	792.3	787.8	783.3	782.6
20°	796.6	794.7	792.7	790.8	788.8	785.4	780.3	775.2	770.2	765.2	764.0
22.5°	779.5	777.3	775.2	772.9	770.8	767.0	761.6	756.1	750.7	745.3	743.5
25°	752.4	749.8	747.0	744.3	741.7	737.3	731.2	725.0	718.9	712.9	710.3
27.5°	724.0	720.7	717.3	713.9	710.5	705.6	699.0	692.6	686.0	679.5	676.4
30°	704.1	700.4	696.7	693.0	689.3	683.9	676.9	669.9	662.9	655.9	652.2
32.5°	683.3	679.1	674.9	670.6	666.5	660.7	653.5	646.3	639.0	631.8	627.5
35°	650.6	645.8	641.0	636.3	631.5	625.4	617.9	610.5	603.0	595.6	590.6
37.5°	615.6	610.7	605.8	600.9	595.9	589.4	581.1	572.8	564.6	556.4	550.7
40°	590.9	586.0	581.1	576.2	571.3	564.6	556.1	547.6	539.2	530.6	524.3
42.5°	567.3	562.2	557.1	551.9	546.7	539.8	530.9	522.0	513.2	504.4	498.0
45°	530.6	525.1	519.6	514.1	508.6	501.4	492.4	483.5	474.6	465.6	458.3
47.5°	492.8	487.1	481.3	475.6	469.9	462.4	453.1	443.9	434.6	425.3	417.8
50°	467.0	461.2	455.4	449.5	443.8	436.1	426.5	417.1	407.5	398.0	390.5
52.5°	440.7	435.1	429.4	423.7	417.9	410.3	400.5	390.7	380.9	371.2	363.6
55°	402.0	396.1	390.1	384.1	378.2	370.3	360.7	351.0	341.3	331.7	323.9
57.5°	363.7	357.5	351.3	345.1	338.9	331.1	321.5	311.9	302.5	292.9	285.1
60°	336.3	330.4	324.4	318.5	312.5	304.8	295.2	285.7	276.2	266.7	258.9
62.5°	311.7	305.5	299.3	293.1	286.9	279.0	269.1	259.4	249.6	239.9	232.7
65°	273.4	267.0	260.5	254.2	247.7	239.8	230.2	220.8	211.2	201.6	195.3
67.5°	233.6	227.4	221.3	215.2	209.1	201.6	192.7	183.8	175.0	166.2	160.7
70°	208.4	202.1	195.9	189.6	183.4	176.0	167.5	159.0	150.5	142.1	137.2
72.5°	181.6	175.9	170.2	164.6	158.9	152.1	144.1	136.1	128.0	120.0	115.9
75°	145.4	139.9	134.4	128.9	123.4	117.1	110.1	103.1	96.1	89.1	85.7
77.5°	108.7	104.0	99.4	94.6	90.0	84.8	79.1	73.5	67.8	62.2	60.2
80°	85.1	80.8	76.5	72.2	67.8	63.5	59.0	54.5	50.0	45.5	45.1
82.5°	64.7	60.8	56.8	52.9	48.9	45.6	43.0	40.5	38.0	35.4	35.0
85°	36.2	33.2	30.2	27.2	24.3	22.6	22.1	21.7	21.2	20.8	20.5
87.5°	13.0	12.6	12.2	11.8	11.4	11.3	11.6	11.9	12.1	12.4	12.6
90°	3.4	6.1	8.8	11.5	14.3	16.6	18.6	20.6	22.6	24.5	26.1
92.5°	14.0	14.2	14.4	14.6	14.6	15.8	17.7	19.7	21.7	23.7	25.1
95°	61.4	53.0	44.5	36.1	27.6	23.6	23.8	24.1	24.3	24.5	26.1
97.5°	130.4	135.7	140.9	146.2	151.4	140.3	112.5	84.9	57.2	29.4	29.6
100°	183.1	187.6	192.1	196.6	201.0	186.1	151.9	117.6	83.3	49.2	44.9
102.5°	242.1	245.4	248.7	251.9	255.2	254.6	250.1	245.7	241.3	236.8	191.2
105°	336.1	337.6	339.1	340.6	342.1	343.5	344.7	345.9	347.2	348.4	350.7
107.5°	423.4	424.2	425.0	425.7	426.5	427.7	429.4	431.0	432.7	434.5	435.5
110°	482.4	483.2	484.0	484.7	485.4	486.6	488.0	489.5	491.0	492.5	493.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	539.6	541.0	542.3	543.6	545.0	546.0	546.7	547.4	548.1	548.8	548.7
115°	627.6	628.4	629.1	629.8	630.6	630.9	630.6	630.3	630.1	629.8	630.3
117.5°	706.9	707.9	708.9	709.9	710.8	711.6	712.2	712.7	713.3	713.9	713.8
120°	760.5	761.5	762.5	763.5	764.5	764.8	764.7	764.4	764.1	763.9	764.4
122.5°	810.5	811.1	811.8	812.4	813.0	813.4	813.7	814.1	814.4	814.8	815.1
125°	882.3	883.2	884.2	885.2	886.2	886.5	886.0	885.5	884.9	884.5	885.2
127.5°	950.1	950.4	950.6	950.9	951.1	951.8	953.0	954.1	955.3	956.4	956.2
130°	993.9	994.2	994.5	994.6	994.9	995.4	996.2	996.9	997.6	998.4	998.7
132.5°	1034.1	1034.6	1035.0	1035.4	1035.9	1036.6	1037.6	1038.5	1039.4	1040.3	1040.6
135°	1094.4	1094.2	1093.9	1093.7	1093.5	1093.8	1094.8	1095.8	1096.8	1097.8	1098.3
137.5°	1147.8	1147.9	1148.0	1148.1	1148.2	1148.8	1149.9	1151.0	1152.1	1153.1	1153.7
140°	1182.7	1183.2	1183.6	1184.1	1184.6	1185.2	1185.6	1186.1	1186.6	1187.1	1187.8
142.5°	1213.9	1214.8	1215.7	1216.6	1217.5	1218.1	1218.4	1218.7	1219.0	1219.3	1219.9
145°	1262.0	1262.7	1263.4	1264.2	1264.9	1265.3	1265.3	1265.3	1265.3	1265.3	1265.6
147.5°	1300.1	1301.5	1303.0	1304.3	1305.7	1306.3	1306.1	1305.8	1305.5	1305.3	1305.4
150°	1327.8	1328.9	1329.8	1330.8	1331.8	1332.1	1332.0	1331.7	1331.5	1331.2	1331.2
152.5°	1351.1	1351.9	1352.6	1353.4	1354.3	1354.4	1354.0	1353.5	1353.1	1352.6	1353.1
155°	1383.7	1383.9	1384.1	1384.4	1384.7	1384.4	1383.7	1382.9	1382.2	1381.5	1382.4
157.5°	1411.2	1411.0	1410.8	1410.7	1410.6	1410.1	1409.2	1408.3	1407.6	1406.7	1408.0
160°	1427.2	1426.5	1425.7	1425.0	1424.3	1423.7	1423.5	1423.2	1423.0	1422.8	1424.3
162.5°	1441.5	1440.5	1439.7	1438.7	1437.8	1437.2	1436.9	1436.7	1436.4	1436.1	1437.6
165°	1459.7	1458.4	1457.2	1455.9	1454.7	1454.1	1454.1	1454.1	1454.1	1454.1	1456.0
167.5°	1473.9	1472.7	1471.4	1470.1	1468.8	1468.0	1467.9	1467.7	1467.6	1467.4	1469.6
170°	1482.0	1480.5	1478.9	1477.5	1476.0	1475.4	1475.6	1475.8	1476.1	1476.4	1478.3
172.5°	1487.3	1485.8	1484.4	1482.8	1481.4	1480.7	1481.0	1481.3	1481.4	1481.7	1483.7
175°	1493.1	1491.6	1490.1	1488.7	1487.1	1486.5	1486.8	1487.0	1487.3	1487.5	1489.8
177.5°	1495.8	1494.4	1493.0	1491.6	1490.2	1489.7	1490.1	1490.6	1490.9	1491.3	1492.9
180°	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	875.0	875.0	875.0	875.0	875.0	875.0	875.0	875.0
2.5°	871.8	873.1	874.3	874.9	874.9	874.7	874.6	874.5
5°	865.9	867.5	868.9	869.5	869.2	868.9	868.6	868.3
7.5°	854.4	855.3	856.4	856.5	856.1	855.6	855.1	854.6
10°	844.0	844.6	845.2	845.2	844.6	844.0	843.4	842.8
12.5°	831.2	831.6	832.0	831.7	830.9	830.1	829.2	828.4
15°	808.7	808.5	808.1	807.5	806.4	805.4	804.3	803.3
17.5°	781.7	780.8	780.0	778.8	777.2	775.7	774.0	772.5
20°	762.8	761.6	760.3	758.8	756.9	754.9	753.0	751.1
22.5°	741.8	739.9	738.1	736.5	734.9	733.3	731.8	730.1
25°	707.8	705.2	702.7	700.8	699.2	697.8	696.3	694.7
27.5°	673.2	670.1	667.0	664.3	662.2	660.0	658.0	655.8
30°	648.5	644.7	641.0	638.0	635.6	633.2	630.9	628.4
32.5°	623.2	618.9	614.5	611.2	609.0	606.7	604.4	602.2
35°	585.5	580.4	575.4	571.5	568.9	566.1	563.4	560.8
37.5°	545.0	539.4	533.7	529.6	526.8	524.2	521.5	518.8
40°	518.1	511.9	505.6	501.2	498.4	495.8	493.1	490.4
42.5°	491.6	485.3	478.9	474.3	471.5	468.7	465.9	463.1
45°	451.1	443.8	436.4	431.4	428.8	426.1	423.4	420.8
47.5°	410.2	402.6	395.0	389.8	386.8	383.9	381.0	378.0
50°	383.1	375.7	368.2	363.1	360.2	357.4	354.6	351.7
52.5°	356.0	348.4	341.0	335.7	332.7	329.8	326.8	323.9
55°	316.2	308.4	300.7	295.4	292.6	289.7	286.9	284.0
57.5°	277.2	269.3	261.5	256.5	254.3	252.2	250.0	247.9
60°	251.2	243.4	235.7	230.7	228.3	225.8	223.5	221.1
62.5°	225.6	218.4	211.3	206.7	204.8	202.9	201.0	199.1
65°	188.9	182.4	176.1	171.9	170.2	168.4	166.6	164.8
67.5°	155.2	149.6	144.1	140.4	138.4	136.5	134.5	132.5
70°	132.2	127.3	122.3	119.2	117.7	116.2	114.7	113.2
72.5°	111.7	107.5	103.2	100.5	99.1	97.7	96.3	95.0
75°	82.2	78.9	75.4	73.3	72.3	71.5	70.6	69.7
77.5°	58.2	56.2	54.2	53.0	52.8	52.5	52.3	52.0
80°	44.7	44.3	43.7	43.5	43.3	43.1	43.0	42.9
82.5°	34.7	34.4	34.1	33.8	33.7	33.5	33.4	33.2
85°	20.1	19.9	19.5	19.5	19.5	19.5	19.5	19.5
87.5°	12.7	12.9	13.2	13.3	13.5	13.8	13.9	14.2
90°	27.6	29.0	30.6	31.5	32.0	32.5	33.0	33.5
92.5°	26.7	28.2	29.6	30.4	30.6	30.7	30.7	30.8
95°	27.6	29.0	30.6	31.4	31.6	31.9	32.1	32.4
97.5°	29.8	30.0	30.0	30.3	30.6	30.7	31.0	31.3
100°	40.7	36.5	32.3	30.3	30.6	30.7	31.0	31.3
102.5°	145.8	100.2	54.7	31.9	32.0	32.0	32.1	32.2
105°	352.9	355.2	357.4	354.0	345.1	336.1	327.2	318.3
107.5°	436.6	437.7	438.8	439.8	440.7	441.7	442.6	443.6
110°	493.5	494.0	494.5	495.1	495.8	496.6	497.3	498.1





TEST NUMBER: P333049-935

CATALOG NUMBER: S124RDIW-S575D1340U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	548.5	548.5	548.4	548.8	549.7	550.7	551.6	552.6
115°	630.9	631.4	631.8	632.1	632.1	632.1	632.1	632.1
117.5°	713.6	713.5	713.4	713.3	713.3	713.2	713.1	712.9
120°	764.8	765.3	765.9	765.9	765.3	764.8	764.4	763.9
122.5°	815.4	815.7	816.0	815.9	815.4	814.9	814.4	813.9
125°	886.0	886.7	887.4	887.9	888.2	888.5	888.7	889.0
127.5°	956.1	956.0	955.8	955.6	955.5	955.2	955.0	954.8
130°	998.8	999.1	999.4	999.5	999.5	999.5	999.5	999.5
132.5°	1040.9	1041.1	1041.4	1041.4	1041.2	1041.0	1040.8	1040.6
135°	1098.8	1099.2	1099.8	1100.3	1100.8	1101.2	1101.7	1102.3
137.5°	1154.3	1154.8	1155.4	1155.5	1155.4	1155.3	1155.1	1154.9
140°	1188.6	1189.4	1190.1	1190.6	1190.8	1191.1	1191.4	1191.6
142.5°	1220.4	1220.9	1221.5	1221.8	1221.8	1221.8	1221.9	1221.9
145°	1265.8	1266.0	1266.3	1266.7	1267.1	1267.7	1268.2	1268.7
147.5°	1305.7	1305.9	1306.1	1306.3	1306.6	1306.8	1307.0	1307.3
150°	1331.2	1331.2	1331.2	1331.3	1331.5	1331.8	1332.1	1332.3
152.5°	1353.4	1353.8	1354.2	1354.4	1354.2	1354.0	1353.9	1353.8
155°	1383.5	1384.4	1385.4	1385.5	1384.8	1384.1	1383.3	1382.6
157.5°	1409.3	1410.6	1411.9	1411.9	1410.6	1409.3	1408.0	1406.7
160°	1425.7	1427.2	1428.7	1428.7	1427.2	1425.7	1424.3	1422.8
162.5°	1439.2	1440.6	1442.1	1442.0	1440.4	1438.6	1436.9	1435.3
165°	1458.0	1460.0	1462.0	1461.8	1459.7	1457.4	1455.2	1452.9
167.5°	1471.8	1473.9	1476.2	1476.0	1473.5	1471.0	1468.6	1466.1
170°	1480.3	1482.3	1484.3	1484.0	1481.6	1479.1	1476.6	1474.1
172.5°	1485.7	1487.7	1489.7	1489.4	1486.6	1483.9	1481.3	1478.6
175°	1492.0	1494.3	1496.5	1496.1	1493.1	1490.1	1487.1	1484.2
177.5°	1494.5	1496.1	1497.7	1497.3	1494.9	1492.5	1490.1	1487.7
180°	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1	1493.1

(END OF REPORT)