

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: P333053-935

Luminaire Tested: **S124RDIW-S575D1560U935-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333053-935  
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-S575D1560U935-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 1560 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7396.6 lumens  
Efficiency: N/A  
Efficacy: 122.1 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

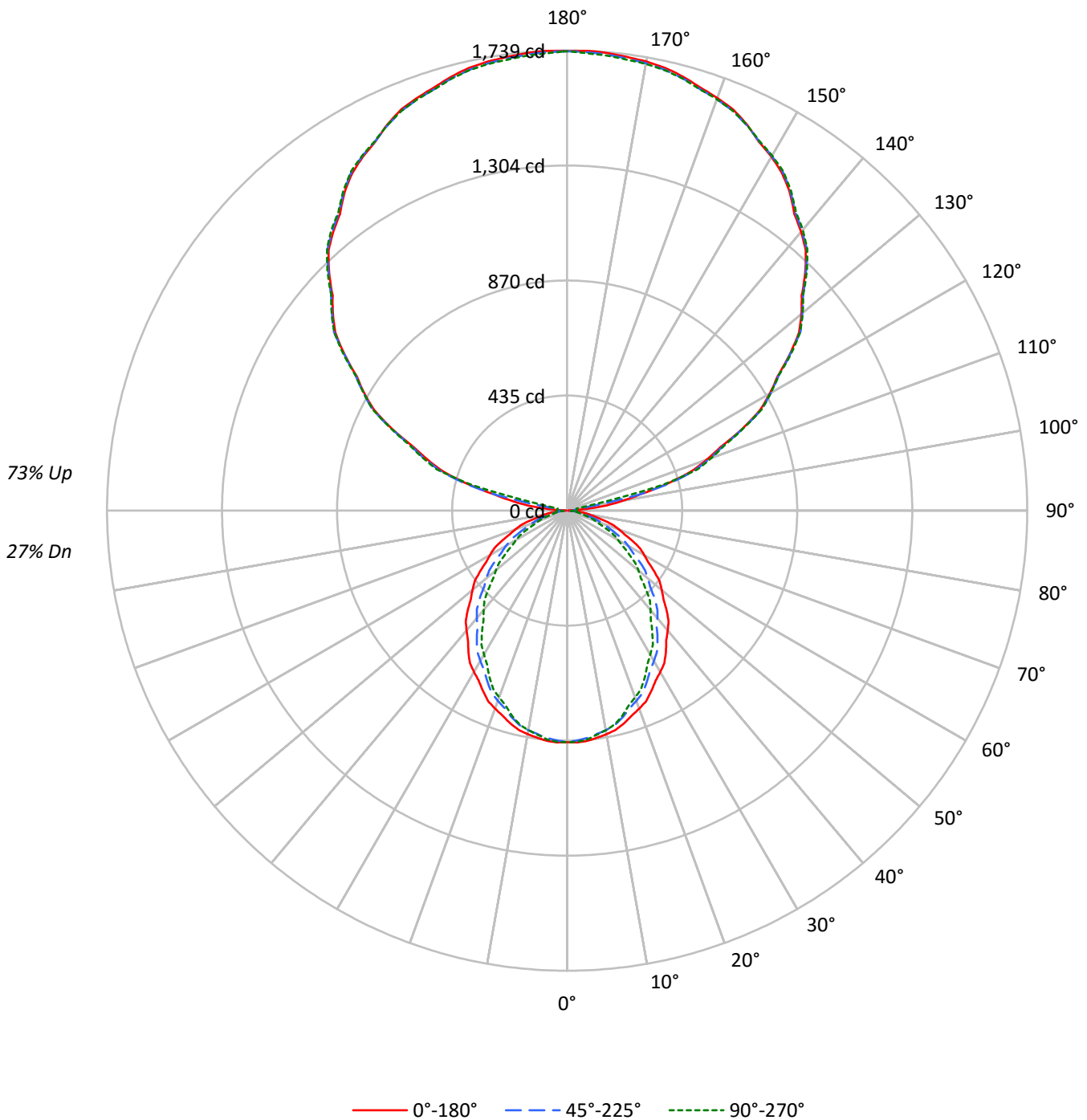
Input Watts (W): 60.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P333053-935

CATALOG NUMBER: S124RDIW-S575D1560U935-4F0-1E-UDD-F

### Luminous Intensity Polar Plot





TEST NUMBER: P333053-935

CATALOG NUMBER: S124RDIW-S575D1560U935-4F0-1E-UDD-F

**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	102	102	102	102	91	91	91	91	71	71	71	52	52	52	35	35	35	27
1	93	89	85	82	83	79	76	74	62	60	58	46	45	44	31	31	30	23
2	85	78	72	67	75	70	65	61	55	51	48	41	39	37	28	27	26	20
3	77	68	61	56	69	61	55	51	48	44	41	36	33	31	25	23	22	17
4	71	60	53	47	63	54	48	43	43	38	35	32	29	27	22	20	19	15
5	65	54	46	40	58	48	42	37	38	33	30	29	26	23	20	18	17	13
6	60	48	40	35	53	43	37	32	34	30	26	26	23	20	18	16	15	11
7	55	43	36	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10
8	51	39	32	27	45	35	29	24	28	24	20	22	18	16	15	13	12	9
9	47	36	28	24	42	32	26	22	26	21	18	20	17	14	14	12	10	8
10	44	33	26	21	39	30	23	19	24	19	16	18	15	13	13	11	10	7

**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



TEST NUMBER: P333053-935

CATALOG NUMBER: S124RDIW-S575D1560U935-4F0-1E-UDD-F

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.2	1.1
10°-20°	229.2	3.1
20°-30°	331.0	4.5
30°-40°	375.2	5.1
40°-50°	362.3	4.9
50°-60°	301.3	4.1
60°-70°	208.0	2.8
70°-80°	105.4	1.4
80°-90°	32.1	0.4
90°-100°	59.4	0.8
100°-110°	378.6	5.1
110°-120°	724.2	9.8
120°-130°	919.3	12.4
130°-140°	983.6	13.3
140°-150°	919.8	12.4
150°-160°	741.8	10.0
160°-170°	478.4	6.5
170°-180°	164.9	2.2
0°-30°	642.4	8.7
0°-40°	1017.6	13.8
0°-60°	1681.1	22.7
0°-90°	2026.7	27.4
90°-120°	1162.1	15.7
90°-150°	3984.9	53.9
90°-180°	5370.0	72.6
0°-180°	7396.6	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°	4	18	29	36	39	5
95°	71	30	29	36	38	92
105°	391	399	405	414	370	409
115°	730	733	732	735	735	718
125°	1026	1030	1028	1032	1034	915
135°	1272	1272	1276	1279	1282	980
145°	1467	1471	1471	1472	1475	916
155°	1609	1610	1606	1611	1608	741
165°	1697	1691	1691	1700	1689	479
175°	1736	1729	1730	1740	1726	165
180°	1736	1736	1736	1736	1736	



TEST NUMBER: P333053-935

CATALOG NUMBER: S124RDIW-S575D1560U935-4F0-1E-UDD-F

**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°	13.1	12.8	12.5	12.1	11.8	11.9	12.2	12.6	12.9	13.3	13.4
90°	3.9	7.1	10.2	13.4	16.6	19.4	21.6	23.9	26.3	28.6	30.3
92.5°	16.4	16.5	16.7	16.9	17.0	18.3	20.6	22.9	25.2	27.6	29.3
95°	71.4	61.6	51.8	42.0	32.2	27.4	27.7	28.0	28.2	28.6	30.3
97.5°	151.6	157.7	163.8	170.0	176.2	163.1	130.9	98.7	66.5	34.3	34.4
100°	212.9	218.2	223.3	228.5	233.7	216.4	176.6	136.7	96.9	57.2	52.3
102.5°	281.5	285.3	289.1	292.9	296.7	296.0	290.8	285.7	280.4	275.3	222.3
105°	390.8	392.5	394.3	396.1	397.8	399.3	400.8	402.3	403.6	405.1	407.7
107.5°	492.3	493.3	494.1	495.0	495.8	497.2	499.2	501.2	503.1	505.1	506.4
110°	560.9	561.8	562.7	563.5	564.4	565.7	567.4	569.1	570.8	572.6	573.2



TEST NUMBER: P333053-935

CATALOG NUMBER: S124RDIW-S575D1560U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	627.4	629.0	630.5	632.1	633.6	634.8	635.6	636.5	637.2	638.1	637.9
115°	729.7	730.6	731.4	732.3	733.1	733.5	733.1	732.9	732.6	732.3	732.9
117.5°	821.9	823.0	824.2	825.4	826.6	827.4	828.0	828.7	829.3	829.9	829.8
120°	884.2	885.4	886.6	887.7	888.8	889.2	889.0	888.7	888.4	888.1	888.7
122.5°	942.4	943.1	943.7	944.4	945.2	945.7	946.2	946.5	946.9	947.4	947.7
125°	1025.8	1026.9	1028.0	1029.2	1030.4	1030.6	1030.1	1029.5	1028.9	1028.4	1029.2
127.5°	1104.7	1105.0	1105.3	1105.5	1105.9	1106.6	1108.0	1109.3	1110.6	1112.0	1111.8
130°	1155.6	1155.9	1156.2	1156.5	1156.8	1157.4	1158.2	1159.1	1159.9	1160.8	1161.1
132.5°	1202.3	1202.8	1203.4	1203.9	1204.5	1205.2	1206.3	1207.4	1208.5	1209.6	1209.9
135°	1272.5	1272.1	1271.9	1271.6	1271.3	1271.7	1272.9	1274.0	1275.2	1276.3	1276.9
137.5°	1334.6	1334.6	1334.7	1334.9	1335.0	1335.7	1337.0	1338.3	1339.5	1340.7	1341.4
140°	1375.0	1375.6	1376.2	1376.7	1377.3	1377.9	1378.5	1379.1	1379.7	1380.2	1381.1
142.5°	1411.4	1412.4	1413.5	1414.5	1415.6	1416.3	1416.6	1416.9	1417.3	1417.6	1418.2
145°	1467.2	1468.1	1469.0	1469.8	1470.7	1471.1	1471.1	1471.1	1471.1	1471.1	1471.4
147.5°	1511.7	1513.2	1514.8	1516.5	1518.1	1518.7	1518.5	1518.2	1517.9	1517.6	1517.9
150°	1543.9	1545.0	1546.1	1547.3	1548.4	1548.9	1548.6	1548.3	1548.0	1547.7	1547.7
152.5°	1570.8	1571.8	1572.7	1573.6	1574.5	1574.8	1574.2	1573.6	1573.1	1572.6	1573.1
155°	1608.8	1609.0	1609.3	1609.6	1609.9	1609.6	1608.8	1607.9	1607.1	1606.1	1607.3
157.5°	1640.7	1640.5	1640.4	1640.2	1640.0	1639.4	1638.4	1637.4	1636.5	1635.5	1637.0
160°	1659.4	1658.5	1657.7	1656.8	1656.0	1655.4	1655.0	1654.8	1654.5	1654.2	1656.0
162.5°	1676.0	1674.9	1673.8	1672.8	1671.6	1670.9	1670.6	1670.3	1670.1	1669.7	1671.5
165°	1697.0	1695.6	1694.2	1692.7	1691.3	1690.6	1690.6	1690.6	1690.6	1690.6	1692.8
167.5°	1713.6	1712.2	1710.6	1709.2	1707.6	1706.8	1706.7	1706.5	1706.3	1706.2	1708.7
170°	1723.0	1721.3	1719.5	1717.8	1716.1	1715.4	1715.6	1716.0	1716.2	1716.5	1718.8
172.5°	1729.2	1727.5	1725.8	1724.1	1722.3	1721.6	1721.9	1722.2	1722.4	1722.8	1725.0
175°	1735.9	1734.2	1732.5	1730.8	1729.1	1728.4	1728.6	1728.9	1729.2	1729.5	1732.1
177.5°	1739.1	1737.5	1735.9	1734.2	1732.7	1732.1	1732.5	1733.0	1733.5	1733.9	1735.8
180°	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9



TEST NUMBER: P333053-935

CATALOG NUMBER: S124RDIW-S575D1560U935-4F0-1E-UDD-F

**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°	13.7	13.9	14.1	14.4	14.6	14.8	15.1	15.3
90°	32.0	33.8	35.5	36.7	37.2	37.8	38.4	38.9
92.5°	31.0	32.7	34.4	35.4	35.5	35.6	35.7	35.8
95°	32.0	33.8	35.5	36.5	36.8	37.1	37.4	37.6
97.5°	34.6	34.8	35.0	35.2	35.5	35.8	36.1	36.3
100°	47.4	42.4	37.5	35.2	35.5	35.8	36.1	36.3
102.5°	169.4	116.5	63.6	37.2	37.2	37.3	37.4	37.4
105°	410.3	412.9	415.5	411.6	401.2	390.8	380.5	370.1
107.5°	507.6	508.9	510.1	511.3	512.5	513.5	514.6	515.7
110°	573.8	574.4	574.9	575.7	576.5	577.4	578.2	579.1





TEST NUMBER: P333053-935

CATALOG NUMBER: S124RDIW-S575D1560U935-4F0-1E-UDD-F

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	637.8	637.7	637.6	638.1	639.2	640.2	641.4	642.5
115°	733.5	734.0	734.6	734.9	734.9	734.9	734.9	734.9
117.5°	829.7	829.6	829.5	829.4	829.2	829.1	829.1	828.9
120°	889.2	889.8	890.4	890.4	889.8	889.2	888.7	888.1
122.5°	948.0	948.4	948.7	948.6	948.0	947.4	946.8	946.3
125°	1030.1	1031.0	1031.8	1032.4	1032.7	1032.9	1033.3	1033.5
127.5°	1111.6	1111.5	1111.3	1111.0	1110.9	1110.6	1110.3	1110.2
130°	1161.4	1161.7	1161.9	1162.1	1162.1	1162.1	1162.1	1162.1
132.5°	1210.2	1210.5	1210.7	1210.8	1210.6	1210.3	1210.1	1209.9
135°	1277.5	1278.1	1278.7	1279.3	1279.8	1280.4	1281.0	1281.5
137.5°	1342.0	1342.6	1343.3	1343.5	1343.3	1343.2	1343.0	1342.8
140°	1382.0	1382.9	1383.7	1384.2	1384.6	1384.8	1385.1	1385.4
142.5°	1418.9	1419.5	1420.1	1420.5	1420.6	1420.6	1420.6	1420.7
145°	1471.7	1472.0	1472.2	1472.7	1473.3	1473.9	1474.5	1475.0
147.5°	1518.0	1518.3	1518.5	1518.8	1519.1	1519.3	1519.7	1519.9
150°	1547.7	1547.7	1547.7	1547.9	1548.2	1548.4	1548.8	1549.0
152.5°	1573.6	1574.0	1574.5	1574.6	1574.4	1574.3	1574.1	1573.9
155°	1608.4	1609.6	1610.8	1610.9	1610.1	1609.2	1608.3	1607.5
157.5°	1638.5	1640.0	1641.5	1641.5	1640.0	1638.5	1637.0	1635.5
160°	1657.7	1659.4	1661.1	1661.1	1659.4	1657.7	1656.0	1654.2
162.5°	1673.3	1675.0	1676.7	1676.5	1674.6	1672.7	1670.7	1668.7
165°	1695.1	1697.5	1699.8	1699.6	1697.0	1694.4	1691.9	1689.3
167.5°	1711.2	1713.7	1716.3	1716.1	1713.2	1710.4	1707.4	1704.6
170°	1721.1	1723.5	1725.8	1725.4	1722.6	1719.7	1716.8	1713.9
172.5°	1727.3	1729.7	1732.0	1731.6	1728.5	1725.4	1722.3	1719.1
175°	1734.7	1737.3	1739.9	1739.5	1735.9	1732.5	1729.1	1725.6
177.5°	1737.6	1739.5	1741.3	1740.9	1738.1	1735.3	1732.5	1729.7
180°	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9	1735.9

(END OF REPORT)