

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: P332773-927

Luminaire Tested: **S124DIW-S575D1560U927-4F0-1E-UDD-F**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332773-927
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: S124DIW-S575D1560U927-4F0-1E-UDD-F
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 1560 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6919.6 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.3
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')
CIE Type: Semi-Indirect

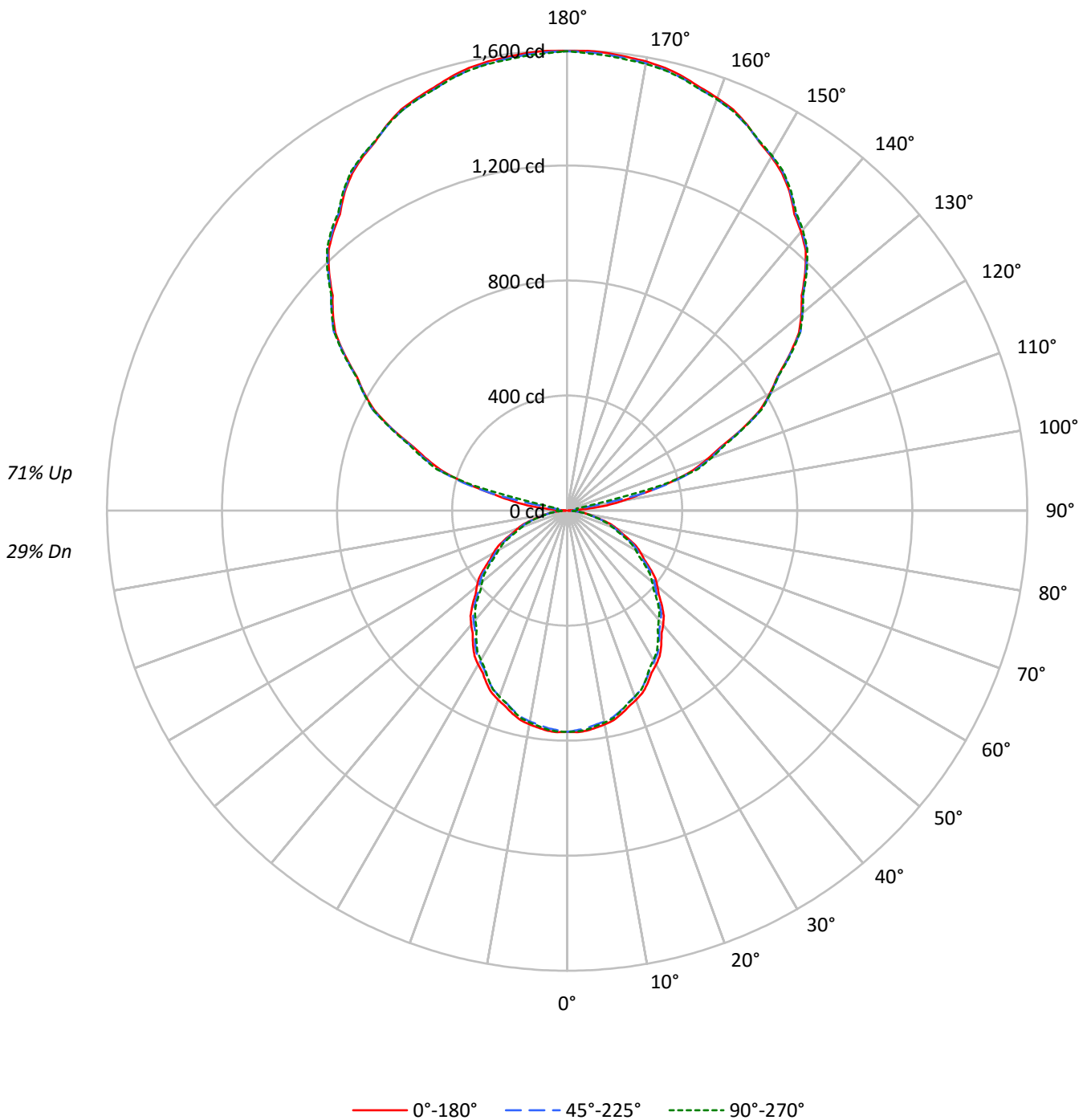
Input Watts (W): 60.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332773-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-F

Luminous Intensity Polar Plot





TEST NUMBER: P332773-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-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	53	53	53	36	36	36	29
1	93	89	85	82	83	80	76	74	62	60	58	47	45	44	32	31	31	24
2	85	77	72	67	75	70	65	60	55	51	48	41	39	37	28	27	26	20
3	77	68	61	55	69	61	55	50	48	44	40	36	33	31	25	23	22	17
4	70	60	52	47	63	54	48	43	43	38	34	32	29	27	22	20	19	15
5	65	53	46	40	58	48	41	36	38	33	30	29	25	23	20	18	16	13
6	59	48	40	34	53	43	36	31	34	29	26	26	23	20	18	16	14	11
7	55	43	35	30	49	39	32	27	31	26	22	24	20	18	17	14	13	10
8	51	39	31	26	45	35	29	24	28	23	20	21	18	16	15	13	11	9
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6211	6211	6211
5°	6229	6155	6199
10°	6190	6105	6135
15°	6115	6018	6033
20°	6016	5910	5916
25°	5903	5787	5770
30°	5764	5643	5591
35°	5619	5492	5419
40°	5469	5321	5223
45°	5313	5151	5053
50°	5141	5001	4847
55°	4954	4807	4650
60°	4766	4589	4448
65°	4556	4380	4204
70°	4322	4102	3944
75°	3961	3768	3671
80°	3524	3380	3296
85°	3084	2973	2908



TEST NUMBER: P332773-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-F

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.5	1.0
10°-20°	204.1	3.0
20°-30°	300.5	4.3
30°-40°	349.3	5.0
40°-50°	349.3	5.0
50°-60°	305.5	4.4
60°-70°	226.9	3.3
70°-80°	128.9	1.9
80°-90°	41.8	0.6
90°-100°	54.6	0.8
100°-110°	348.3	5.0
110°-120°	666.3	9.6
120°-130°	845.9	12.2
130°-140°	905.0	13.1
140°-150°	846.3	12.2
150°-160°	682.5	9.9
160°-170°	440.2	6.4
170°-180°	151.7	2.2
0°-30°	577.0	8.3
0°-40°	926.3	13.4
0°-60°	1581.2	22.9
0°-90°	1978.8	28.6
90°-120°	1069.3	15.5
90°-150°	3666.4	53.0
90°-180°	4941.0	71.4
0°-180°	6919.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	769	766	760	766	765	73
15°	732	729	720	723	722	206
25°	663	658	650	650	648	305
35°	570	566	557	553	550	356
45°	465	461	451	445	443	359
55°	352	350	342	334	330	315
65°	238	235	229	223	220	236
75°	127	124	121	118	118	135
85°	33	33	32	32	31	37
90°	4	17	26	33	36	5
95°	66	27	26	33	35	84
105°	360	367	373	380	340	376
115°	671	675	674	676	676	660
125°	944	948	946	950	951	842
135°	1171	1170	1174	1177	1179	902
145°	1350	1353	1354	1355	1357	843
155°	1480	1481	1478	1482	1479	682
165°	1561	1556	1555	1564	1554	441
175°	1597	1591	1591	1601	1588	152
180°	1597	1597	1597	1597	1597	



TEST NUMBER: P332773-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	771.3	771.0	770.6	770.3	770.0	769.2	768.0	766.8	765.6	764.4	765.5
5°	768.7	768.2	767.6	767.1	766.5	765.5	764.0	762.5	761.0	759.5	761.0
7.5°	761.5	761.0	760.5	759.9	759.4	758.3	756.6	754.9	753.2	751.5	752.8
10°	755.1	754.6	754.1	753.5	753.0	751.8	750.0	748.2	746.5	744.7	745.8
12.5°	746.8	746.2	745.7	745.1	744.6	743.4	741.5	739.6	737.7	735.8	737.0
15°	731.7	731.2	730.6	730.1	729.5	728.3	726.2	724.1	722.1	720.0	720.8
17.5°	713.6	712.9	712.3	711.5	710.8	709.6	707.6	705.7	703.7	701.8	702.3
20°	700.3	699.6	698.9	698.2	697.5	696.2	694.1	692.1	690.0	687.9	688.3
22.5°	686.0	685.1	684.2	683.3	682.4	680.9	678.8	676.8	674.7	672.6	673.4
25°	662.7	661.7	660.8	659.8	658.9	657.4	655.5	653.6	651.6	649.7	649.9
27.5°	636.0	635.1	634.1	633.1	632.1	630.7	628.9	627.2	625.3	623.6	623.3
30°	618.3	617.2	616.1	615.0	613.9	612.4	610.7	608.9	607.1	605.4	604.8
32.5°	599.5	598.6	597.5	596.6	595.6	594.1	592.3	590.4	588.5	586.6	586.0
35°	570.2	569.3	568.3	567.4	566.4	564.9	563.0	561.1	559.2	557.3	556.3
37.5°	539.2	538.4	537.5	536.6	535.8	534.3	532.3	530.2	528.1	526.1	525.1
40°	519.0	517.9	516.8	515.8	514.7	513.1	511.0	509.0	506.9	504.9	503.5
42.5°	497.3	496.7	496.1	495.4	494.7	493.2	491.0	488.7	486.4	484.2	482.6
45°	465.4	464.5	463.5	462.6	461.6	460.0	457.8	455.6	453.4	451.2	449.7
47.5°	432.0	431.3	430.7	430.0	429.4	428.0	426.0	424.0	421.9	419.9	418.2
50°	409.3	408.8	408.2	407.7	407.1	405.9	404.0	402.0	400.1	398.2	396.3
52.5°	387.1	386.5	385.8	385.2	384.5	383.2	381.1	379.1	377.1	375.0	373.4
55°	352.0	351.6	351.2	350.8	350.4	349.2	347.3	345.3	343.4	341.5	339.8
57.5°	318.5	318.0	317.5	317.0	316.6	315.4	313.5	311.6	309.7	307.8	306.3
60°	295.2	294.6	293.9	293.2	292.6	291.3	289.5	287.7	286.0	284.2	283.0
62.5°	272.6	272.0	271.4	270.8	270.3	269.0	267.2	265.3	263.4	261.5	260.4
65°	238.5	237.9	237.2	236.5	235.8	234.8	233.5	232.0	230.7	229.3	227.9
67.5°	204.3	203.7	203.0	202.4	201.8	200.8	199.5	198.2	196.9	195.5	194.2
70°	183.1	182.1	181.2	180.2	179.3	178.2	177.1	176.0	174.9	173.8	172.8
72.5°	160.4	159.5	158.5	157.5	156.5	155.7	154.8	153.9	153.0	152.1	151.2
75°	127.0	126.3	125.6	124.9	124.2	123.6	122.9	122.2	121.5	120.8	120.3
77.5°	95.1	94.7	94.4	94.2	93.9	93.4	92.8	92.2	91.6	91.0	90.8
80°	75.8	75.4	75.0	74.6	74.1	73.8	73.6	73.3	73.0	72.7	72.5
82.5°	57.1	56.9	56.7	56.5	56.3	56.2	56.2	56.1	56.0	56.0	55.8
85°	33.3	33.3	33.3	33.3	33.3	33.1	32.9	32.6	32.3	32.1	32.1
87.5°	13.5	14.0	14.5	15.0	15.4	15.8	16.2	16.5	16.8	17.1	17.4
90°	3.6	6.5	9.4	12.4	15.3	17.8	19.9	22.0	24.2	26.3	27.9
92.5°	15.1	15.2	15.4	15.5	15.7	16.8	18.9	21.1	23.2	25.3	26.9
95°	65.7	56.6	47.7	38.7	29.6	25.2	25.5	25.7	26.0	26.3	27.9
97.5°	139.5	145.1	150.8	156.5	162.1	150.0	120.4	90.8	61.2	31.5	31.7
100°	195.9	200.7	205.5	210.2	215.0	199.1	162.5	125.8	89.2	52.6	48.1
102.5°	259.0	262.5	266.0	269.5	273.0	272.4	267.6	262.8	258.0	253.3	204.5
105°	359.6	361.2	362.7	364.4	366.0	367.4	368.8	370.1	371.4	372.7	375.1
107.5°	453.0	453.8	454.6	455.4	456.2	457.5	459.3	461.1	462.9	464.7	465.9
110°	516.1	516.9	517.7	518.5	519.3	520.5	522.0	523.6	525.2	526.8	527.4



TEST NUMBER: P332773-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	577.3	578.7	580.1	581.5	583.0	584.1	584.8	585.6	586.3	587.1	586.9
115°	671.4	672.2	673.0	673.8	674.5	674.9	674.5	674.3	674.1	673.8	674.3
117.5°	756.2	757.2	758.4	759.4	760.5	761.3	761.8	762.5	763.0	763.6	763.5
120°	813.6	814.6	815.7	816.7	817.8	818.2	817.9	817.7	817.4	817.1	817.7
122.5°	867.0	867.7	868.3	868.9	869.7	870.1	870.5	870.8	871.2	871.6	872.0
125°	943.8	944.8	945.9	947.0	948.0	948.2	947.8	947.2	946.7	946.2	947.0
127.5°	1016.4	1016.7	1016.9	1017.2	1017.5	1018.2	1019.5	1020.6	1021.8	1023.1	1022.9
130°	1063.3	1063.5	1063.7	1064.1	1064.3	1064.9	1065.6	1066.4	1067.2	1068.0	1068.3
132.5°	1106.2	1106.7	1107.2	1107.7	1108.2	1108.9	1109.9	1110.9	1111.9	1112.9	1113.2
135°	1170.8	1170.4	1170.2	1170.0	1169.7	1170.1	1171.2	1172.2	1173.3	1174.3	1174.9
137.5°	1227.9	1228.0	1228.0	1228.2	1228.3	1228.9	1230.1	1231.3	1232.4	1233.6	1234.1
140°	1265.1	1265.7	1266.2	1266.7	1267.3	1267.8	1268.3	1268.8	1269.4	1269.9	1270.7
142.5°	1298.5	1299.5	1300.5	1301.5	1302.4	1303.1	1303.4	1303.7	1304.0	1304.3	1304.9
145°	1350.0	1350.8	1351.5	1352.3	1353.1	1353.5	1353.5	1353.5	1353.5	1353.5	1353.8
147.5°	1390.8	1392.3	1393.8	1395.3	1396.8	1397.3	1397.1	1396.9	1396.5	1396.3	1396.5
150°	1420.5	1421.5	1422.5	1423.6	1424.7	1425.1	1424.8	1424.6	1424.3	1424.0	1424.0
152.5°	1445.3	1446.1	1447.0	1447.8	1448.7	1448.9	1448.3	1447.9	1447.4	1446.9	1447.4
155°	1480.2	1480.4	1480.7	1481.0	1481.2	1481.0	1480.2	1479.4	1478.6	1477.7	1478.8
157.5°	1509.6	1509.4	1509.3	1509.1	1508.9	1508.4	1507.4	1506.6	1505.7	1504.8	1506.2
160°	1526.8	1526.0	1525.2	1524.4	1523.6	1523.0	1522.7	1522.5	1522.3	1521.9	1523.6
162.5°	1542.1	1541.0	1540.0	1539.1	1538.0	1537.4	1537.1	1536.8	1536.6	1536.3	1537.9
165°	1561.4	1560.0	1558.8	1557.4	1556.1	1555.4	1555.4	1555.4	1555.4	1555.4	1557.5
167.5°	1576.7	1575.3	1573.9	1572.6	1571.1	1570.4	1570.3	1570.1	1569.9	1569.8	1572.1
170°	1585.3	1583.7	1582.1	1580.5	1578.9	1578.3	1578.5	1578.8	1579.1	1579.3	1581.4
172.5°	1591.0	1589.4	1587.9	1586.3	1584.7	1584.0	1584.3	1584.5	1584.8	1585.1	1587.1
175°	1597.2	1595.6	1594.0	1592.4	1590.9	1590.2	1590.5	1590.7	1591.0	1591.3	1593.6
177.5°	1600.1	1598.6	1597.1	1595.6	1594.2	1593.6	1594.0	1594.5	1594.9	1595.3	1597.0
180°	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2



TEST NUMBER: P332773-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	769.3	769.3	769.3	769.3	769.3	769.3	769.3	769.3
2.5°	766.6	767.7	768.8	769.3	769.1	769.1	769.0	768.8
5°	762.5	764.0	765.5	766.1	765.8	765.6	765.2	765.0
7.5°	754.0	755.2	756.4	756.9	756.8	756.6	756.5	756.2
10°	746.9	748.0	749.1	749.5	749.2	748.9	748.6	748.4
12.5°	738.2	739.4	740.6	741.0	740.6	740.2	739.9	739.5
15°	721.7	722.5	723.3	723.5	723.1	722.7	722.2	721.8
17.5°	702.8	703.3	703.9	703.9	703.7	703.4	703.1	702.9
20°	688.8	689.2	689.6	689.7	689.4	689.1	688.9	688.6
22.5°	674.1	674.9	675.7	675.7	675.3	674.8	674.3	673.8
25°	650.0	650.1	650.3	650.1	649.5	649.0	648.4	647.8
27.5°	623.0	622.6	622.3	621.8	621.1	620.4	619.7	619.0
30°	604.3	603.7	603.2	602.5	601.8	601.2	600.5	599.8
32.5°	585.3	584.6	584.0	583.3	582.7	581.9	581.2	580.6
35°	555.3	554.4	553.4	552.6	551.9	551.2	550.6	549.9
37.5°	524.0	522.9	521.9	520.9	520.1	519.1	518.2	517.3
40°	502.2	500.7	499.4	498.4	497.6	497.0	496.3	495.6
42.5°	481.0	479.3	477.8	476.7	476.3	475.9	475.4	474.9
45°	448.2	446.7	445.2	444.3	443.9	443.5	443.0	442.6
47.5°	416.5	414.8	413.1	411.8	410.7	409.6	408.6	407.6
50°	394.3	392.4	390.5	389.2	388.3	387.5	386.7	385.9
52.5°	371.6	369.9	368.3	366.9	365.8	364.8	363.8	362.7
55°	338.3	336.6	334.9	333.7	332.9	332.1	331.2	330.4
57.5°	304.8	303.2	301.6	300.4	299.6	298.8	298.0	297.2
60°	281.7	280.5	279.2	278.3	277.6	276.9	276.2	275.5
62.5°	259.3	258.1	257.0	256.1	255.4	254.8	254.1	253.3
65°	226.6	225.2	223.9	222.8	222.1	221.4	220.8	220.1
67.5°	192.9	191.6	190.3	189.5	189.3	189.2	188.9	188.8
70°	171.7	170.6	169.4	168.7	168.3	167.9	167.5	167.1
72.5°	150.4	149.5	148.6	148.0	147.6	147.2	146.8	146.3
75°	119.7	119.1	118.7	118.3	118.1	118.0	117.9	117.7
77.5°	90.6	90.5	90.3	90.1	89.7	89.4	89.0	88.6
80°	72.2	71.9	71.6	71.5	71.3	71.1	71.1	70.9
82.5°	55.6	55.5	55.3	55.1	55.1	54.9	54.7	54.6
85°	32.1	32.1	32.1	32.0	31.8	31.7	31.6	31.4
87.5°	17.7	18.1	18.4	18.6	18.7	18.8	18.9	19.0
90°	29.5	31.1	32.6	33.7	34.2	34.8	35.3	35.8
92.5°	28.5	30.1	31.7	32.6	32.6	32.8	32.9	33.0
95°	29.5	31.1	32.6	33.6	33.8	34.1	34.4	34.6
97.5°	31.8	32.0	32.2	32.4	32.6	33.0	33.2	33.4
100°	43.6	39.1	34.5	32.4	32.6	33.0	33.2	33.4
102.5°	155.9	107.2	58.5	34.2	34.2	34.3	34.4	34.4
105°	377.5	379.9	382.3	378.7	369.2	359.6	350.1	340.5
107.5°	467.1	468.3	469.4	470.5	471.5	472.5	473.5	474.5
110°	527.9	528.5	528.9	529.7	530.4	531.2	532.0	532.8



TEST NUMBER: P332773-927

CATALOG NUMBER: S124DIW-S575D1560U927-4F0-1E-UDD-F

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	586.8	586.7	586.6	587.1	588.1	589.1	590.1	591.1
115°	674.9	675.3	675.9	676.2	676.2	676.2	676.2	676.2
117.5°	763.4	763.3	763.2	763.1	763.0	762.9	762.8	762.6
120°	818.2	818.7	819.3	819.3	818.7	818.2	817.7	817.1
122.5°	872.3	872.6	872.9	872.7	872.3	871.7	871.2	870.7
125°	947.8	948.6	949.4	949.9	950.1	950.4	950.7	950.9
127.5°	1022.8	1022.6	1022.5	1022.2	1022.1	1021.8	1021.6	1021.4
130°	1068.6	1068.8	1069.1	1069.2	1069.2	1069.2	1069.2	1069.2
132.5°	1113.5	1113.7	1114.0	1114.0	1113.8	1113.6	1113.4	1113.2
135°	1175.4	1175.9	1176.5	1177.0	1177.5	1178.1	1178.6	1179.1
137.5°	1234.8	1235.3	1236.0	1236.1	1236.0	1235.8	1235.6	1235.5
140°	1271.5	1272.3	1273.1	1273.6	1273.9	1274.1	1274.4	1274.7
142.5°	1305.5	1306.1	1306.6	1306.9	1307.0	1307.1	1307.1	1307.2
145°	1354.1	1354.3	1354.6	1355.0	1355.5	1356.1	1356.6	1357.1
147.5°	1396.7	1396.9	1397.2	1397.4	1397.6	1397.9	1398.2	1398.4
150°	1424.0	1424.0	1424.0	1424.2	1424.4	1424.7	1425.0	1425.2
152.5°	1447.8	1448.2	1448.7	1448.7	1448.6	1448.4	1448.3	1448.1
155°	1479.9	1481.0	1482.0	1482.2	1481.4	1480.6	1479.8	1479.0
157.5°	1507.5	1508.9	1510.3	1510.3	1508.9	1507.5	1506.2	1504.8
160°	1525.2	1526.8	1528.4	1528.4	1526.8	1525.2	1523.6	1521.9
162.5°	1539.5	1541.1	1542.7	1542.5	1540.8	1539.0	1537.2	1535.3
165°	1559.6	1561.8	1563.9	1563.8	1561.4	1559.0	1556.6	1554.3
167.5°	1574.5	1576.8	1579.1	1579.0	1576.3	1573.7	1571.0	1568.4
170°	1583.6	1585.7	1587.9	1587.5	1584.9	1582.2	1579.6	1576.9
172.5°	1589.3	1591.4	1593.6	1593.2	1590.3	1587.5	1584.6	1581.7
175°	1596.0	1598.5	1600.8	1600.4	1597.2	1594.0	1590.9	1587.7
177.5°	1598.7	1600.4	1602.1	1601.7	1599.2	1596.6	1594.0	1591.5
180°	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2	1597.2

(END OF REPORT)