

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: P332735-935

Luminaire Tested: **S124DIW-S350D1340U935-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332735-935
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: S124DIW-S350D1340U935-4F0-1E-UDD-D
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 350 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5863.6 lumens
Efficiency: N/A
Efficacy: 125.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

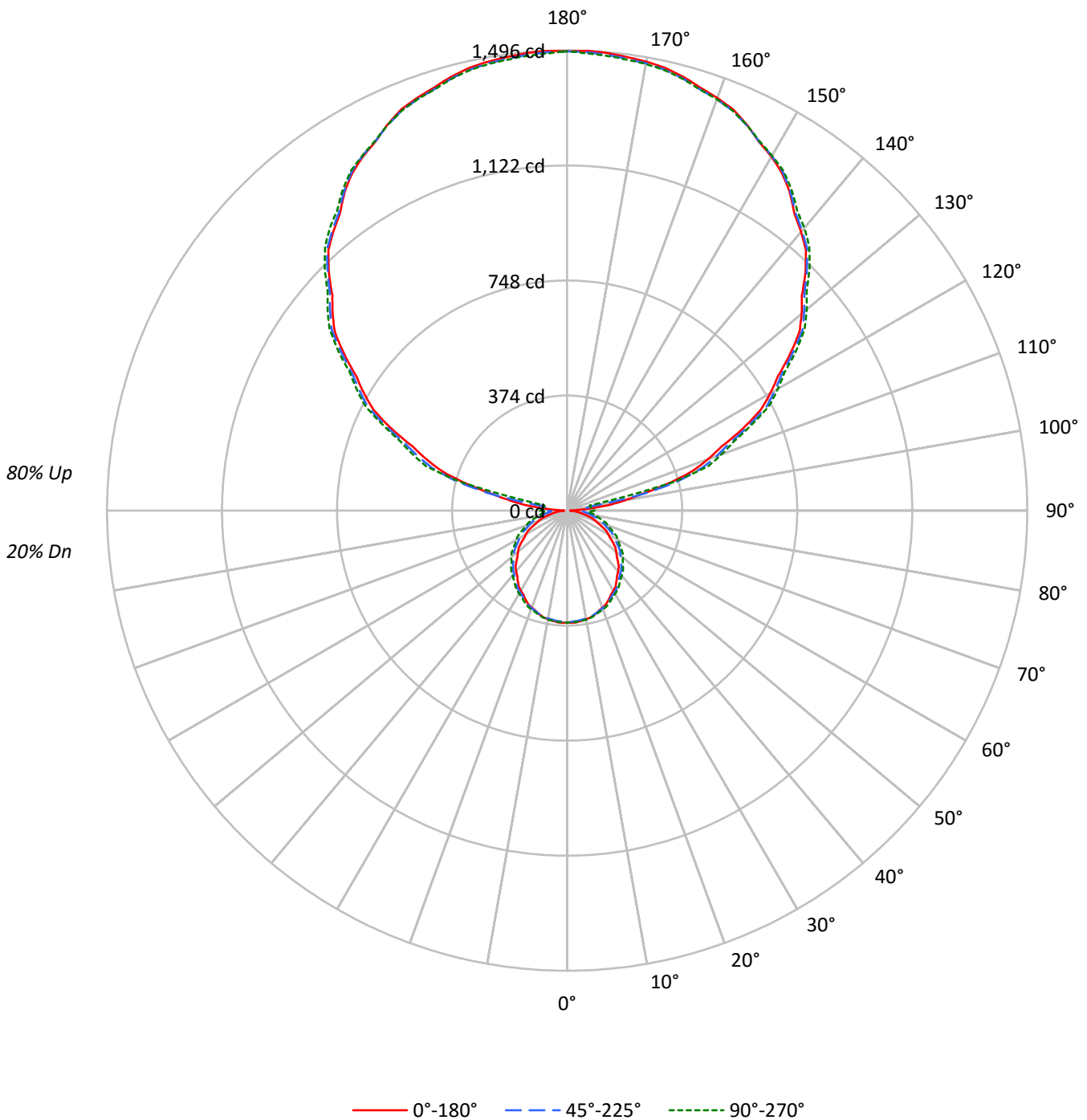
Input Watts (W): 46.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100	100	100	88	88	88	88	66	66	66	47	47	47	28	28	28	20				
1	91	86	82	79	80	76	73	70	57	55	53	40	39	38	24	24	23	16				
2	82	75	69	64	72	66	61	57	50	47	44	35	33	31	21	20	19	13				
3	75	66	59	53	66	58	52	47	44	40	37	31	28	26	19	17	16	11				
4	68	58	50	44	60	51	45	40	39	34	31	27	24	22	16	15	14	9				
5	62	51	44	38	55	45	39	34	34	30	26	24	21	19	15	13	12	8				
6	57	46	38	32	50	41	34	29	31	26	23	22	19	16	13	12	10	7				
7	53	41	33	28	46	37	30	25	28	23	20	20	17	14	12	10	9	6				
8	49	37	30	25	43	33	27	22	25	21	17	18	15	13	11	9	8	5				
9	45	34	26	22	40	30	24	20	23	18	15	16	13	11	10	8	7	5				
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	9	8	6	4				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2938	2938	2938
5°	2948	2871	2880
10°	2929	2825	2823
15°	2902	2770	2755
20°	2863	2710	2690
25°	2819	2643	2617
30°	2770	2576	2543
35°	2716	2507	2478
40°	2672	2442	2410
45°	2607	2382	2352
50°	2553	2313	2291
55°	2496	2248	2220
60°	2408	2164	2153
65°	2309	2076	2073
70°	2192	1973	1979
75°	2029	1861	1894
80°	1846	1754	1809
85°	1616	1659	1762



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.5	0.6
10°-20°	98.7	1.7
20°-30°	149.3	2.5
30°-40°	180.7	3.1
40°-50°	191.0	3.3
50°-60°	179.7	3.1
60°-70°	149.1	2.5
70°-80°	104.7	1.8
80°-90°	63.5	1.1
90°-100°	86.2	1.5
100°-110°	351.6	6.0
110°-120°	640.4	10.9
120°-130°	800.6	13.7
130°-140°	850.3	14.5
140°-150°	792.0	13.5
150°-160°	638.0	10.9
160°-170°	411.5	7.0
170°-180°	141.8	2.4
0°-30°	282.5	4.8
0°-40°	463.2	7.9
0°-60°	833.9	14.2
0°-90°	1151.3	19.6
90°-120°	1078.2	18.4
90°-150°	3521.0	60.0
90°-180°	4712.0	80.4
0°-180°	5863.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	364	364	364	364	364	
5°	364	363	360	363	363	35
15°	349	350	348	352	352	98
25°	320	322	323	327	328	147
35°	280	284	288	294	296	175
45°	233	241	249	255	258	180
55°	183	191	203	211	214	163
65°	126	139	153	163	167	125
75°	70	85	102	113	117	75
85°	22	39	57	69	73	23
90°	10	38	65	83	89	7
95°	67	45	60	77	82	83
105°	340	355	375	392	359	356
115°	630	637	649	660	663	620
125°	884	888	896	907	910	789
135°	1095	1095	1102	1110	1115	844
145°	1262	1265	1265	1269	1273	789
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°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	365.2	365.0	364.8	364.5	364.4	363.9	363.4	362.8	362.2	361.6	362.1
5°	364.4	364.0	363.8	363.5	363.3	362.8	362.1	361.5	360.9	360.2	361.0
7.5°	361.3	361.1	360.9	360.8	360.6	360.2	359.7	359.2	358.7	358.2	359.0
10°	358.6	358.5	358.4	358.3	358.3	358.0	357.6	357.1	356.6	356.2	357.0
12.5°	355.1	355.0	355.0	355.0	355.0	354.8	354.5	354.2	353.9	353.6	354.3
15°	349.2	349.4	349.5	349.6	349.7	349.6	349.2	349.0	348.7	348.4	349.2
17.5°	341.4	341.6	341.9	342.2	342.4	342.6	342.5	342.4	342.4	342.3	343.2
20°	335.8	336.0	336.4	336.7	336.9	337.1	337.2	337.3	337.3	337.4	338.4
22.5°	329.6	329.9	330.3	330.6	331.0	331.2	331.4	331.6	331.7	331.9	332.8
25°	319.5	320.0	320.6	321.2	321.7	322.1	322.4	322.6	322.9	323.2	324.2
27.5°	308.2	309.1	309.9	310.6	311.4	312.0	312.5	312.9	313.3	313.7	314.6
30°	300.7	301.5	302.2	302.9	303.7	304.4	305.0	305.6	306.3	306.9	307.9
32.5°	292.7	293.5	294.4	295.2	296.1	296.9	297.6	298.3	299.0	299.7	300.8
35°	279.6	280.7	281.7	282.8	284.0	284.9	285.9	286.7	287.7	288.5	289.8
37.5°	266.5	267.7	269.0	270.2	271.5	272.6	273.8	274.9	276.0	277.2	278.4
40°	258.0	259.2	260.4	261.5	262.7	263.9	265.2	266.5	267.7	269.0	270.4
42.5°	248.2	249.5	250.8	252.2	253.5	254.9	256.4	257.9	259.3	260.8	262.3
45°	233.1	234.8	236.5	238.2	240.0	241.7	243.4	245.1	246.8	248.6	250.1
47.5°	218.7	220.5	222.2	224.0	225.8	227.6	229.6	231.7	233.7	235.7	237.2
50°	208.3	210.3	212.2	214.2	216.2	218.2	220.2	222.2	224.2	226.2	228.0
52.5°	197.9	199.8	201.8	203.8	205.8	207.9	210.2	212.5	214.7	217.1	218.9
55°	182.6	184.5	186.4	188.3	190.2	192.5	195.2	197.9	200.6	203.4	205.2
57.5°	165.6	167.9	170.2	172.6	175.0	177.5	180.2	182.9	185.5	188.3	190.5
60°	154.5	156.8	159.2	161.5	163.8	166.5	169.5	172.5	175.5	178.5	180.6
62.5°	143.7	146.3	148.9	151.4	153.9	156.8	159.7	162.7	165.7	168.8	170.8
65°	126.3	129.2	132.2	135.0	137.9	140.9	144.0	147.1	150.2	153.3	155.5
67.5°	109.6	112.7	115.8	118.9	121.9	125.1	128.5	131.7	135.0	138.3	140.6
70°	98.2	101.3	104.4	107.5	110.6	113.8	117.3	120.7	124.2	127.6	130.0
72.5°	87.1	90.3	93.4	96.6	99.7	103.1	106.8	110.5	114.1	117.8	120.1
75°	70.1	73.4	76.8	80.2	83.5	87.0	90.9	94.7	98.5	102.3	104.9
77.5°	54.2	57.8	61.3	64.8	68.4	72.2	76.1	80.2	84.1	88.1	90.7
80°	44.4	48.0	51.7	55.3	58.9	62.7	66.7	70.7	74.6	78.7	81.4
82.5°	34.6	38.4	42.2	46.0	49.7	53.6	57.6	61.6	65.5	69.6	72.3
85°	21.6	25.4	29.2	33.0	36.9	40.7	44.9	48.9	53.0	57.1	59.8
87.5°	12.7	17.0	21.2	25.5	29.7	34.0	38.4	42.7	47.1	51.5	54.4
90°	9.9	16.2	22.6	28.9	35.3	41.4	47.3	53.1	59.1	64.9	69.1
92.5°	20.2	23.7	27.1	30.5	33.9	38.6	44.4	50.3	56.2	62.1	66.1
95°	66.7	61.3	55.8	50.4	44.9	44.2	48.1	52.1	56.1	60.0	64.0
97.5°	135.3	143.1	150.9	158.8	166.6	158.5	134.5	110.5	86.4	62.4	64.9
100°	187.6	194.4	201.3	208.1	214.9	202.9	172.3	141.5	110.8	80.1	78.4
102.5°	246.6	251.9	257.3	262.6	267.9	270.1	269.1	268.1	267.1	266.1	222.9
105°	339.8	343.1	346.4	349.7	353.0	357.0	361.5	366.2	370.7	375.3	379.8
107.5°	427.1	429.3	431.5	433.8	436.0	439.5	444.4	449.3	454.1	458.9	462.3
110°	485.7	487.8	489.7	491.7	493.8	497.1	501.7	506.4	511.1	515.7	518.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	542.5	545.0	547.5	549.9	552.4	555.5	559.2	562.9	566.6	570.4	572.3
115°	630.1	631.6	633.2	634.7	636.3	638.4	641.1	643.7	646.4	649.0	651.5
117.5°	709.3	710.8	712.2	713.7	715.2	717.6	720.8	724.0	727.3	730.6	732.4
120°	762.6	763.8	765.1	766.4	767.6	769.5	771.8	774.2	776.5	778.9	781.3
122.5°	812.6	813.2	813.9	814.5	815.2	816.9	819.8	822.6	825.4	828.3	830.3
125°	883.9	884.8	885.7	886.6	887.5	888.8	890.6	892.3	894.1	895.9	898.4
127.5°	951.7	951.8	952.0	952.2	952.4	953.8	956.7	959.6	962.5	965.4	966.8
130°	995.1	995.3	995.5	995.6	995.7	997.0	999.1	1001.3	1003.5	1005.7	1007.6
132.5°	1035.4	1035.7	1036.0	1036.4	1036.7	1038.0	1040.1	1042.2	1044.3	1046.4	1048.2
135°	1095.3	1095.0	1094.8	1094.5	1094.2	1094.9	1096.6	1098.2	1099.8	1101.5	1103.4
137.5°	1148.7	1148.7	1148.7	1148.7	1148.7	1149.3	1150.7	1152.2	1153.6	1154.9	1156.8
140°	1183.4	1183.9	1184.3	1184.6	1185.1	1185.6	1186.2	1186.8	1187.3	1187.9	1189.9
142.5°	1214.4	1215.3	1216.2	1217.0	1217.9	1218.5	1218.7	1219.0	1219.2	1219.4	1221.0
145°	1262.3	1263.0	1263.7	1264.3	1265.0	1265.3	1265.3	1265.3	1265.3	1265.3	1266.1
147.5°	1300.5	1301.8	1303.1	1304.4	1305.7	1306.3	1306.1	1305.8	1305.5	1305.3	1305.5
150°	1328.3	1329.1	1330.1	1330.9	1331.9	1332.1	1332.0	1331.7	1331.5	1331.2	1331.2
152.5°	1351.2	1351.9	1352.7	1353.5	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°	363.9	363.9	363.9	363.9	363.9	363.9	363.9	363.9
2.5°	362.7	363.2	363.7	363.9	363.9	363.8	363.7	363.6
5°	361.7	362.4	363.2	363.5	363.4	363.3	363.2	363.1
7.5°	359.8	360.6	361.4	361.8	361.7	361.6	361.5	361.4
10°	357.8	358.6	359.5	359.8	359.7	359.6	359.6	359.5
12.5°	355.1	355.9	356.5	356.9	356.9	356.9	356.9	356.8
15°	350.1	350.9	351.7	352.1	352.0	351.9	351.8	351.7
17.5°	344.0	344.8	345.7	346.0	345.9	345.9	345.9	345.8
20°	339.2	340.2	341.0	341.6	341.6	341.6	341.6	341.6
22.5°	333.7	334.6	335.5	336.0	336.2	336.3	336.5	336.7
25°	325.2	326.1	327.2	327.7	327.8	327.9	328.0	328.0
27.5°	315.6	316.5	317.5	318.0	318.1	318.1	318.2	318.4
30°	308.8	309.9	310.8	311.4	311.6	311.9	312.0	312.2
32.5°	302.0	303.2	304.3	305.0	305.1	305.3	305.5	305.7
35°	291.1	292.3	293.6	294.4	294.6	294.9	295.2	295.5
37.5°	279.7	280.9	282.2	283.1	283.4	283.6	284.0	284.2
40°	271.7	273.0	274.4	275.3	275.6	276.0	276.4	276.7
42.5°	263.8	265.4	266.8	267.8	268.0	268.3	268.6	268.9
45°	251.7	253.2	254.8	255.7	256.2	256.7	257.1	257.5
47.5°	238.8	240.4	242.0	243.1	243.7	244.2	244.7	245.3
50°	229.8	231.6	233.4	234.6	235.1	235.7	236.3	236.8
52.5°	220.7	222.5	224.3	225.5	226.0	226.5	227.1	227.6
55°	207.0	208.8	210.6	211.8	212.3	212.8	213.4	214.0
57.5°	192.6	194.8	196.9	198.2	198.7	199.2	199.8	200.3
60°	182.7	184.8	186.8	188.2	189.0	189.7	190.5	191.1
62.5°	172.9	175.0	177.0	178.5	179.2	179.9	180.6	181.3
65°	157.7	160.1	162.3	163.8	164.5	165.2	166.0	166.7
67.5°	142.9	145.3	147.5	149.0	149.7	150.4	151.1	151.9
70°	132.4	134.9	137.3	138.9	139.5	140.2	140.8	141.4
72.5°	122.5	124.9	127.3	128.8	129.5	130.2	131.0	131.6
75°	107.4	109.9	112.4	114.1	114.9	115.7	116.6	117.4
77.5°	93.2	95.8	98.4	100.1	101.0	101.9	102.7	103.6
80°	84.1	86.8	89.5	91.3	92.0	92.7	93.4	94.1
82.5°	75.1	77.9	80.7	82.5	83.3	84.0	84.9	85.7
85°	62.5	65.2	67.9	69.7	70.6	71.5	72.4	73.4
87.5°	57.3	60.3	63.1	65.1	66.0	66.8	67.8	68.6
90°	73.2	77.2	81.4	84.0	85.2	86.4	87.7	88.9
92.5°	70.2	74.2	78.3	80.7	81.5	82.3	83.2	83.9
95°	67.9	71.8	75.8	78.3	79.3	80.4	81.5	82.5
97.5°	67.4	70.0	72.5	74.3	75.3	76.3	77.3	78.4
100°	76.5	74.8	73.0	72.6	73.4	74.3	75.3	76.1
102.5°	179.8	136.6	93.5	72.3	73.1	73.9	74.6	75.3
105°	384.4	388.8	393.3	391.5	383.2	375.1	366.9	358.6
107.5°	465.6	468.9	472.3	474.7	476.3	477.9	479.5	481.0
110°	520.9	523.5	526.1	528.1	529.5	531.0	532.4	533.9



TEST NUMBER: P332735-935

CATALOG NUMBER: S124DIW-S350D1340U935-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	574.2	576.1	578.0	579.8	581.5	583.2	584.8	586.5
115°	654.0	656.5	658.9	660.6	661.2	661.8	662.5	663.1
117.5°	734.1	735.9	737.7	738.9	739.5	740.1	740.8	741.4
120°	783.6	785.8	788.2	789.5	789.7	789.9	790.1	790.4
122.5°	832.5	834.6	836.7	837.8	837.9	838.1	838.3	838.4
125°	900.8	903.3	905.8	907.4	908.2	909.0	909.7	910.5
127.5°	968.4	969.8	971.3	972.2	972.7	973.1	973.5	973.9
130°	1009.5	1011.3	1013.2	1014.4	1015.0	1015.5	1016.1	1016.6
132.5°	1050.0	1051.8	1053.6	1054.7	1055.1	1055.4	1055.8	1056.1
135°	1105.4	1107.2	1109.2	1110.7	1111.7	1112.8	1113.9	1114.9
137.5°	1158.7	1160.5	1162.4	1163.6	1163.8	1164.2	1164.4	1164.8
140°	1191.8	1193.7	1195.6	1197.0	1197.7	1198.3	1199.0	1199.7
142.5°	1222.6	1224.2	1225.7	1226.8	1227.2	1227.6	1228.0	1228.5
145°	1266.9	1267.7	1268.4	1269.3	1270.1	1271.0	1271.9	1272.7
147.5°	1305.8	1306.1	1306.4	1306.7	1307.3	1307.9	1308.4	1308.9
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)