

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: P332766

Luminaire Tested: **S124DIW-S575D1340U835-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332766
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S575D1340U835-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7026.2 lumens
Efficiency: N/A
Efficacy: 130.6 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

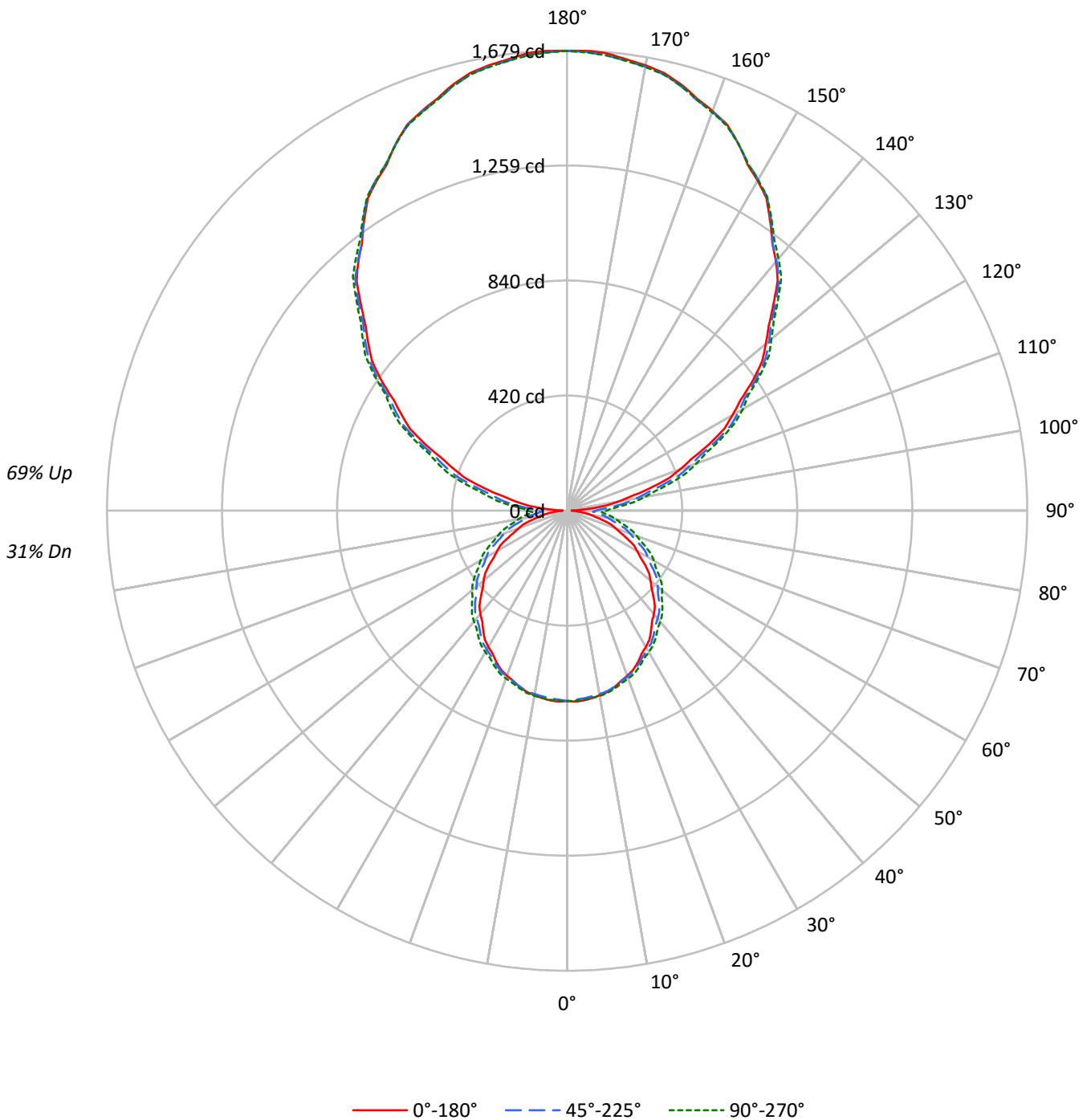
Input Watts (W): 53.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10	50	30	10	0																
RCR																																														
0	103	103	103	103	92	92	92	92	73	73	73	55	55	55	39	39	39	31																												
1	93	88	84	81	83	80	76	73	63	60	58	47	46	45	33	32	31	25																												
2	84	77	71	65	75	69	64	59	55	51	48	41	39	37	29	27	26	20																												
3	77	67	60	54	69	61	54	49	48	43	40	36	33	31	25	23	22	17																												
4	70	59	51	45	62	53	47	41	42	37	34	32	29	26	23	20	19	14																												
5	64	53	45	39	57	47	40	35	38	33	29	29	25	22	20	18	16	12																												
6	59	47	39	33	53	42	35	30	34	29	25	26	22	19	18	16	14	11																												
7	54	42	34	29	49	38	31	26	31	25	22	23	20	17	17	14	12	9																												
8	50	38	31	25	45	35	28	23	28	23	19	21	18	15	15	13	11	8																												
9	47	35	27	22	42	31	25	21	25	20	17	19	16	13	14	12	10	8																												
10	43	32	25	20	39	29	22	18	23	18	15	18	14	12	13	11	9	7																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5610	5610	5610
5°	5628	5483	5498
10°	5593	5393	5388
15°	5543	5289	5260
20°	5467	5175	5135
25°	5382	5046	4997
30°	5290	4919	4856
35°	5185	4787	4732
40°	5102	4663	4603
45°	4978	4549	4492
50°	4873	4416	4375
55°	4765	4291	4237
60°	4596	4132	4112
65°	4410	3962	3958
70°	4186	3768	3778
75°	3872	3553	3616
80°	3526	3347	3457
85°	3082	3163	3364



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.8	0.9
10°-20°	188.5	2.7
20°-30°	285.1	4.1
30°-40°	344.9	4.9
40°-50°	364.7	5.2
50°-60°	343.2	4.9
60°-70°	284.7	4.1
70°-80°	200.0	2.8
80°-90°	118.1	1.7
90°-100°	177.7	2.5
100°-110°	377.3	5.4
110°-120°	589.5	8.4
120°-130°	752.1	10.7
130°-140°	831.6	11.8
140°-150°	810.9	11.5
150°-160°	680.6	9.7
160°-170°	452.8	6.4
170°-180°	158.6	2.3
0°-30°	539.4	7.7
0°-40°	884.4	12.6
0°-60°	1592.2	22.7
0°-90°	2195.0	31.2
90°-120°	1144.5	16.3
90°-150°	3539.1	50.4
90°-180°	4831.0	68.8
0°-180°	7026.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	696	693	688	694	693	66
15°	667	668	665	672	672	188
25°	610	615	617	625	626	281
35°	534	543	551	561	564	334
45°	445	460	475	487	492	344
55°	349	365	388	403	408	311
65°	241	266	293	311	318	239
75°	134	163	195	216	224	142
85°	41	74	109	131	140	44
90°	16	62	106	135	145	13
95°	88	125	166	190	198	95
105°	309	327	360	383	394	328
115°	570	578	599	615	619	562
125°	827	827	844	856	858	737
135°	1064	1071	1077	1086	1088	823
145°	1291	1295	1297	1300	1300	808
155°	1478	1478	1477	1482	1477	680
165°	1609	1606	1603	1610	1606	453
175°	1674	1668	1666	1675	1666	159
180°	1677	1677	1677	1677	1677	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	697.4	697.0	696.6	696.1	695.7	695.0	693.9	692.8	691.6	690.5	691.5
5°	695.7	695.2	694.6	694.1	693.6	692.7	691.5	690.3	689.1	687.9	689.3
7.5°	689.8	689.4	689.1	688.8	688.5	687.9	686.9	685.9	684.8	683.8	685.4
10°	684.8	684.6	684.4	684.3	684.1	683.6	682.7	681.8	681.0	680.1	681.7
12.5°	677.9	677.9	677.9	677.8	677.8	677.5	676.9	676.3	675.7	675.1	676.5
15°	666.9	667.1	667.2	667.4	667.6	667.4	666.9	666.4	665.8	665.3	666.9
17.5°	651.8	652.3	652.8	653.3	653.9	654.1	654.0	653.9	653.8	653.7	655.2
20°	641.2	641.7	642.2	642.8	643.3	643.6	643.8	644.0	644.1	644.3	646.0
22.5°	629.4	630.0	630.7	631.3	632.0	632.5	632.8	633.1	633.4	633.7	635.5
25°	610.1	611.1	612.2	613.2	614.2	615.0	615.5	616.0	616.6	617.1	619.0
27.5°	588.6	590.1	591.6	593.2	594.7	595.8	596.6	597.4	598.2	599.0	600.8
30°	574.3	575.7	577.0	578.4	579.8	581.1	582.3	583.5	584.7	586.0	587.9
32.5°	558.7	560.4	562.0	563.7	565.4	566.9	568.2	569.6	570.9	572.3	574.4
35°	533.8	535.9	538.0	540.0	542.1	544.0	545.7	547.5	549.2	550.9	553.4
37.5°	508.8	511.1	513.5	515.9	518.3	520.6	522.7	524.9	527.0	529.1	531.6
40°	492.6	494.8	497.1	499.3	501.6	503.9	506.3	508.7	511.2	513.6	516.2
42.5°	473.9	476.4	478.9	481.5	484.0	486.7	489.5	492.3	495.2	498.0	500.9
45°	445.1	448.4	451.7	455.0	458.2	461.5	464.8	468.1	471.4	474.7	477.6
47.5°	417.6	420.9	424.3	427.7	431.1	434.7	438.5	442.3	446.1	449.9	453.0
50°	397.6	401.4	405.2	409.1	412.9	416.7	420.5	424.3	428.1	431.9	435.3
52.5°	377.7	381.5	385.3	389.1	392.9	397.0	401.4	405.7	410.1	414.4	417.9
55°	348.6	352.2	355.9	359.5	363.1	367.5	372.7	377.9	383.1	388.3	391.8
57.5°	316.1	320.6	325.1	329.6	334.1	338.9	344.0	349.2	354.4	359.5	363.6
60°	294.9	299.4	303.9	308.4	312.9	318.0	323.7	329.4	335.1	340.8	344.8
62.5°	274.4	279.3	284.2	289.1	294.0	299.3	305.0	310.7	316.5	322.2	326.1
65°	241.2	246.8	252.3	257.8	263.4	269.1	274.9	280.8	286.7	292.6	296.9
67.5°	209.3	215.2	221.1	227.0	232.8	238.9	245.2	251.5	257.8	264.1	268.5
70°	187.5	193.4	199.3	205.2	211.1	217.3	223.8	230.4	237.0	243.6	248.2
72.5°	166.4	172.4	178.4	184.4	190.4	196.9	203.9	210.9	217.9	224.9	229.4
75°	133.8	140.2	146.6	153.0	159.4	166.3	173.5	180.8	188.1	195.3	200.2
77.5°	103.5	110.3	117.1	123.8	130.6	137.8	145.4	153.0	160.6	168.2	173.1
80°	84.8	91.7	98.7	105.6	112.5	119.7	127.4	135.0	142.6	150.2	155.4
82.5°	66.1	73.3	80.5	87.7	94.9	102.3	109.9	117.5	125.1	132.8	138.1
85°	41.2	48.5	55.8	63.0	70.3	77.8	85.6	93.4	101.2	108.9	114.1
87.5°	23.8	31.5	39.2	46.9	54.6	62.4	70.5	78.5	86.5	94.6	99.9
90°	16.3	26.4	36.5	46.6	56.7	66.6	76.3	86.1	95.8	105.6	112.3
92.5°	39.6	49.4	59.3	69.2	79.0	88.5	97.5	106.6	115.6	124.7	130.6
95°	87.9	96.2	104.5	112.8	121.1	129.8	138.9	148.0	157.2	166.3	171.8
97.5°	145.1	152.1	159.1	166.1	173.0	181.2	190.6	200.0	209.4	218.8	224.3
100°	190.1	195.8	201.4	207.1	212.7	220.2	229.5	238.9	248.2	257.6	262.8
102.5°	237.8	242.3	246.7	251.1	255.5	262.2	271.1	280.1	289.1	298.0	303.4
105°	309.2	312.9	316.7	320.4	324.2	329.8	337.4	344.9	352.5	360.0	365.2
107.5°	385.5	388.7	391.9	395.1	398.3	403.0	409.2	415.4	421.6	427.9	432.9
110°	436.8	439.8	442.8	445.8	448.8	453.2	458.9	464.7	470.5	476.2	479.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	490.1	492.4	494.6	496.9	499.2	502.9	508.2	513.4	518.7	523.9	527.7
115°	570.1	571.7	573.2	574.8	576.3	579.6	584.5	589.5	594.5	599.4	602.9
117.5°	646.2	647.4	648.5	649.7	650.9	653.8	658.6	663.3	668.1	672.8	675.4
120°	696.4	698.1	699.8	701.4	703.1	706.0	710.2	714.3	718.5	722.6	724.6
122.5°	749.3	749.9	750.5	751.0	751.6	754.0	758.4	762.7	767.1	771.4	773.9
125°	826.6	826.5	826.3	826.1	825.9	827.9	831.9	835.9	840.0	844.0	846.7
127.5°	897.3	898.0	898.7	899.4	900.1	901.8	904.7	907.5	910.4	913.3	915.8
130°	946.5	947.2	947.8	948.5	949.2	951.0	953.7	956.5	959.3	962.0	964.6
132.5°	997.3	997.8	998.2	998.7	999.1	1000.4	1002.4	1004.3	1006.3	1008.3	1010.7
135°	1063.7	1065.4	1067.2	1068.9	1070.6	1072.1	1073.3	1074.5	1075.7	1076.9	1079.1
137.5°	1136.8	1137.5	1138.1	1138.8	1139.4	1140.2	1141.3	1142.3	1143.4	1144.4	1146.2
140°	1185.6	1186.0	1186.4	1186.8	1187.2	1187.5	1187.7	1187.9	1188.0	1188.2	1190.2
142.5°	1229.6	1230.1	1230.7	1231.2	1231.8	1231.9	1231.5	1231.2	1230.9	1230.5	1232.4
145°	1291.2	1292.2	1293.1	1294.1	1295.1	1295.7	1296.0	1296.3	1296.6	1296.9	1297.6
147.5°	1352.4	1353.6	1354.8	1356.0	1357.2	1357.7	1357.5	1357.3	1357.0	1356.8	1356.7
150°	1389.7	1390.7	1391.7	1392.7	1393.7	1394.1	1394.1	1394.1	1394.1	1394.1	1394.1
152.5°	1424.4	1425.1	1425.7	1426.4	1427.0	1427.5	1427.7	1427.9	1428.2	1428.4	1429.1
155°	1478.4	1478.4	1478.4	1478.4	1478.4	1478.3	1478.0	1477.7	1477.4	1477.2	1478.3
157.5°	1524.1	1523.6	1523.1	1522.5	1522.0	1521.7	1521.7	1521.6	1521.6	1521.5	1522.4
160°	1551.1	1550.8	1550.5	1550.2	1549.9	1549.6	1549.3	1549.1	1548.8	1548.5	1549.3
162.5°	1576.0	1575.2	1574.5	1573.7	1573.0	1572.5	1572.2	1571.9	1571.6	1571.3	1572.9
165°	1609.4	1608.6	1607.7	1606.8	1606.0	1605.3	1604.7	1604.1	1603.5	1602.9	1604.7
167.5°	1635.1	1633.9	1632.7	1631.5	1630.3	1629.7	1629.8	1629.8	1629.9	1629.9	1631.7
170°	1649.6	1648.2	1646.8	1645.3	1643.9	1643.3	1643.6	1643.9	1644.2	1644.4	1646.2
172.5°	1660.0	1658.8	1657.6	1656.4	1655.2	1654.6	1654.7	1654.7	1654.8	1654.8	1656.8
175°	1674.3	1672.8	1671.4	1670.0	1668.5	1667.6	1667.4	1667.1	1666.8	1666.5	1668.5
177.5°	1678.9	1677.8	1676.6	1675.5	1674.3	1673.8	1673.8	1673.8	1673.8	1673.8	1675.4
180°	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	694.9	694.9	694.9	694.9	694.9	694.9	694.9	694.9
2.5°	692.5	693.4	694.4	694.8	694.7	694.5	694.4	694.3
5°	690.7	692.0	693.4	694.0	693.9	693.7	693.5	693.3
7.5°	687.0	688.5	690.1	690.8	690.6	690.4	690.2	690.1
10°	683.2	684.8	686.3	687.0	686.9	686.7	686.5	686.3
12.5°	678.0	679.4	680.8	681.5	681.5	681.4	681.4	681.4
15°	668.4	670.0	671.5	672.2	672.1	671.9	671.7	671.5
17.5°	656.8	658.4	660.0	660.7	660.6	660.5	660.3	660.2
20°	647.8	649.5	651.2	652.1	652.1	652.1	652.1	652.1
22.5°	637.2	638.9	640.6	641.7	641.9	642.2	642.5	642.8
25°	620.9	622.8	624.7	625.7	625.9	626.1	626.2	626.4
27.5°	602.6	604.3	606.1	607.1	607.3	607.5	607.7	607.9
30°	589.8	591.7	593.6	594.7	595.0	595.4	595.7	596.1
32.5°	576.6	578.8	581.0	582.2	582.6	582.9	583.3	583.6
35°	555.8	558.2	560.6	562.1	562.6	563.1	563.6	564.2
37.5°	534.1	536.5	539.0	540.5	541.0	541.6	542.1	542.7
40°	518.8	521.4	524.0	525.6	526.3	527.0	527.7	528.4
42.5°	503.8	506.6	509.5	511.2	511.8	512.3	512.9	513.4
45°	480.6	483.5	486.4	488.3	489.2	490.1	490.9	491.8
47.5°	456.0	459.1	462.1	464.1	465.2	466.2	467.3	468.3
50°	438.8	442.3	445.7	448.0	449.0	450.0	451.1	452.1
52.5°	421.4	424.8	428.3	430.5	431.6	432.6	433.6	434.7
55°	395.2	398.7	402.1	404.4	405.4	406.5	407.5	408.5
57.5°	367.7	371.9	376.0	378.5	379.5	380.4	381.4	382.4
60°	348.8	352.8	356.7	359.4	360.8	362.2	363.6	365.0
62.5°	330.1	334.1	338.1	340.7	342.1	343.5	344.9	346.3
65°	301.2	305.6	309.9	312.7	314.1	315.5	316.9	318.3
67.5°	272.9	277.3	281.7	284.5	285.9	287.2	288.6	289.9
70°	252.9	257.6	262.2	265.2	266.4	267.6	268.8	270.0
72.5°	233.9	238.5	243.0	245.9	247.3	248.6	250.0	251.3
75°	205.0	209.8	214.7	217.9	219.4	221.0	222.6	224.1
77.5°	178.1	183.0	187.9	191.2	192.8	194.5	196.1	197.8
80°	160.6	165.7	170.9	174.2	175.6	177.0	178.4	179.8
82.5°	143.4	148.7	154.1	157.5	159.0	160.5	162.0	163.6
85°	119.3	124.5	129.7	133.2	134.9	136.6	138.3	140.1
87.5°	105.3	110.7	116.0	119.5	121.2	122.8	124.4	126.1
90°	119.1	125.8	132.5	136.9	138.9	140.8	142.8	144.7
92.5°	136.5	142.4	148.3	152.1	153.9	155.6	157.3	159.1
95°	177.3	182.9	188.4	191.9	193.5	195.1	196.6	198.2
97.5°	229.9	235.5	241.0	244.6	246.0	247.5	249.0	250.5
100°	268.1	273.3	278.5	281.8	283.0	284.2	285.4	286.6
102.5°	308.7	314.0	319.4	322.8	324.4	326.0	327.6	329.2
105°	370.4	375.6	380.8	384.5	386.7	389.0	391.2	393.5
107.5°	438.0	443.1	448.1	451.2	452.4	453.6	454.8	456.0
110°	483.0	486.4	489.8	492.6	494.9	497.1	499.4	501.6



TEST NUMBER: P332766

CATALOG NUMBER: S124DIW-S575D1340U835-4F0-1E-UDD-D1

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	531.4	535.1	538.8	541.5	543.0	544.6	546.1	547.7
115°	606.5	610.0	613.5	615.7	616.6	617.5	618.5	619.4
117.5°	678.1	680.7	683.3	685.0	685.8	686.6	687.4	688.2
120°	726.7	728.7	730.7	732.7	734.6	736.6	738.6	740.5
122.5°	776.3	778.8	781.3	782.6	782.9	783.1	783.3	783.5
125°	849.4	852.1	854.8	856.4	856.9	857.4	857.8	858.3
127.5°	918.3	920.9	923.4	925.0	925.8	926.5	927.2	927.9
130°	967.1	969.6	972.2	973.4	973.3	973.2	973.0	972.9
132.5°	1013.1	1015.5	1017.9	1019.4	1020.0	1020.5	1021.1	1021.7
135°	1081.3	1083.5	1085.7	1086.9	1087.0	1087.2	1087.4	1087.6
137.5°	1148.0	1149.7	1151.5	1152.9	1154.0	1155.0	1156.0	1157.1
140°	1192.1	1194.1	1196.0	1197.3	1197.9	1198.5	1199.0	1199.6
142.5°	1234.4	1236.3	1238.2	1239.5	1240.1	1240.8	1241.5	1242.2
145°	1298.4	1299.1	1299.9	1300.2	1300.0	1299.8	1299.7	1299.5
147.5°	1356.6	1356.5	1356.4	1356.5	1356.8	1357.0	1357.3	1357.6
150°	1394.1	1394.1	1394.1	1394.0	1393.7	1393.4	1393.1	1392.9
152.5°	1429.8	1430.5	1431.2	1431.1	1430.4	1429.6	1428.9	1428.1
155°	1479.5	1480.6	1481.8	1481.8	1480.6	1479.5	1478.3	1477.2
157.5°	1523.2	1524.1	1525.0	1524.9	1523.9	1522.9	1522.0	1521.0
160°	1550.2	1551.1	1551.9	1551.6	1550.2	1548.8	1547.3	1545.9
162.5°	1574.4	1576.0	1577.5	1577.6	1576.1	1574.7	1573.3	1571.8
165°	1606.4	1608.1	1609.9	1610.2	1609.0	1607.8	1606.7	1605.5
167.5°	1633.4	1635.1	1636.8	1636.8	1635.0	1633.2	1631.5	1629.7
170°	1647.9	1649.6	1651.4	1651.2	1649.2	1647.2	1645.2	1643.2
172.5°	1658.7	1660.7	1662.7	1662.6	1660.6	1658.6	1656.6	1654.6
175°	1670.5	1672.5	1674.6	1674.6	1672.5	1670.5	1668.5	1666.5
177.5°	1677.0	1678.6	1680.2	1680.1	1678.3	1676.4	1674.6	1672.7
180°	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9	1676.9

(END OF REPORT)