

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: P332760-830

Luminaire Tested: **S124DIW-S575D1050U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332760-830  
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-S575D1050U830-4F0-1E-UDD-D1  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 1050 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5661.7 lumens  
Efficiency: N/A  
Efficacy: 125.3 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

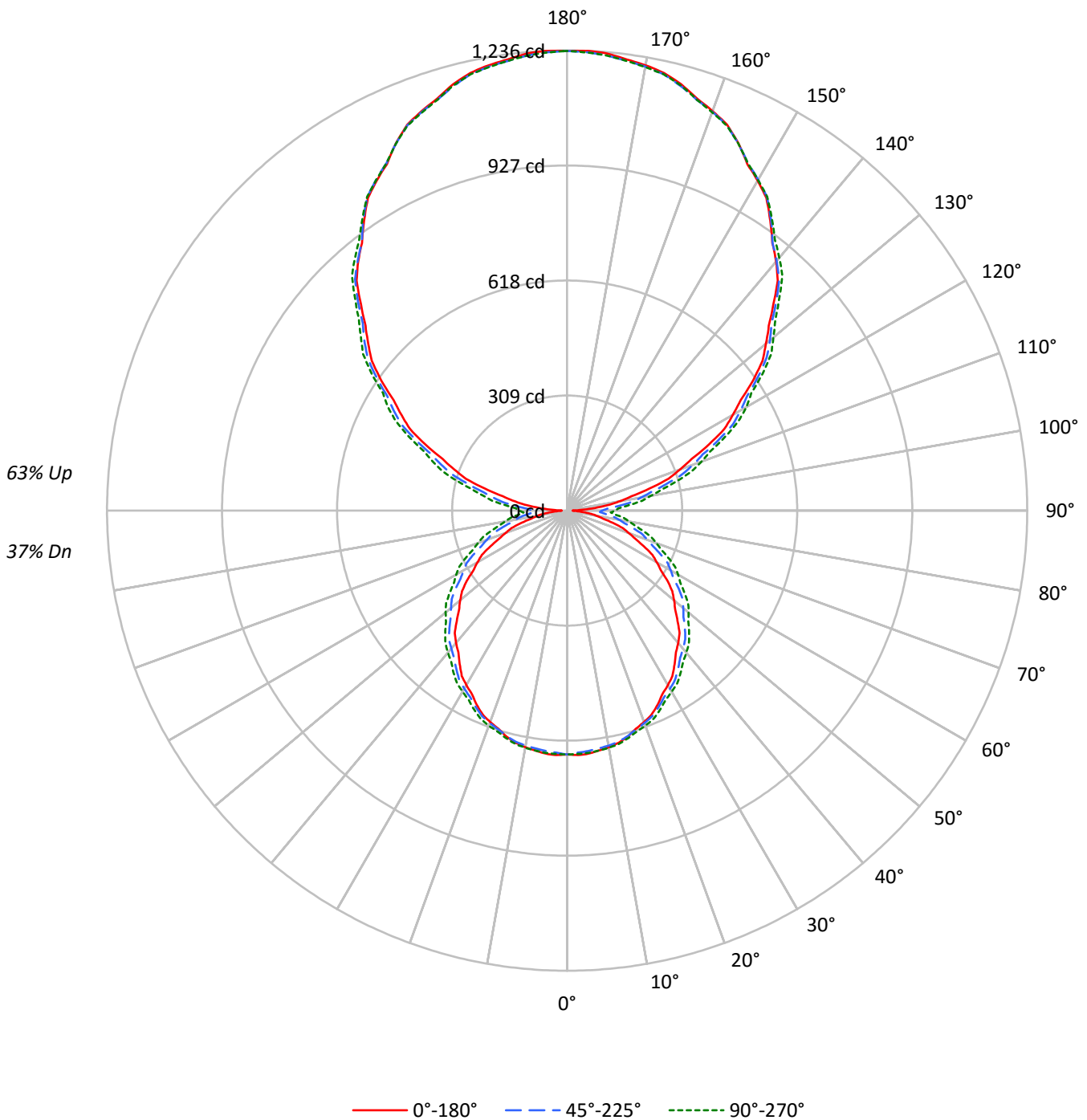
Input Watts (W): 45.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332760-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-D1

### Luminous Intensity Polar Plot





TEST NUMBER: P332760-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-D1

**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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37
1	94	89	85	82	85	81	78	74	65	63	61	51	49	48	37	36	35	29
2	85	78	71	66	77	70	65	60	57	53	50	44	41	39	32	31	29	24
3	78	68	60	55	70	62	55	50	50	45	41	39	35	33	29	26	24	20
4	71	60	52	46	64	54	47	42	44	39	35	34	31	28	25	23	21	17
5	65	53	45	39	58	48	41	36	39	34	30	31	27	24	23	20	18	14
6	60	47	39	34	54	43	36	31	35	30	26	28	24	21	21	18	16	13
7	55	43	35	29	50	39	32	27	32	26	23	25	21	18	19	16	14	11
8	51	39	31	26	46	35	28	24	29	24	20	23	19	16	17	14	12	10
9	47	35	28	23	43	32	26	21	26	21	18	21	17	14	16	13	11	9
10	44	32	25	20	40	29	23	19	24	19	16	19	16	13	15	12	10	8

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

	0°	45°	90°
0°	5288	5288	5288
5°	5304	5168	5182
10°	5272	5083	5079
15°	5225	4985	4958
20°	5153	4877	4840
25°	5073	4756	4710
30°	4986	4636	4576
35°	4887	4512	4460
40°	4809	4395	4338
45°	4692	4287	4233
50°	4593	4163	4123
55°	4491	4045	3993
60°	4332	3894	3876
65°	4156	3735	3731
70°	3945	3551	3561
75°	3649	3349	3408
80°	3322	3156	3259
85°	2903	2980	3172



TEST NUMBER: P332760-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-D1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.0	1.1
10°-20°	177.7	3.1
20°-30°	268.7	4.7
30°-40°	325.1	5.7
40°-50°	343.7	6.1
50°-60°	323.5	5.7
60°-70°	268.4	4.7
70°-80°	188.5	3.3
80°-90°	110.3	1.9
90°-100°	144.7	2.6
100°-110°	288.1	5.1
110°-120°	440.9	7.8
120°-130°	557.6	9.8
130°-140°	614.0	10.8
140°-150°	597.3	10.6
150°-160°	501.1	8.9
160°-170°	333.4	5.9
170°-180°	116.7	2.1
0°-30°	508.4	9.0
0°-40°	833.5	14.7
0°-60°	1500.7	26.5
0°-90°	2067.8	36.5
90°-120°	873.7	15.4
90°-150°	2642.6	46.7
90°-180°	3594.0	63.5
0°-180°	5661.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	656	653	648	654	654	62
15°	629	629	627	633	633	177
25°	575	579	582	589	590	265
35°	503	512	519	529	532	315
45°	420	433	447	459	464	324
55°	329	344	366	380	385	293
65°	227	251	276	293	300	225
75°	126	153	184	204	211	134
85°	39	70	103	124	132	41
90°	15	54	94	120	128	11
95°	67	100	136	158	166	71
105°	229	246	276	296	306	244
115°	421	428	449	463	468	415
125°	609	610	626	637	640	543
135°	783	789	794	804	806	606
145°	951	954	955	958	958	595
155°	1088	1088	1088	1091	1088	501
165°	1185	1182	1180	1185	1182	334
175°	1233	1228	1227	1233	1227	117
180°	1235	1235	1235	1235	1235	



TEST NUMBER: P332760-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	657.3	657.0	656.6	656.1	655.7	655.1	654.0	653.0	651.9	650.8	651.8
5°	655.7	655.3	654.7	654.2	653.7	652.9	651.8	650.6	649.5	648.4	649.7
7.5°	650.2	649.8	649.5	649.2	648.9	648.4	647.4	646.5	645.5	644.5	646.0
10°	645.5	645.3	645.1	645.0	644.8	644.3	643.5	642.6	641.9	641.0	642.5
12.5°	638.9	638.9	638.9	638.9	638.9	638.6	638.0	637.4	636.9	636.3	637.6
15°	628.6	628.8	628.9	629.1	629.2	629.1	628.6	628.1	627.5	627.1	628.6
17.5°	614.3	614.8	615.3	615.8	616.3	616.5	616.4	616.3	616.2	616.1	617.6
20°	604.4	604.8	605.3	605.9	606.3	606.6	606.8	607.0	607.1	607.3	608.9
22.5°	593.2	593.8	594.5	595.0	595.7	596.2	596.4	596.7	597.0	597.3	599.0
25°	575.0	576.0	577.0	578.0	578.9	579.7	580.1	580.6	581.2	581.6	583.4
27.5°	554.8	556.2	557.6	559.1	560.5	561.6	562.3	563.1	563.8	564.6	566.3
30°	541.3	542.6	543.8	545.2	546.5	547.7	548.8	550.0	551.1	552.3	554.1
32.5°	526.6	528.2	529.7	531.3	532.9	534.3	535.6	536.9	538.1	539.4	541.4
35°	503.1	505.1	507.1	509.0	511.0	512.7	514.3	516.0	517.6	519.2	521.6
37.5°	479.6	481.7	484.0	486.3	488.5	490.7	492.7	494.7	496.7	498.7	501.1
40°	464.3	466.4	468.5	470.6	472.8	474.9	477.2	479.5	481.8	484.1	486.5
42.5°	446.7	449.0	451.4	453.8	456.2	458.7	461.4	464.0	466.7	469.4	472.1
45°	419.5	422.6	425.7	428.9	431.9	435.0	438.1	441.2	444.3	447.4	450.2
47.5°	393.6	396.7	399.9	403.1	406.3	409.7	413.3	416.9	420.5	424.0	427.0
50°	374.8	378.3	381.9	385.6	389.2	392.8	396.3	399.9	403.5	407.1	410.3
52.5°	356.0	359.6	363.2	366.7	370.3	374.2	378.3	382.4	386.5	390.6	393.9
55°	328.6	332.0	335.5	338.8	342.2	346.4	351.3	356.2	361.1	366.0	369.3
57.5°	297.9	302.2	306.4	310.7	314.9	319.4	324.2	329.1	334.0	338.8	342.7
60°	278.0	282.2	286.4	290.7	294.9	299.7	305.1	310.5	315.8	321.2	325.0
62.5°	258.6	263.3	267.9	272.5	277.1	282.1	287.5	292.8	298.3	303.7	307.4
65°	227.3	232.6	237.8	243.0	248.3	253.6	259.1	264.7	270.2	275.8	279.8
67.5°	197.3	202.8	208.4	214.0	219.4	225.2	231.1	237.0	243.0	248.9	253.1
70°	176.7	182.3	187.8	193.4	199.0	204.8	210.9	217.2	223.4	229.6	233.9
72.5°	156.8	162.5	168.1	173.8	179.5	185.6	192.2	198.8	205.4	212.0	216.2
75°	126.1	132.1	138.2	144.2	150.2	156.7	163.5	170.4	177.3	184.1	188.7
77.5°	97.6	104.0	110.4	116.7	123.1	129.9	137.0	144.2	151.4	158.5	163.2
80°	79.9	86.4	93.0	99.5	106.0	112.8	120.1	127.2	134.4	141.6	146.5
82.5°	62.3	69.1	75.9	82.7	89.4	96.4	103.6	110.7	117.9	125.2	130.2
85°	38.8	45.7	52.6	59.4	66.3	73.3	80.7	88.0	95.4	102.6	107.5
87.5°	22.2	29.4	36.5	43.6	50.7	58.1	65.5	73.0	80.5	87.9	92.9
90°	14.6	23.5	32.3	41.2	50.0	58.8	67.5	76.3	84.9	93.6	99.6
92.5°	31.6	40.2	48.6	57.2	65.8	74.1	82.3	90.5	98.7	106.9	112.3
95°	66.8	74.1	81.4	88.7	96.0	103.7	111.9	120.1	128.2	136.4	141.4
97.5°	108.7	114.9	121.0	127.1	133.4	140.6	148.9	157.3	165.7	174.0	179.1
100°	141.8	146.8	151.9	157.0	162.1	168.8	177.0	185.3	193.6	201.8	206.7
102.5°	176.9	181.0	185.0	189.1	193.1	199.2	207.1	215.1	223.0	231.0	235.8
105°	229.0	232.5	236.0	239.5	243.0	248.2	255.1	261.9	268.8	275.7	280.4
107.5°	285.3	288.2	291.2	294.1	297.0	301.3	307.2	313.0	318.9	324.7	329.3
110°	322.9	325.6	328.3	331.0	333.7	337.8	343.3	348.7	354.3	359.8	363.1



TEST NUMBER: P332760-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	362.0	364.1	366.2	368.3	370.4	374.0	379.1	384.2	389.2	394.3	397.8
115°	420.8	422.2	423.7	425.1	426.6	429.7	434.5	439.3	444.1	448.8	452.2
117.5°	476.7	477.8	478.8	479.8	480.9	483.7	488.2	492.9	497.4	501.9	504.6
120°	513.6	514.9	516.2	517.6	518.9	521.6	525.8	529.8	533.9	538.0	540.2
122.5°	552.5	553.0	553.4	553.8	554.2	556.6	560.7	564.9	569.1	573.3	575.8
125°	609.3	609.1	608.9	608.8	608.6	610.5	614.3	618.2	622.1	625.9	628.6
127.5°	661.3	661.8	662.2	662.7	663.2	664.8	667.6	670.3	673.2	675.9	678.4
130°	697.3	697.8	698.2	698.7	699.2	700.8	703.3	706.0	708.6	711.1	713.7
132.5°	734.7	735.1	735.4	735.7	735.9	737.1	739.0	740.9	742.8	744.7	747.2
135°	783.4	784.8	786.0	787.3	788.5	789.8	790.9	792.0	793.2	794.4	796.5
137.5°	837.4	837.7	838.2	838.6	839.1	839.7	840.7	841.5	842.4	843.3	845.1
140°	873.3	873.5	873.7	874.0	874.3	874.5	874.7	874.8	875.0	875.2	877.0
142.5°	905.5	905.9	906.3	906.6	907.1	907.1	906.8	906.6	906.3	906.1	907.9
145°	950.8	951.5	952.2	952.8	953.6	953.9	954.2	954.4	954.6	954.8	955.6
147.5°	995.9	996.7	997.6	998.4	999.3	999.7	999.5	999.3	999.1	998.9	998.9
150°	1023.3	1024.1	1024.7	1025.4	1026.1	1026.4	1026.4	1026.4	1026.4	1026.4	1026.4
152.5°	1048.8	1049.2	1049.7	1050.2	1050.7	1050.9	1051.1	1051.3	1051.5	1051.7	1052.2
155°	1088.5	1088.5	1088.5	1088.5	1088.5	1088.4	1088.2	1088.0	1087.8	1087.6	1088.4
157.5°	1122.1	1121.7	1121.3	1121.0	1120.6	1120.4	1120.3	1120.3	1120.2	1120.2	1120.9
160°	1142.0	1141.8	1141.5	1141.3	1141.1	1140.9	1140.7	1140.5	1140.3	1140.1	1140.7
162.5°	1160.3	1159.8	1159.2	1158.7	1158.1	1157.7	1157.5	1157.3	1157.1	1156.9	1158.0
165°	1185.0	1184.3	1183.6	1183.1	1182.4	1181.9	1181.5	1181.0	1180.6	1180.2	1181.5
167.5°	1203.8	1203.0	1202.1	1201.2	1200.3	1199.9	1200.0	1200.0	1200.0	1200.0	1201.3
170°	1214.6	1213.5	1212.4	1211.4	1210.3	1209.8	1210.1	1210.3	1210.5	1210.7	1212.0
172.5°	1222.2	1221.3	1220.4	1219.6	1218.6	1218.2	1218.2	1218.3	1218.3	1218.3	1219.8
175°	1232.7	1231.6	1230.6	1229.5	1228.4	1227.9	1227.6	1227.4	1227.2	1227.0	1228.4
177.5°	1236.1	1235.3	1234.4	1233.6	1232.8	1232.3	1232.3	1232.3	1232.3	1232.3	1233.5
180°	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6



TEST NUMBER: P332760-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	655.0	655.0	655.0	655.0	655.0	655.0	655.0	655.0
2.5°	652.7	653.6	654.5	654.9	654.8	654.6	654.5	654.4
5°	651.0	652.2	653.6	654.1	654.0	653.8	653.7	653.5
7.5°	647.5	648.9	650.4	651.1	650.9	650.7	650.5	650.4
10°	643.9	645.5	646.9	647.5	647.4	647.2	647.1	646.9
12.5°	639.0	640.4	641.7	642.3	642.3	642.2	642.2	642.2
15°	630.0	631.5	632.9	633.6	633.5	633.3	633.1	632.9
17.5°	619.1	620.6	622.1	622.7	622.6	622.5	622.4	622.3
20°	610.6	612.2	613.8	614.6	614.6	614.6	614.6	614.6
22.5°	600.6	602.2	603.8	604.8	605.0	605.3	605.6	605.9
25°	585.2	587.0	588.8	589.7	589.9	590.1	590.2	590.4
27.5°	568.0	569.6	571.3	572.2	572.4	572.6	572.8	573.0
30°	555.9	557.7	559.5	560.5	560.8	561.2	561.5	561.8
32.5°	543.5	545.5	547.6	548.7	549.1	549.4	549.8	550.1
35°	523.9	526.1	528.4	529.8	530.3	530.7	531.2	531.8
37.5°	503.4	505.7	508.0	509.4	509.9	510.5	511.0	511.5
40°	489.0	491.4	493.9	495.4	496.1	496.7	497.4	498.0
42.5°	474.9	477.5	480.2	481.8	482.4	482.9	483.4	483.9
45°	453.0	455.7	458.5	460.2	461.1	461.9	462.7	463.5
47.5°	429.8	432.7	435.5	437.4	438.5	439.4	440.5	441.4
50°	413.6	416.9	420.1	422.3	423.2	424.1	425.2	426.1
52.5°	397.2	400.4	403.7	405.8	406.8	407.7	408.7	409.7
55°	372.5	375.8	379.0	381.2	382.1	383.1	384.1	385.0
57.5°	346.6	350.5	354.4	356.8	357.7	358.5	359.5	360.4
60°	328.8	332.5	336.2	338.7	340.1	341.4	342.7	344.0
62.5°	311.1	314.9	318.7	321.1	322.4	323.8	325.1	326.4
65°	283.9	288.0	292.1	294.7	296.1	297.4	298.7	300.0
67.5°	257.2	261.4	265.5	268.2	269.5	270.7	272.0	273.2
70°	238.4	242.8	247.1	250.0	251.1	252.2	253.4	254.5
72.5°	220.5	224.8	229.0	231.8	233.1	234.3	235.6	236.9
75°	193.2	197.7	202.4	205.4	206.8	208.3	209.8	211.2
77.5°	167.9	172.5	177.1	180.2	181.7	183.3	184.8	186.4
80°	151.4	156.2	161.1	164.2	165.5	166.8	168.1	169.5
82.5°	135.2	140.2	145.2	148.5	149.9	151.3	152.7	154.2
85°	112.4	117.3	122.2	125.5	127.1	128.8	130.4	132.1
87.5°	97.9	102.9	107.9	111.1	112.6	114.1	115.6	117.3
90°	105.7	111.6	117.6	121.5	123.2	125.0	126.7	128.4
92.5°	117.6	123.0	128.4	131.8	133.4	134.9	136.5	138.1
95°	146.5	151.5	156.6	159.8	161.3	162.7	164.2	165.6
97.5°	184.1	189.2	194.2	197.4	198.8	200.2	201.6	203.0
100°	211.5	216.3	221.1	224.1	225.3	226.4	227.5	228.7
102.5°	240.7	245.5	250.4	253.5	255.1	256.5	257.9	259.4
105°	285.1	289.8	294.5	297.8	299.7	301.7	303.7	305.6
107.5°	333.8	338.5	343.1	346.0	347.1	348.3	349.4	350.5
110°	366.5	369.8	373.1	375.7	377.7	379.6	381.5	383.4





TEST NUMBER: P332760-830

CATALOG NUMBER: S124DIW-S575D1050U830-4F0-1E-UDD-D1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	401.3	404.8	408.4	410.9	412.3	413.8	415.2	416.6
115°	455.6	459.0	462.4	464.5	465.4	466.4	467.3	468.3
117.5°	507.3	509.9	512.6	514.4	515.3	516.1	517.1	517.9
120°	542.3	544.6	546.8	548.7	550.4	552.2	553.9	555.6
122.5°	578.3	580.9	583.4	584.8	585.2	585.7	586.1	586.5
125°	631.2	634.0	636.6	638.2	638.8	639.3	639.9	640.5
127.5°	681.0	683.4	686.0	687.6	688.3	689.2	689.9	690.7
130°	716.2	718.7	721.2	722.6	722.6	722.8	722.9	723.0
132.5°	749.5	751.9	754.2	755.7	756.4	757.1	757.7	758.3
135°	798.7	800.9	803.0	804.4	804.6	805.0	805.4	805.7
137.5°	847.0	848.8	850.6	852.0	852.9	853.8	854.8	855.7
140°	878.9	880.9	882.8	884.0	884.7	885.2	885.8	886.5
142.5°	909.6	911.5	913.3	914.5	915.2	915.9	916.4	917.1
145°	956.4	957.2	957.9	958.3	958.3	958.3	958.4	958.4
147.5°	998.9	998.8	998.8	998.9	999.2	999.6	999.8	1000.1
150°	1026.4	1026.4	1026.4	1026.3	1026.1	1026.0	1025.7	1025.5
152.5°	1052.6	1053.2	1053.7	1053.7	1053.1	1052.5	1052.0	1051.5
155°	1089.3	1090.1	1091.0	1091.0	1090.1	1089.3	1088.4	1087.6
157.5°	1121.5	1122.1	1122.8	1122.8	1122.0	1121.2	1120.6	1119.8
160°	1141.3	1142.0	1142.6	1142.4	1141.3	1140.3	1139.3	1138.1
162.5°	1159.1	1160.3	1161.5	1161.5	1160.5	1159.4	1158.3	1157.3
165°	1182.7	1184.0	1185.2	1185.4	1184.6	1183.7	1182.9	1182.0
167.5°	1202.6	1203.8	1205.1	1205.1	1203.8	1202.5	1201.2	1199.9
170°	1213.2	1214.6	1215.8	1215.7	1214.3	1212.8	1211.3	1209.8
172.5°	1221.3	1222.7	1224.2	1224.1	1222.7	1221.2	1219.7	1218.1
175°	1229.9	1231.4	1232.9	1232.9	1231.4	1229.9	1228.4	1227.0
177.5°	1234.7	1235.9	1237.1	1237.0	1235.6	1234.3	1232.9	1231.5
180°	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6	1234.6

(END OF REPORT)