

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: P332753-930

Luminaire Tested: **S124DIW-S575D770U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332753-930  
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-S575D770U930-4F0-1E-UDD-D  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4436.5 lumens  
Efficiency: N/A  
Efficacy: 118.0 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: General Diffuse

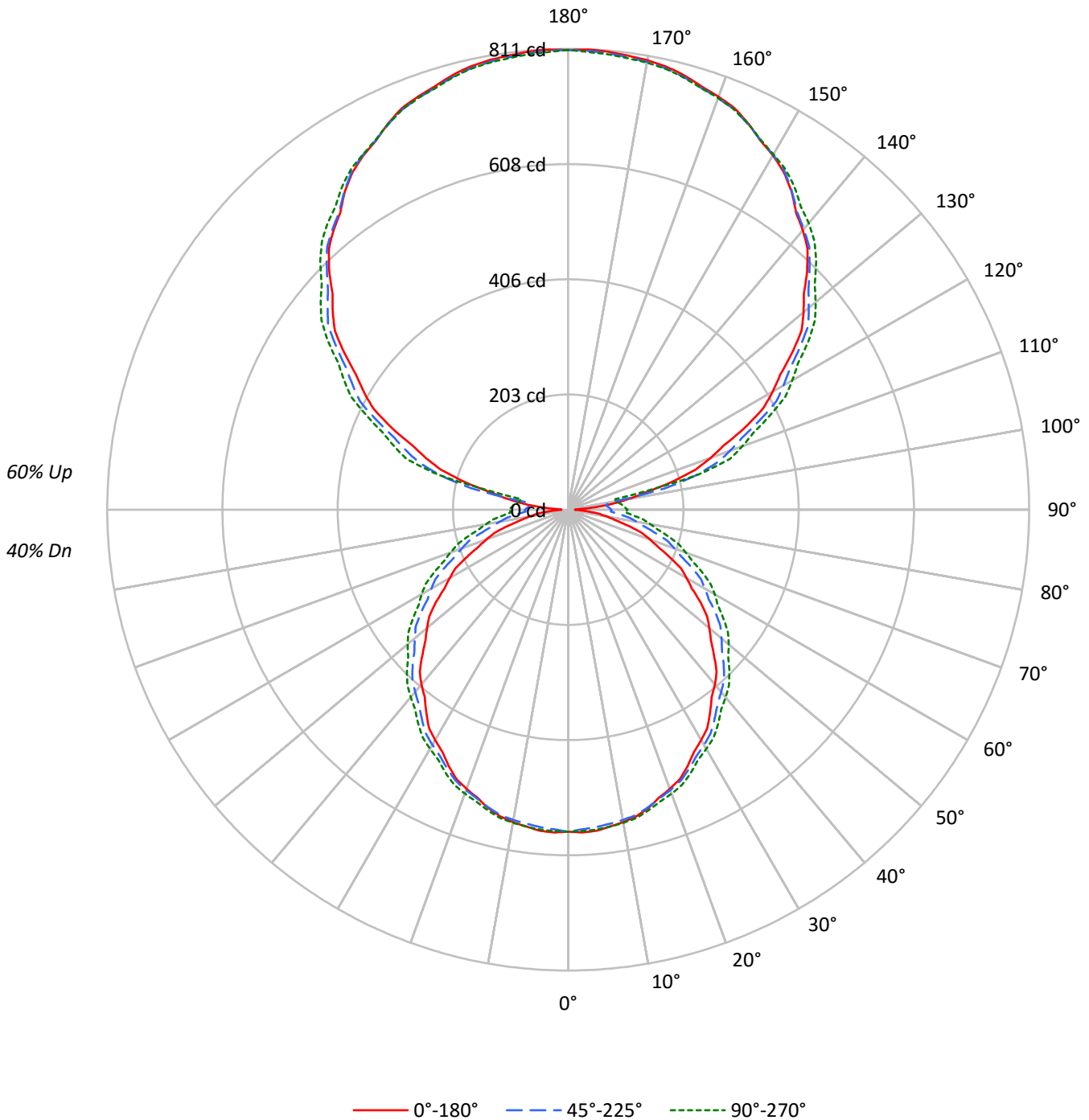
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332753-930

CATALOG NUMBER: S124DIW-S575D770U930-4F0-1E-UDD-D

### Luminous Intensity Polar Plot





TEST NUMBER: P332753-930

CATALOG NUMBER: S124DIW-S575D770U930-4F0-1E-UDD-D

**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	105	105	105	105	95	95	95	95	78	78	78	62	62	62	47	47	47	40
1	95	90	86	82	86	82	79	75	67	65	62	53	51	50	40	39	38	32
2	86	78	72	66	78	71	66	61	58	54	51	46	43	41	35	33	32	26
3	78	68	61	55	71	62	56	51	51	46	42	41	37	34	31	28	26	22
4	71	60	52	46	65	55	48	43	45	40	36	36	32	29	27	25	23	19
5	65	54	45	39	59	49	42	36	40	35	31	32	28	25	24	22	19	16
6	60	48	40	34	54	44	37	31	36	31	26	29	25	22	22	19	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	20	17	15	12
8	51	39	31	26	47	36	29	24	30	24	20	24	20	17	18	16	13	11
9	48	35	28	23	43	33	26	21	27	22	18	22	18	15	17	14	12	10
10	45	32	25	20	40	30	23	19	25	20	16	20	16	14	16	13	11	9

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

	0°	45°	90°
0°	4574	4574	4574
5°	4588	4470	4482
10°	4560	4397	4393
15°	4519	4312	4289
20°	4458	4219	4187
25°	4388	4114	4074
30°	4313	4011	3959
35°	4227	3903	3858
40°	4160	3802	3753
45°	4059	3708	3663
50°	3973	3600	3567
55°	3884	3499	3454
60°	3746	3369	3353
65°	3597	3231	3227
70°	3414	3072	3080
75°	3157	2896	2948
80°	2873	2730	2819
85°	2514	2579	2742



TEST NUMBER: P332753-930

CATALOG NUMBER: S124DIW-S575D770U930-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.6	1.2
10°-20°	153.7	3.5
20°-30°	232.4	5.2
30°-40°	281.2	6.3
40°-50°	297.3	6.7
50°-60°	279.8	6.3
60°-70°	232.1	5.2
70°-80°	163.1	3.7
80°-90°	94.5	2.1
90°-100°	82.4	1.9
100°-110°	217.0	4.9
110°-120°	364.7	8.2
120°-130°	443.8	10.0
130°-140°	465.1	10.5
140°-150°	430.1	9.7
150°-160°	345.7	7.8
160°-170°	223.0	5.0
170°-180°	76.9	1.7
0°-30°	439.8	9.9
0°-40°	721.0	16.3
0°-60°	1298.1	29.3
0°-90°	1787.8	40.3
90°-120°	664.1	15.0
90°-150°	2003.1	45.2
90°-180°	2649.0	59.7
0°-180°	4436.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	567	565	561	566	565	54
15°	544	544	542	548	548	153
25°	497	501	503	510	511	229
35°	435	443	449	458	460	272
45°	363	375	387	397	401	280
55°	284	298	317	329	333	253
65°	197	217	239	254	260	195
75°	109	133	159	176	183	116
85°	34	60	89	107	114	36
90°	12	44	76	97	104	8
95°	42	43	68	88	96	49
105°	188	205	231	250	235	197
115°	344	352	371	386	391	339
125°	481	483	497	510	515	429
135°	594	594	601	612	617	458
145°	684	686	686	690	694	428
155°	750	750	749	751	749	346
165°	791	788	788	792	787	223
175°	809	806	806	811	804	77
180°	809	809	809	809	809	



TEST NUMBER: P332753-930

CATALOG NUMBER: S124DIW-S575D770U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	568.6	568.3	567.9	567.5	567.2	566.6	565.7	564.8	563.9	563.0	563.8
5°	567.2	566.8	566.3	565.9	565.5	564.8	563.8	562.8	561.8	560.8	562.0
7.5°	562.4	562.1	561.8	561.6	561.3	560.8	560.0	559.2	558.3	557.5	558.8
10°	558.3	558.2	558.0	557.9	557.7	557.3	556.6	555.9	555.2	554.5	555.8
12.5°	552.7	552.7	552.7	552.6	552.6	552.4	551.9	551.4	550.9	550.4	551.5
15°	543.7	543.9	544.0	544.1	544.3	544.1	543.7	543.3	542.8	542.4	543.7
17.5°	531.4	531.8	532.2	532.6	533.1	533.3	533.2	533.1	533.0	533.0	534.2
20°	522.8	523.2	523.6	524.1	524.5	524.7	524.9	525.1	525.1	525.3	526.7
22.5°	513.1	513.6	514.2	514.7	515.3	515.7	515.9	516.2	516.4	516.7	518.1
25°	497.4	498.2	499.1	499.9	500.8	501.4	501.8	502.2	502.7	503.1	504.7
27.5°	479.9	481.1	482.3	483.6	484.9	485.8	486.4	487.1	487.7	488.4	489.8
30°	468.2	469.4	470.4	471.6	472.7	473.8	474.7	475.7	476.7	477.8	479.3
32.5°	455.5	456.9	458.2	459.6	461.0	462.2	463.3	464.4	465.5	466.6	468.3
35°	435.2	436.9	438.6	440.3	442.0	443.5	444.9	446.4	447.8	449.1	451.2
37.5°	414.8	416.7	418.7	420.6	422.6	424.4	426.2	428.0	429.7	431.4	433.4
40°	401.6	403.4	405.3	407.1	409.0	410.8	412.8	414.7	416.8	418.7	420.9
42.5°	386.4	388.4	390.4	392.6	394.6	396.8	399.1	401.4	403.7	406.0	408.4
45°	362.9	365.6	368.3	371.0	373.6	376.3	379.0	381.6	384.3	387.0	389.4
47.5°	340.5	343.2	345.9	348.7	351.5	354.4	357.5	360.6	363.7	366.8	369.3
50°	324.2	327.3	330.4	333.5	336.6	339.7	342.8	345.9	349.0	352.1	354.9
52.5°	307.9	311.0	314.1	317.2	320.3	323.7	327.3	330.8	334.4	337.9	340.7
55°	284.2	287.1	290.2	293.1	296.0	299.6	303.9	308.1	312.3	316.6	319.4
57.5°	257.7	261.4	265.1	268.7	272.4	276.3	280.5	284.7	288.9	293.1	296.4
60°	240.4	244.1	247.8	251.4	255.1	259.3	263.9	268.6	273.2	277.9	281.1
62.5°	223.7	227.7	231.7	235.7	239.7	244.0	248.7	253.3	258.0	262.7	265.9
65°	196.7	201.2	205.7	210.2	214.7	219.4	224.1	228.9	233.7	238.6	242.1
67.5°	170.6	175.5	180.3	185.1	189.8	194.8	199.9	205.0	210.2	215.3	218.9
70°	152.9	157.7	162.5	167.3	172.1	177.2	182.5	187.8	193.2	198.6	202.4
72.5°	135.7	140.6	145.4	150.3	155.2	160.5	166.2	171.9	177.7	183.4	187.0
75°	109.1	114.3	119.5	124.7	130.0	135.6	141.5	147.4	153.4	159.2	163.2
77.5°	84.4	89.9	95.5	100.9	106.5	112.3	118.5	124.7	130.9	137.1	141.1
80°	69.1	74.8	80.5	86.1	91.7	97.6	103.9	110.1	116.3	122.5	126.7
82.5°	53.9	59.8	65.6	71.5	77.4	83.4	89.6	95.8	102.0	108.3	112.6
85°	33.6	39.5	45.5	51.4	57.3	63.4	69.8	76.1	82.5	88.8	93.0
87.5°	19.2	25.2	31.2	37.3	43.4	49.6	55.9	62.4	68.7	75.1	79.3
90°	12.0	19.1	26.2	33.3	40.4	47.5	54.7	61.9	69.0	76.1	81.0
92.5°	17.3	22.4	27.6	32.8	37.9	44.0	51.2	58.3	65.5	72.6	77.4
95°	41.5	41.6	41.7	41.7	41.8	44.8	50.8	56.7	62.6	68.5	73.1
97.5°	78.2	85.0	91.9	98.7	105.6	104.4	95.1	85.8	76.6	67.3	71.0
100°	106.2	112.3	118.4	124.5	130.6	127.1	114.1	100.9	87.9	74.8	76.4
102.5°	138.2	143.2	148.1	153.1	158.2	162.1	165.1	168.0	171.0	174.0	153.0
105°	187.8	191.5	195.1	198.8	202.4	207.2	213.0	218.9	224.8	230.7	235.5
107.5°	235.1	237.8	240.5	243.2	245.9	250.2	256.1	261.9	267.7	273.6	277.7
110°	266.5	268.9	271.3	273.6	276.1	280.1	285.8	291.6	297.3	303.0	306.6



TEST NUMBER: P332753-930

CATALOG NUMBER: S124DIW-S575D770U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	297.0	299.5	301.9	304.4	306.9	310.7	315.8	320.8	326.0	331.0	334.1
115°	343.9	345.6	347.2	348.9	350.6	353.6	358.0	362.4	366.8	371.1	374.5
117.5°	386.8	388.1	389.4	390.7	392.0	394.8	399.3	403.8	408.4	412.9	415.7
120°	415.3	416.3	417.2	418.2	419.1	421.6	425.6	429.5	433.5	437.4	440.5
122.5°	442.4	442.8	443.2	443.6	444.0	446.3	450.3	454.4	458.4	462.5	465.5
125°	480.6	481.0	481.4	481.8	482.2	484.0	487.3	490.6	493.8	497.1	500.2
127.5°	517.3	517.3	517.3	517.3	517.3	518.9	522.3	525.6	528.9	532.2	534.7
130°	540.5	540.5	540.5	540.5	540.5	541.8	544.5	547.1	549.8	552.4	555.1
132.5°	562.3	562.4	562.5	562.6	562.7	563.9	566.2	568.6	570.9	573.2	575.8
135°	594.4	594.2	594.1	593.9	593.8	594.5	596.1	597.5	599.1	600.6	603.2
137.5°	623.3	623.2	623.1	623.1	623.0	623.5	624.5	625.6	626.6	627.7	630.1
140°	642.1	642.3	642.5	642.5	642.7	642.9	643.4	643.8	644.2	644.6	646.8
142.5°	658.6	659.1	659.5	660.0	660.4	660.7	660.8	660.9	660.9	661.0	662.9
145°	684.5	684.8	685.0	685.3	685.5	685.7	685.7	685.7	685.7	685.7	686.6
147.5°	705.2	705.8	706.4	707.0	707.7	707.8	707.8	707.6	707.4	707.4	707.6
150°	720.2	720.6	721.0	721.4	721.8	721.9	721.8	721.6	721.5	721.4	721.4
152.5°	732.3	732.7	733.1	733.5	733.9	733.9	733.7	733.5	733.3	733.0	733.2
155°	749.8	750.0	750.1	750.2	750.4	750.2	749.8	749.4	749.0	748.6	749.2
157.5°	764.8	764.7	764.6	764.5	764.4	764.1	763.7	763.2	762.7	762.3	763.0
160°	773.4	773.0	772.7	772.3	771.8	771.5	771.4	771.3	771.1	771.0	771.8
162.5°	781.1	780.6	780.2	779.7	779.1	778.8	778.7	778.5	778.4	778.3	779.1
165°	791.0	790.3	789.6	789.0	788.3	788.0	788.0	788.0	788.0	788.0	789.0
167.5°	798.7	798.0	797.4	796.6	795.9	795.6	795.5	795.4	795.3	795.2	796.4
170°	803.1	802.3	801.4	800.6	799.9	799.5	799.6	799.8	799.9	800.1	801.1
172.5°	806.0	805.2	804.4	803.6	802.7	802.4	802.6	802.7	802.8	803.0	804.0
175°	809.1	808.3	807.6	806.7	805.9	805.6	805.7	805.8	806.0	806.1	807.3
177.5°	810.6	809.8	809.1	808.3	807.6	807.3	807.6	807.7	808.0	808.1	809.0
180°	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1



TEST NUMBER: P332753-930

CATALOG NUMBER: S124DIW-S575D770U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	566.6	566.6	566.6	566.6	566.6	566.6	566.6	566.6
2.5°	564.6	565.3	566.1	566.5	566.4	566.2	566.1	566.1
5°	563.1	564.2	565.3	565.8	565.7	565.6	565.4	565.2
7.5°	560.1	561.3	562.6	563.2	563.0	562.9	562.7	562.6
10°	557.0	558.3	559.5	560.1	560.0	559.9	559.7	559.5
12.5°	552.8	553.9	555.1	555.6	555.6	555.5	555.5	555.5
15°	544.9	546.3	547.5	548.0	548.0	547.8	547.6	547.5
17.5°	535.5	536.8	538.1	538.7	538.6	538.5	538.3	538.3
20°	528.2	529.5	530.9	531.7	531.7	531.7	531.7	531.7
22.5°	519.5	520.9	522.3	523.2	523.3	523.6	523.8	524.1
25°	506.2	507.8	509.3	510.1	510.3	510.5	510.5	510.7
27.5°	491.3	492.7	494.2	495.0	495.1	495.3	495.5	495.6
30°	480.9	482.4	484.0	484.9	485.1	485.4	485.7	486.0
32.5°	470.1	471.9	473.7	474.7	475.0	475.2	475.6	475.8
35°	453.1	455.1	457.1	458.3	458.7	459.1	459.5	460.0
37.5°	435.5	437.4	439.4	440.7	441.1	441.6	442.0	442.5
40°	423.0	425.1	427.2	428.5	429.1	429.7	430.2	430.8
42.5°	410.7	413.0	415.4	416.8	417.3	417.7	418.2	418.6
45°	391.8	394.2	396.6	398.1	398.8	399.6	400.2	401.0
47.5°	371.8	374.3	376.7	378.4	379.3	380.1	381.0	381.8
50°	357.8	360.6	363.4	365.3	366.1	366.9	367.8	368.6
52.5°	343.6	346.3	349.2	351.0	351.9	352.7	353.5	354.4
55°	322.2	325.1	327.8	329.7	330.5	331.4	332.2	333.0
57.5°	299.8	303.2	306.6	308.6	309.4	310.1	311.0	311.8
60°	284.4	287.6	290.8	293.0	294.2	295.3	296.4	297.6
62.5°	269.1	272.4	275.7	277.8	278.9	280.1	281.2	282.3
65°	245.6	249.2	252.7	254.9	256.1	257.2	258.4	259.5
67.5°	222.5	226.1	229.7	232.0	233.1	234.2	235.3	236.4
70°	206.2	210.0	213.8	216.2	217.2	218.2	219.2	220.1
72.5°	190.7	194.4	198.1	200.5	201.6	202.7	203.8	204.9
75°	167.1	171.0	175.0	177.7	178.9	180.2	181.5	182.7
77.5°	145.2	149.2	153.2	155.9	157.2	158.6	159.9	161.3
80°	130.9	135.1	139.3	142.0	143.2	144.3	145.4	146.6
82.5°	116.9	121.2	125.6	128.4	129.6	130.9	132.1	133.4
85°	97.3	101.5	105.7	108.6	110.0	111.4	112.8	114.2
87.5°	83.6	87.9	92.1	94.9	96.2	97.5	98.7	100.0
90°	85.9	90.8	95.7	98.8	100.3	101.7	103.1	104.4
92.5°	82.2	86.9	91.7	94.7	95.9	97.1	98.2	99.5
95°	77.7	82.3	87.0	90.0	91.4	92.8	94.2	95.6
97.5°	74.8	78.6	82.3	84.9	86.3	87.6	88.9	90.3
100°	77.9	79.4	81.0	82.3	83.4	84.5	85.6	86.7
102.5°	132.0	111.0	90.1	80.1	81.3	82.4	83.6	84.7
105°	240.2	244.9	249.6	250.1	246.5	242.7	239.0	235.3
107.5°	281.8	285.8	289.8	292.6	294.2	295.7	297.3	298.7
110°	310.1	313.6	317.1	319.6	321.1	322.7	324.2	325.7





TEST NUMBER: P332753-930

CATALOG NUMBER: S124DIW-S575D770U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	337.1	340.2	343.3	345.7	347.3	348.9	350.6	352.2
115°	377.9	381.2	384.7	386.8	387.8	388.8	389.8	390.8
117.5°	418.6	421.5	424.4	426.3	427.4	428.5	429.6	430.6
120°	443.6	446.7	449.8	451.8	452.6	453.5	454.4	455.2
122.5°	468.5	471.4	474.4	476.3	477.0	477.8	478.5	479.2
125°	503.2	506.3	509.4	511.4	512.4	513.4	514.4	515.4
127.5°	537.1	539.6	542.1	543.7	544.5	545.4	546.3	547.1
130°	557.8	560.4	563.1	564.9	565.7	566.6	567.4	568.3
132.5°	578.3	580.8	583.4	585.1	585.8	586.5	587.3	588.0
135°	605.7	608.2	610.7	612.5	613.7	614.7	615.9	617.0
137.5°	632.4	634.8	637.2	638.6	639.3	639.8	640.5	641.1
140°	649.1	651.3	653.5	655.1	655.9	656.7	657.6	658.4
142.5°	664.8	666.7	668.6	669.8	670.5	671.1	671.7	672.4
145°	687.6	688.6	689.6	690.5	691.4	692.2	693.0	693.8
147.5°	707.8	708.0	708.3	708.7	709.2	709.8	710.4	710.9
150°	721.4	721.4	721.4	721.5	721.6	721.7	721.9	721.9
152.5°	733.4	733.6	733.9	733.9	733.9	733.8	733.7	733.6
155°	749.7	750.2	750.7	750.8	750.4	750.0	749.6	749.3
157.5°	763.7	764.4	765.1	765.1	764.4	763.7	763.0	762.3
160°	772.7	773.4	774.2	774.2	773.4	772.7	771.8	771.0
162.5°	779.9	780.6	781.5	781.5	780.6	779.6	778.7	777.8
165°	790.1	791.2	792.2	792.2	791.0	789.8	788.6	787.3
167.5°	797.6	798.7	800.0	799.9	798.5	797.2	795.8	794.5
170°	802.2	803.3	804.4	804.2	802.9	801.5	800.2	798.8
172.5°	805.1	806.2	807.2	807.1	805.6	804.2	802.7	801.3
175°	808.5	809.8	811.0	810.7	809.1	807.6	805.9	804.3
177.5°	809.9	810.7	811.6	811.4	810.1	808.8	807.6	806.2
180°	809.1	809.1	809.1	809.1	809.1	809.1	809.1	809.1

(END OF REPORT)