

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: P331533-930

Luminaire Tested: **S122DIW-S675D710U930-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331533-930  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122DIW-S675D710U930-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 710 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4504.4 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

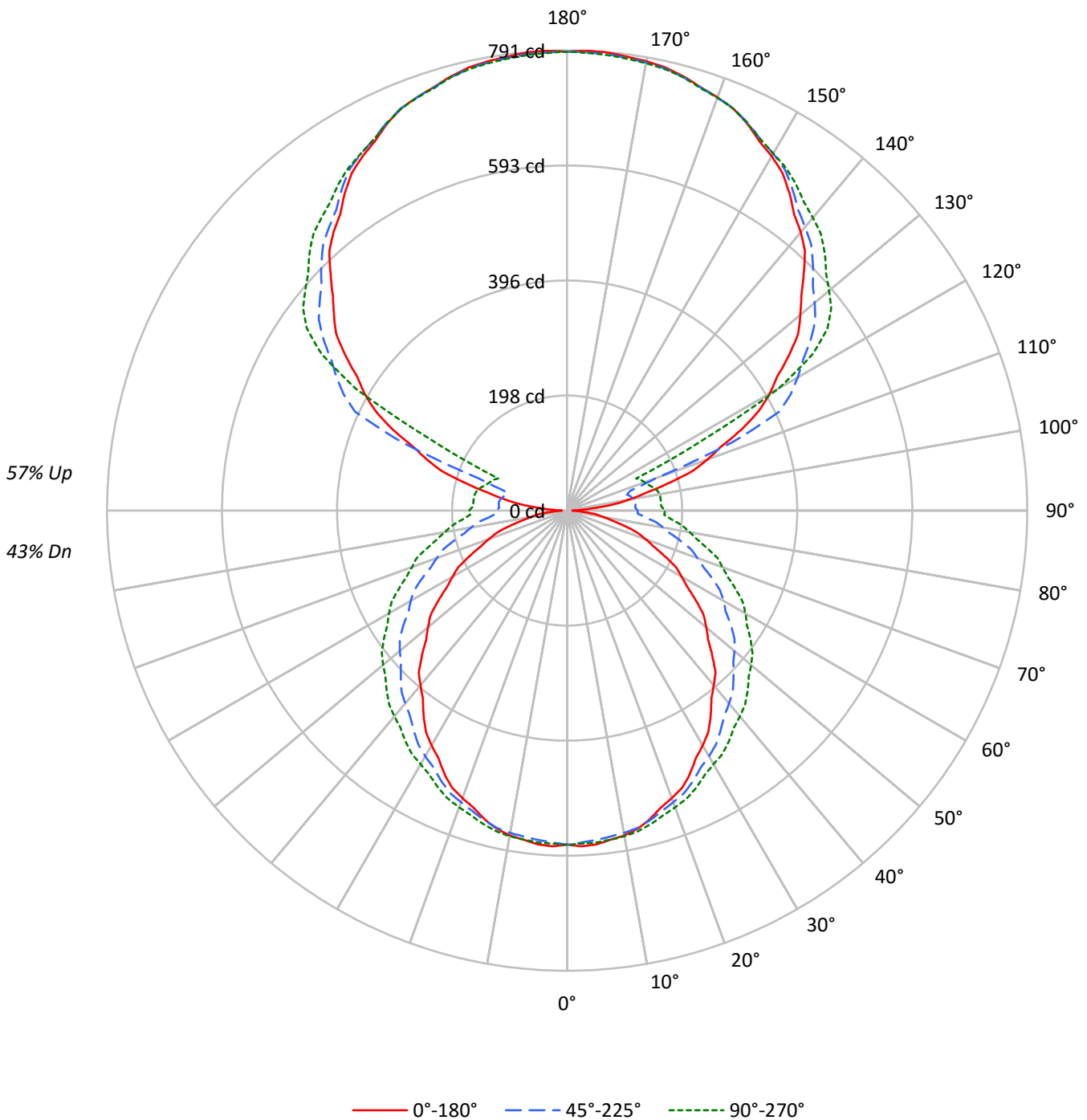
Input Watts (W): 45  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331533-930

CATALOG NUMBER: S122DIW-S675D710U930-4F0-1E-UDD-D

### 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	0
RCR																		
0	106	106	106	106	96	96	96	96	80	80	80	64	64	64	50	50	50	43
1	95	90	86	82	86	82	79	75	68	65	63	54	52	51	42	41	40	34
2	86	78	71	66	78	71	66	61	59	54	51	47	44	41	36	34	32	27
3	78	68	60	54	71	62	55	50	51	46	42	41	37	34	32	29	27	22
4	71	60	52	45	65	55	48	42	45	40	35	36	32	29	28	25	23	19
5	65	53	45	39	59	49	41	36	40	35	30	32	28	25	25	22	20	16
6	60	47	39	33	54	44	36	31	36	30	26	29	25	22	23	20	17	14
7	55	43	35	29	50	39	32	27	33	27	23	26	22	19	21	18	15	12
8	51	39	31	25	47	36	29	24	30	24	20	24	20	17	19	16	13	11
9	48	35	28	22	43	32	26	21	27	22	18	22	18	15	17	14	12	10
10	44	32	25	20	40	30	23	19	25	20	16	20	16	13	16	13	11	9

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

	0°	45°	90°
0°	9273	9273	9273
5°	9317	8925	8891
10°	9259	8661	8564
15°	9131	8383	8221
20°	8970	8083	7889
25°	8811	7795	7587
30°	8587	7498	7284
35°	8359	7211	7072
40°	8120	6969	6858
45°	7894	6750	6677
50°	7650	6553	6497
55°	7394	6340	6314
60°	7081	6122	6123
65°	6755	5864	5892
70°	6394	5587	5644
75°	5927	5315	5415
80°	5197	5036	5185
85°	4489	4797	5004



TEST NUMBER: P331533-930

CATALOG NUMBER: S122DIW-S675D710U930-4F0-1E-UDD-D

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.4	1.2
10°-20°	156.0	3.5
20°-30°	236.5	5.2
30°-40°	288.0	6.4
40°-50°	309.9	6.9
50°-60°	300.9	6.7
60°-70°	262.7	5.8
70°-80°	202.3	4.5
80°-90°	137.7	3.1
90°-100°	119.8	2.7
100°-110°	164.8	3.7
110°-120°	303.0	6.7
120°-130°	450.9	10.0
130°-140°	463.3	10.3
140°-150°	422.7	9.4
150°-160°	338.4	7.5
160°-170°	218.0	4.8
170°-180°	75.1	1.7
0°-30°	446.9	9.9
0°-40°	734.9	16.3
0°-60°	1345.7	29.9
0°-90°	1948.4	43.3
90°-120°	587.6	13.0
90°-150°	1924.6	42.7
90°-180°	2556.0	56.7
0°-180°	4504.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	573	568	573	573	55
15°	549	551	551	558	558	155
25°	499	505	513	522	525	229
35°	430	445	460	478	484	269
45°	353	376	404	429	439	272
55°	270	301	344	373	384	242
65°	185	226	275	308	320	183
75°	102	149	202	237	249	108
85°	30	82	135	168	181	32
90°	9	64	121	156	168	7
95°	44	66	118	151	162	51
105°	178	210	106	140	153	190
115°	332	352	402	174	131	326
125°	466	475	511	536	546	415
135°	575	584	598	620	626	444
145°	666	666	675	684	686	417
155°	733	729	735	738	734	338
165°	773	770	771	775	771	218
175°	790	787	788	791	786	75
180°	789	789	789	789	789	



TEST NUMBER: P331533-930

CATALOG NUMBER: S122DIW-S675D710U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	577.6	577.2	576.7	576.3	575.8	575.1	574.1	573.0	572.0	571.0	571.7
5°	575.9	575.4	574.9	574.3	573.7	572.9	571.8	570.7	569.6	568.4	569.6
7.5°	570.8	570.4	570.1	569.6	569.3	568.7	567.9	567.0	566.1	565.3	566.6
10°	566.8	566.4	566.1	565.7	565.3	564.8	564.3	563.8	563.2	562.6	564.1
12.5°	560.1	560.2	560.3	560.4	560.4	560.3	559.9	559.5	559.1	558.6	560.1
15°	549.3	549.7	550.1	550.4	550.8	551.0	551.0	551.0	551.0	551.0	552.6
17.5°	535.3	536.1	536.9	537.7	538.4	539.2	539.7	540.3	540.9	541.5	543.2
20°	526.0	526.9	527.8	528.8	529.7	530.5	531.2	532.1	532.8	533.5	535.6
22.5°	516.0	517.1	518.2	519.3	520.3	521.4	522.4	523.4	524.5	525.5	527.6
25°	499.4	500.7	502.0	503.3	504.6	506.1	507.7	509.4	511.0	512.7	514.9
27.5°	479.4	481.5	483.6	485.8	487.9	489.9	491.9	493.8	495.8	497.7	500.5
30°	466.1	468.5	470.9	473.3	475.7	478.1	480.5	482.9	485.3	487.7	490.6
32.5°	451.4	454.1	456.8	459.5	462.3	465.0	467.9	470.7	473.5	476.4	479.8
35°	430.3	433.4	436.6	439.7	442.9	446.2	449.7	453.2	456.7	460.2	464.3
37.5°	407.3	411.0	414.6	418.2	421.8	425.9	430.5	435.0	439.5	444.1	448.7
40°	392.0	396.1	400.1	404.2	408.3	412.8	417.8	422.8	427.8	432.8	437.6
42.5°	377.4	381.4	385.5	389.6	393.6	398.5	404.3	410.0	415.7	421.5	426.7
45°	352.9	357.9	362.9	367.9	372.8	378.6	385.1	391.6	398.0	404.5	410.3
47.5°	328.7	334.2	339.7	345.0	350.5	357.0	364.6	372.2	379.8	387.3	393.4
50°	312.1	317.9	323.6	329.3	335.0	342.1	350.4	358.7	367.0	375.4	381.6
52.5°	296.1	302.1	308.2	314.2	320.2	327.7	336.4	345.2	353.9	362.7	369.2
55°	270.5	277.1	283.8	290.5	297.1	305.2	314.9	324.5	334.1	343.7	350.4
57.5°	245.2	252.7	260.2	267.7	275.2	283.9	293.7	303.5	313.3	323.1	330.3
60°	227.2	235.1	243.1	251.1	259.0	268.3	278.8	289.3	299.9	310.5	317.5
62.5°	211.2	219.5	227.7	235.9	244.3	253.6	264.2	274.7	285.3	295.8	303.3
65°	184.7	193.8	202.9	212.0	221.0	231.0	241.9	252.8	263.7	274.7	282.3
67.5°	160.5	169.9	179.4	188.9	198.4	208.6	219.8	231.0	242.1	253.3	261.0
70°	143.2	152.8	162.4	172.0	181.6	192.2	203.7	215.1	226.6	238.1	246.0
72.5°	127.2	137.1	147.0	156.9	166.8	177.6	189.2	200.8	212.5	224.0	231.9
75°	102.4	112.8	123.1	133.5	143.8	154.9	166.7	178.6	190.4	202.3	210.2
77.5°	78.4	89.3	100.1	110.9	121.7	133.2	145.2	157.3	169.3	181.2	189.2
80°	62.5	73.7	85.0	96.3	107.5	119.2	131.3	143.2	155.2	167.3	175.0
82.5°	49.1	60.3	71.3	82.5	93.7	105.3	117.5	129.6	141.8	154.0	161.8
85°	30.0	41.4	52.9	64.3	75.8	87.5	99.3	111.1	123.0	134.9	142.6
87.5°	16.4	27.7	39.1	50.3	61.6	73.3	85.4	97.4	109.4	121.5	129.1
90°	8.9	21.0	33.1	45.2	57.4	69.9	82.8	95.6	108.4	121.3	129.3
92.5°	19.2	29.0	38.9	48.8	58.6	69.5	81.4	93.4	105.2	117.1	124.7
95°	43.8	48.3	52.7	57.3	61.8	70.0	82.0	94.0	106.0	118.0	125.6
97.5°	79.5	75.4	71.3	67.3	63.2	67.5	80.2	92.9	105.7	118.4	125.7
100°	106.9	96.3	85.8	75.3	64.7	65.7	78.2	90.7	103.2	115.8	123.6
102.5°	136.3	138.9	141.5	144.1	146.6	143.9	135.9	128.0	120.0	112.0	120.0
105°	177.7	186.9	196.0	205.2	214.3	206.4	181.4	156.4	131.4	106.4	114.2
107.5°	225.8	233.2	240.5	247.9	255.3	242.7	210.4	178.1	145.8	113.5	118.3
110°	256.2	262.5	268.9	275.2	281.6	271.0	243.4	215.8	188.3	160.6	153.8



TEST NUMBER: P331533-930

CATALOG NUMBER: S122DIW-S675D710U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	285.4	290.9	296.4	301.8	307.3	309.8	309.3	308.9	308.4	308.0	267.7
115°	331.5	335.7	339.9	344.1	348.3	356.1	367.6	379.1	390.6	402.1	348.9
117.5°	371.9	375.6	379.4	383.1	386.9	393.6	403.6	413.4	423.3	433.2	424.4
120°	402.0	404.6	407.3	409.9	412.6	418.7	428.4	438.1	447.8	457.5	464.1
122.5°	427.6	429.9	432.2	434.5	436.8	442.6	452.1	461.5	471.0	480.5	486.4
125°	465.7	467.3	469.0	470.7	472.3	477.3	485.6	493.9	502.2	510.6	516.5
127.5°	500.9	502.6	504.3	505.9	507.5	511.6	518.2	524.8	531.3	537.9	543.8
130°	523.3	525.2	527.0	528.9	530.7	534.3	539.6	544.9	550.1	555.4	561.3
132.5°	546.2	547.7	549.3	550.8	552.3	555.3	559.7	564.1	568.4	572.8	578.4
135°	575.0	577.1	579.1	581.1	583.1	585.6	588.6	591.6	594.6	597.6	602.8
137.5°	605.0	606.4	607.8	609.2	610.6	612.3	614.4	616.5	618.6	620.8	625.4
140°	624.7	625.5	626.3	627.1	627.9	629.2	631.0	632.8	634.5	636.3	640.4
142.5°	641.1	641.8	642.5	643.3	644.0	645.2	646.9	648.6	650.2	651.9	655.3
145°	666.1	665.9	665.9	665.7	665.5	666.6	668.7	670.9	673.0	675.2	677.2
147.5°	688.5	688.1	687.6	687.1	686.6	687.5	689.6	691.7	693.8	695.9	696.8
150°	703.2	702.3	701.4	700.5	699.6	700.2	702.2	704.3	706.3	708.3	709.1
152.5°	715.5	714.5	713.5	712.5	711.5	712.0	714.0	715.8	717.8	719.7	720.5
155°	733.4	732.3	731.2	730.0	728.9	729.0	730.6	732.1	733.6	735.2	735.9
157.5°	747.5	746.5	745.5	744.5	743.6	743.6	744.7	745.8	746.8	747.9	748.8
160°	755.7	754.9	754.2	753.4	752.6	752.6	753.4	754.2	754.9	755.7	756.4
162.5°	763.0	762.2	761.5	760.7	759.9	759.9	760.5	761.2	761.9	762.5	763.4
165°	772.8	772.0	771.3	770.5	769.7	769.6	770.0	770.3	770.7	771.1	772.0
167.5°	780.1	779.3	778.6	777.8	777.1	776.9	777.2	777.6	778.0	778.3	779.2
170°	784.2	783.4	782.7	782.0	781.1	780.9	781.1	781.5	781.7	782.0	782.9
172.5°	786.9	786.2	785.5	784.6	783.9	783.7	783.9	784.2	784.4	784.6	785.5
175°	790.5	789.6	788.7	787.8	786.9	786.6	786.8	787.2	787.4	787.7	788.6
177.5°	791.1	790.4	789.6	789.0	788.2	787.9	788.0	788.1	788.2	788.3	789.0
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8



TEST NUMBER: P331533-930

CATALOG NUMBER: S122DIW-S675D710U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	572.4	573.2	573.9	574.1	573.8	573.6	573.2	573.0
5°	570.7	571.8	572.9	573.4	573.2	573.0	572.8	572.6
7.5°	567.9	569.3	570.6	571.2	571.0	570.8	570.6	570.5
10°	565.6	567.0	568.6	569.2	569.0	568.8	568.7	568.4
12.5°	561.6	563.0	564.6	565.2	565.0	564.8	564.7	564.4
15°	554.3	556.0	557.7	558.4	558.2	558.0	557.8	557.7
17.5°	544.9	546.7	548.5	549.3	549.3	549.3	549.3	549.3
20°	537.6	539.6	541.6	542.7	542.7	542.7	542.7	542.7
22.5°	529.6	531.7	533.6	534.8	535.1	535.4	535.7	536.0
25°	517.1	519.3	521.5	522.9	523.5	524.1	524.6	525.2
27.5°	503.4	506.1	509.0	510.5	510.9	511.4	511.8	512.2
30°	493.7	496.6	499.5	501.3	501.9	502.5	503.0	503.5
32.5°	483.2	486.7	490.0	492.2	493.3	494.2	495.2	496.2
35°	468.4	472.5	476.5	479.2	480.5	481.8	483.1	484.4
37.5°	453.1	457.6	462.2	465.1	466.5	467.8	469.2	470.6
40°	442.4	447.2	452.0	455.3	456.9	458.6	460.2	461.9
42.5°	431.9	437.2	442.5	446.0	447.6	449.3	450.9	452.6
45°	416.0	421.7	427.5	431.2	433.1	435.0	436.8	438.6
47.5°	399.3	405.4	411.3	415.3	417.4	419.4	421.4	423.5
50°	387.9	394.2	400.6	404.7	406.8	408.8	410.7	412.8
52.5°	375.6	382.0	388.5	392.8	394.9	397.1	399.3	401.5
55°	357.0	363.7	370.4	374.9	377.3	379.7	382.1	384.5
57.5°	337.5	344.6	351.8	356.6	359.1	361.5	363.9	366.4
60°	324.5	331.5	338.6	343.4	345.9	348.5	351.1	353.8
62.5°	310.7	318.2	325.7	330.7	333.0	335.5	337.9	340.4
65°	289.8	297.4	305.0	310.0	312.4	314.8	317.2	319.6
67.5°	268.6	276.3	284.0	289.1	291.6	294.1	296.6	299.1
70°	254.0	261.9	269.9	274.9	277.1	279.4	281.6	283.8
72.5°	239.7	247.4	255.3	260.5	263.2	265.9	268.5	271.2
75°	218.2	226.1	234.1	239.2	241.7	244.0	246.5	248.8
77.5°	197.1	205.0	213.0	218.2	220.8	223.4	225.9	228.5
80°	182.8	190.6	198.4	203.6	206.1	208.7	211.3	213.9
82.5°	169.5	177.2	185.1	190.1	192.6	195.0	197.5	199.9
85°	150.3	158.2	165.9	171.0	173.7	176.3	178.9	181.4
87.5°	136.8	144.5	152.1	157.2	159.6	162.1	164.4	166.9
90°	137.4	145.4	153.4	158.7	161.1	163.6	166.1	168.5
92.5°	132.2	139.8	147.4	152.4	154.7	157.2	159.6	161.9
95°	133.3	141.0	148.6	153.5	155.6	157.7	159.8	161.8
97.5°	133.1	140.4	147.7	152.6	154.9	157.3	159.6	161.9
100°	131.5	139.3	147.2	152.3	154.6	156.9	159.1	161.4
102.5°	128.1	136.1	144.1	149.3	151.6	154.1	156.5	158.8
105°	122.1	130.0	137.9	143.1	145.6	148.1	150.7	153.3
107.5°	123.1	127.8	132.6	136.3	138.8	141.5	144.0	146.5
110°	147.1	140.3	133.5	131.5	134.0	136.6	139.1	141.6





TEST NUMBER: P331533-930

CATALOG NUMBER: S122DIW-S675D710U930-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	227.3	186.9	146.6	127.7	130.1	132.6	135.0	137.5
115°	295.7	242.6	189.4	159.2	152.1	145.0	137.9	130.9
117.5°	415.7	407.0	398.3	379.8	351.7	323.6	295.5	267.3
120°	470.9	477.6	484.3	480.1	465.0	449.9	434.8	419.7
122.5°	492.3	498.2	504.2	506.4	504.8	503.2	501.7	500.0
125°	522.4	528.2	534.1	538.1	540.1	542.2	544.2	546.3
127.5°	549.7	555.5	561.4	565.2	567.0	568.7	570.4	572.0
130°	567.0	572.9	578.7	582.3	583.7	585.1	586.4	587.7
132.5°	583.8	589.3	594.8	598.2	599.6	600.9	602.3	603.6
135°	607.9	613.0	618.2	621.4	622.6	623.9	625.1	626.3
137.5°	630.1	634.7	639.4	642.0	642.9	643.7	644.6	645.4
140°	644.6	648.7	652.7	655.0	655.5	656.0	656.5	657.0
142.5°	658.7	662.1	665.5	667.4	667.7	668.1	668.4	668.7
145°	679.2	681.2	683.2	684.4	684.6	684.9	685.2	685.5
147.5°	697.6	698.4	699.2	699.5	699.4	699.4	699.3	699.2
150°	709.8	710.6	711.3	711.4	710.8	710.1	709.5	708.9
152.5°	721.2	722.0	722.8	722.8	721.9	721.1	720.2	719.3
155°	736.6	737.4	738.2	738.0	737.0	736.1	735.0	734.0
157.5°	749.7	750.5	751.4	751.3	750.3	749.3	748.4	747.3
160°	757.2	758.0	758.7	758.6	757.7	756.8	756.0	755.1
162.5°	764.3	765.1	766.0	765.9	764.8	763.7	762.5	761.5
165°	772.9	773.7	774.6	774.6	773.7	772.9	772.0	771.1
167.5°	780.1	781.0	781.8	781.7	780.6	779.4	778.3	777.1
170°	783.7	784.6	785.5	785.4	784.2	783.1	782.0	780.8
172.5°	786.4	787.3	788.2	788.1	786.9	785.8	784.6	783.5
175°	789.5	790.3	791.2	791.0	789.7	788.5	787.2	785.9
177.5°	789.8	790.4	791.2	791.1	790.2	789.2	788.3	787.4
180°	788.8	788.8	788.8	788.8	788.8	788.8	788.8	788.8

(END OF REPORT)