

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: P331808-935

Luminaire Tested: **S122RDIW-S675D435U935-4F0-1E-UDD-F1**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331808-935  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-8,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S122RDIW-S675D435U935-4F0-1E-UDD-F1  
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 435 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3292.0 lumens  
Efficiency: N/A  
Efficacy: 87.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

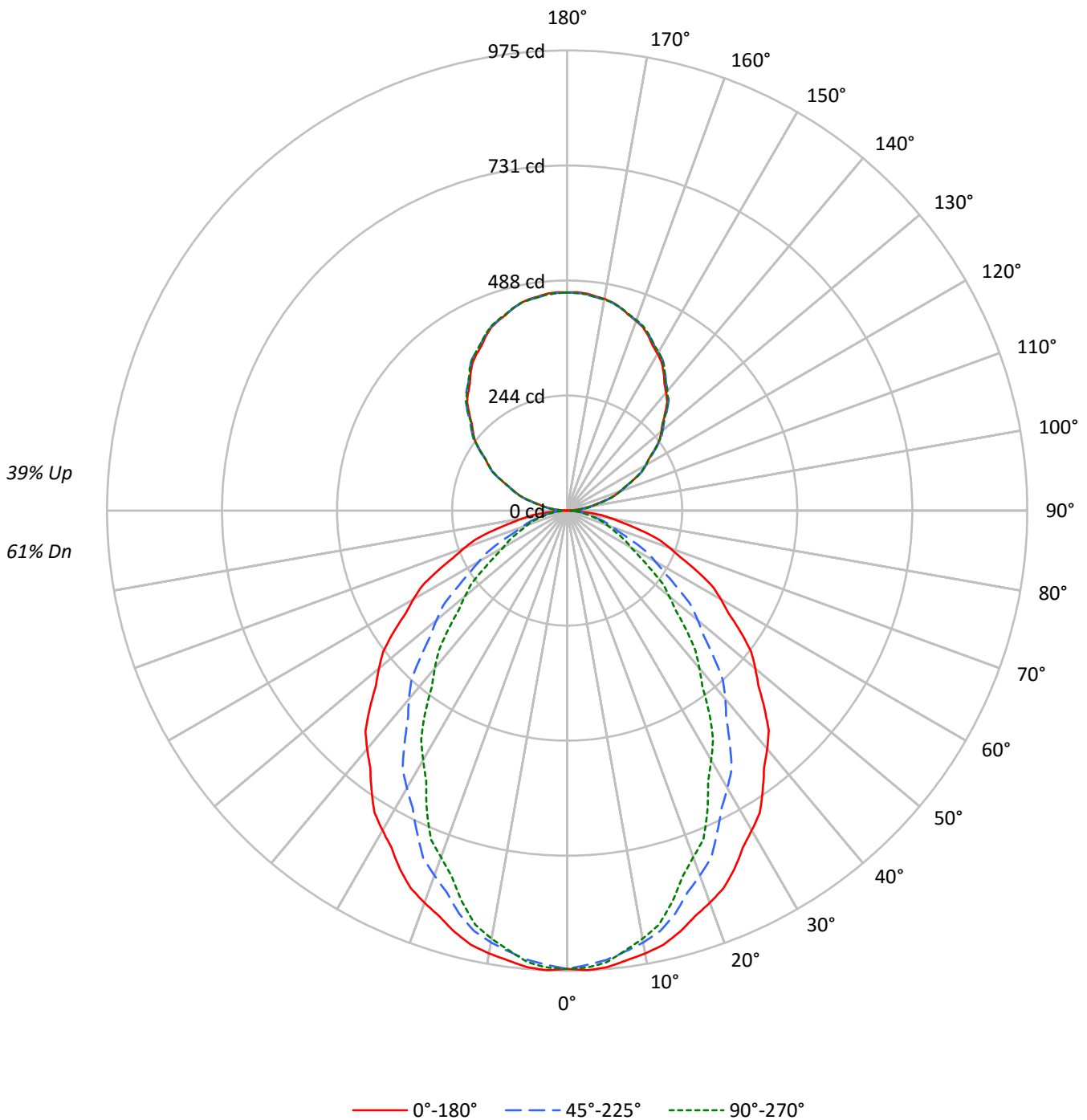
Input Watts (W): 37.7  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P331808-935

CATALOG NUMBER: S122RDIW-S675D435U935-4F0-1E-UDD-F1

### 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	110	110	110	110	103	103	103	103	89	89	89	77	77	77	66	66	66	61
1	101	97	93	89	94	91	87	84	79	77	75	69	67	65	59	58	57	52
2	92	85	79	74	86	80	75	70	70	66	63	61	58	56	53	51	49	45
3	85	75	68	62	79	71	64	59	62	57	53	55	51	48	47	45	42	39
4	78	67	59	53	72	63	56	51	56	50	46	49	45	41	43	40	37	34
5	72	60	52	46	67	57	50	44	50	45	40	44	40	36	39	35	33	30
6	66	54	46	41	62	51	44	39	46	40	35	40	36	32	35	32	29	26
7	61	49	41	36	57	47	39	34	42	36	32	37	32	29	33	29	26	24
8	57	45	37	32	53	43	36	31	38	32	28	34	29	26	30	26	23	21
9	53	41	34	29	50	39	32	28	35	29	26	31	27	23	28	24	21	19
10	50	38	31	26	47	36	29	25	32	27	23	29	25	21	26	22	20	18

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

	0°	45°	90°
0°	15681	15681	15681
5°	15741	15486	15571
10°	15621	15231	15101
15°	15442	14780	14355
20°	15192	14136	13426
25°	14938	13402	12527
30°	14585	12652	11373
35°	14241	11832	10360
40°	13894	10985	9187
45°	13486	10035	8127
50°	13069	9075	7086
55°	12645	8042	6086
60°	12148	6952	5050
65°	11584	5841	4604
70°	10914	4810	4230
75°	10087	4386	3949
80°	8908	3924	3598
85°	7003	3094	3094



TEST NUMBER: P331808-935

CATALOG NUMBER: S122RDIW-S675D435U935-4F0-1E-UDD-F1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.9	2.8
10°-20°	249.6	7.6
20°-30°	350.5	10.6
30°-40°	382.2	11.6
40°-50°	351.5	10.7
50°-60°	276.0	8.4
60°-70°	180.0	5.5
70°-80°	92.8	2.8
80°-90°	25.9	0.8
90°-100°	29.3	0.9
100°-110°	91.0	2.8
110°-120°	155.5	4.7
120°-130°	204.5	6.2
130°-140°	229.5	7.0
140°-150°	225.0	6.8
150°-160°	188.8	5.7
160°-170°	125.2	3.8
170°-180°	43.8	1.3
0°-30°	691.1	21.0
0°-40°	1073.3	32.6
0°-60°	1700.8	51.7
0°-90°	1999.5	60.7
90°-120°	275.7	8.4
90°-150°	934.8	28.4
90°-180°	1293.0	39.3
0°-180°	3292.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	971	966	956	963	961	92
15°	924	913	884	868	859	260
25°	838	809	752	718	703	385
35°	722	676	600	547	526	452
45°	591	530	440	379	356	456
55°	449	379	286	235	216	401
65°	303	232	153	125	120	300
75°	162	102	70	64	63	171
85°	38	20	17	17	17	45
90°	0	5	14	13	13	3
95°	20	24	25	25	24	23
105°	84	85	86	87	87	89
115°	156	158	158	157	156	154
125°	227	230	229	228	228	203
135°	294	298	299	298	297	227
145°	356	359	362	362	360	223
155°	408	409	410	412	411	188
165°	444	443	443	446	444	125
175°	462	460	460	462	460	44
180°	462	462	462	462	462	



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CATALOG NUMBER: S122RDIW-S675D435U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	974.7	974.0	973.2	972.4	971.6	970.3	968.6	966.9	965.3	963.5	965.1
5°	971.2	970.3	969.3	968.3	967.3	965.6	963.0	960.5	957.9	955.5	957.2
7.5°	961.2	960.0	958.8	957.6	956.4	954.2	951.3	948.4	945.4	942.5	942.9
10°	952.8	951.4	950.0	948.6	947.3	944.7	940.7	936.9	933.0	929.0	928.5
12.5°	942.2	940.6	938.8	937.2	935.5	932.2	927.2	922.2	917.1	912.1	911.1
15°	923.8	921.6	919.5	917.3	915.2	910.8	904.1	897.5	890.9	884.2	880.5
17.5°	901.1	897.9	894.6	891.2	887.9	882.1	873.6	865.0	856.5	848.0	843.6
20°	884.2	880.3	876.4	872.5	868.6	861.8	852.0	842.2	832.5	822.7	817.8
22.5°	865.9	861.6	857.2	852.8	848.4	840.8	829.7	818.7	807.7	796.7	790.4
25°	838.5	832.2	826.0	819.8	813.6	803.9	791.1	778.2	765.3	752.3	744.3
27.5°	805.5	798.7	791.9	785.1	778.3	767.6	753.1	738.6	724.0	709.5	700.2
30°	782.3	774.8	767.4	760.0	752.6	741.1	725.4	709.8	694.1	678.6	668.6
32.5°	759.7	751.1	742.4	733.7	725.0	712.7	696.8	680.9	665.0	649.0	637.7
35°	722.5	712.6	702.6	692.6	682.7	669.1	651.9	634.7	617.5	600.3	588.0
37.5°	685.3	674.2	663.3	652.4	641.4	626.8	608.6	590.2	571.9	553.5	540.0
40°	659.2	647.5	635.8	624.1	612.3	597.0	578.1	559.1	540.2	521.2	507.4
42.5°	632.5	620.2	607.8	595.5	583.2	567.1	547.6	528.1	508.4	488.9	474.5
45°	590.6	577.6	564.5	551.4	538.3	521.5	501.0	480.5	459.9	439.5	425.6
47.5°	549.8	536.0	522.1	508.2	494.4	476.9	455.7	434.5	413.4	392.2	378.4
50°	520.3	506.4	492.6	478.7	464.9	447.2	425.7	404.2	382.7	361.3	347.8
52.5°	491.5	477.0	462.5	448.1	433.5	415.8	394.8	373.8	352.8	331.7	318.7
55°	449.2	433.9	418.7	403.5	388.2	370.1	349.0	327.9	306.8	285.7	274.0
57.5°	405.7	390.1	374.4	358.9	343.2	325.3	305.0	284.7	264.4	244.2	233.4
60°	376.2	360.6	344.9	329.3	313.7	295.8	275.7	255.5	235.5	215.3	205.3
62.5°	347.3	331.7	316.1	300.5	284.8	267.4	248.3	229.1	209.9	190.7	181.2
65°	303.2	287.4	271.6	255.8	240.0	223.3	205.7	188.1	170.5	152.9	146.3
67.5°	260.7	245.0	229.3	213.6	197.9	182.1	166.3	150.5	134.7	118.8	115.8
70°	231.2	215.9	200.7	185.5	170.2	155.8	142.4	128.9	115.5	101.9	100.0
72.5°	203.0	188.4	173.8	159.2	144.6	131.9	121.1	110.2	99.4	88.6	87.0
75°	161.7	148.1	134.4	120.7	107.0	96.9	90.2	83.6	77.0	70.3	69.0
77.5°	121.1	109.1	97.1	85.2	73.2	65.5	62.3	59.2	56.0	52.8	51.9
80°	95.8	85.8	75.9	66.0	56.0	50.0	48.0	46.1	44.2	42.2	41.4
82.5°	72.6	64.8	57.1	49.2	41.5	36.9	35.6	34.3	33.0	31.7	31.2
85°	37.8	33.7	29.6	25.5	21.4	19.0	18.4	17.9	17.3	16.7	16.7
87.5°	11.4	10.2	9.2	8.2	7.1	6.8	7.2	7.6	8.0	8.4	8.2
90°	0.4	1.5	2.5	3.5	4.6	6.0	7.9	9.8	11.7	13.7	13.5
92.5°	7.0	7.7	8.4	9.2	10.0	10.6	11.0	11.5	12.0	12.4	12.4
95°	20.3	21.2	22.0	22.9	23.8	24.3	24.5	24.6	24.8	25.0	25.0
97.5°	37.0	37.8	38.6	39.3	40.1	40.6	41.0	41.3	41.7	41.9	41.9
100°	49.5	50.2	50.9	51.7	52.3	52.8	53.0	53.3	53.6	53.8	53.8
102.5°	62.7	63.2	63.7	64.3	64.8	65.3	65.6	66.0	66.3	66.6	66.7
105°	83.9	84.1	84.4	84.6	84.9	85.2	85.3	85.5	85.7	85.8	86.0
107.5°	105.2	105.6	106.0	106.4	106.8	106.9	106.9	106.9	106.9	106.9	107.0
110°	119.0	119.5	120.0	120.5	121.1	121.3	121.3	121.3	121.3	121.3	121.3



TEST NUMBER: P331808-935

CATALOG NUMBER: S122RDIW-S675D435U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	134.0	134.5	135.0	135.5	136.0	136.3	136.2	136.1	136.0	136.0	135.8
115°	156.0	156.5	157.0	157.6	158.1	158.3	158.1	157.9	157.7	157.6	157.5
117.5°	178.1	178.7	179.4	180.1	180.8	180.9	180.5	179.9	179.4	179.0	178.7
120°	192.7	193.4	194.1	194.8	195.4	195.4	194.8	194.1	193.4	192.7	192.7
122.5°	206.1	207.0	207.8	208.6	209.5	209.7	209.1	208.6	208.2	207.7	207.5
125°	227.0	227.8	228.6	229.4	230.1	230.4	230.1	229.9	229.6	229.4	229.1
127.5°	247.4	248.4	249.3	250.4	251.3	251.7	251.4	251.1	250.7	250.5	250.1
130°	260.2	261.3	262.4	263.6	264.7	265.2	265.0	264.8	264.7	264.5	264.3
132.5°	274.6	275.4	276.4	277.3	278.2	278.7	278.7	278.8	278.8	278.8	278.4
135°	293.8	294.7	295.7	296.6	297.6	298.1	298.3	298.4	298.6	298.8	298.7
137.5°	313.9	314.7	315.5	316.2	317.0	317.5	317.8	318.1	318.2	318.5	318.4
140°	326.1	326.9	327.7	328.5	329.2	329.8	330.3	330.7	331.1	331.6	331.6
142.5°	338.6	339.4	340.2	341.0	341.7	342.2	342.5	342.9	343.1	343.5	343.5
145°	356.5	357.1	357.7	358.3	359.0	359.6	360.1	360.6	361.1	361.6	361.7
147.5°	372.6	373.2	374.0	374.7	375.5	376.0	376.3	376.7	377.0	377.4	377.5
150°	383.5	384.0	384.5	385.0	385.6	386.0	386.3	386.7	387.0	387.4	387.6
152.5°	393.1	393.6	394.2	394.7	395.2	395.7	396.1	396.5	396.9	397.4	397.7
155°	407.6	407.9	408.1	408.5	408.7	409.0	409.2	409.5	409.7	410.0	410.4
157.5°	420.1	420.3	420.4	420.6	420.8	420.9	421.0	421.2	421.4	421.5	422.1
160°	427.6	427.7	427.9	428.1	428.3	428.3	428.4	428.5	428.6	428.7	429.2
162.5°	434.4	434.5	434.5	434.5	434.5	434.6	434.7	434.8	434.9	435.0	435.5
165°	443.5	443.4	443.3	443.2	443.2	443.2	443.2	443.2	443.2	443.2	443.8
167.5°	451.2	450.9	450.6	450.4	450.1	450.0	450.0	450.0	450.0	450.0	450.6
170°	455.2	455.0	454.7	454.4	454.2	454.0	453.9	453.8	453.7	453.7	454.3
172.5°	458.1	457.8	457.5	457.3	457.0	456.8	456.8	456.7	456.6	456.5	457.1
175°	461.5	461.2	461.0	460.7	460.5	460.2	460.0	459.9	459.7	459.5	460.1
177.5°	462.9	462.7	462.4	462.3	462.0	461.8	461.8	461.6	461.4	461.3	461.8
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3



TEST NUMBER: P331808-935

CATALOG NUMBER: S122RDIW-S675D435U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	971.2	971.2	971.2	971.2	971.2	971.2	971.2	971.2
2.5°	966.6	968.2	969.7	970.3	970.1	969.7	969.5	969.1
5°	958.9	960.7	962.4	963.0	962.4	961.8	961.3	960.7
7.5°	943.4	943.9	944.4	944.2	943.1	942.2	941.2	940.1
10°	927.9	927.3	926.7	925.8	924.6	923.5	922.3	921.1
12.5°	910.1	909.0	907.9	906.5	904.5	902.6	900.6	898.6
15°	876.8	873.1	869.4	866.5	864.6	862.6	860.7	858.8
17.5°	839.2	834.7	830.3	826.5	823.1	819.8	816.4	813.0
20°	813.0	808.0	803.1	798.6	794.3	790.0	785.7	781.4
22.5°	784.1	777.8	771.5	766.8	763.5	760.3	757.2	754.0
25°	736.3	728.3	720.3	714.9	712.0	709.0	706.1	703.2
27.5°	690.8	681.5	672.2	665.1	660.5	655.8	651.2	646.5
30°	658.7	648.7	638.7	631.1	625.8	620.5	615.3	610.0
32.5°	626.3	614.9	603.6	595.4	590.4	585.5	580.5	575.6
35°	575.8	563.4	551.1	542.8	538.5	534.2	529.9	525.6
37.5°	526.4	512.9	499.4	490.1	485.2	480.3	475.4	470.5
40°	493.4	479.6	465.7	456.2	451.2	446.1	441.0	435.9
42.5°	460.2	445.8	431.5	421.9	417.0	412.1	407.2	402.2
45°	411.7	397.9	384.0	374.7	370.1	365.3	360.7	355.9
47.5°	364.6	350.9	337.0	328.0	323.7	319.5	315.2	311.0
50°	334.3	320.8	307.4	298.5	294.5	290.3	286.3	282.1
52.5°	305.7	292.7	279.7	271.3	267.5	263.7	259.9	256.1
55°	262.3	250.5	238.8	231.1	227.4	223.6	219.9	216.2
57.5°	222.7	212.0	201.2	194.2	191.1	188.0	184.9	181.8
60°	195.4	185.5	175.5	168.9	165.8	162.7	159.5	156.4
62.5°	171.8	162.2	152.7	147.1	145.2	143.4	141.5	139.6
65°	139.7	133.0	126.4	122.8	122.2	121.6	121.0	120.5
67.5°	112.7	109.7	106.7	104.8	104.2	103.6	103.0	102.3
70°	98.1	96.1	94.1	92.8	92.0	91.2	90.4	89.6
72.5°	85.3	83.7	82.1	81.0	80.5	80.1	79.6	79.1
75°	67.6	66.2	64.8	64.1	63.9	63.7	63.5	63.3
77.5°	51.1	50.4	49.6	49.1	48.7	48.5	48.1	47.8
80°	40.6	39.9	39.1	38.7	38.7	38.7	38.7	38.7
82.5°	30.7	30.2	29.8	29.5	29.5	29.5	29.5	29.5
85°	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
87.5°	8.0	7.7	7.6	7.5	7.5	7.6	7.6	7.6
90°	13.3	13.2	13.0	12.9	13.0	13.1	13.2	13.3
92.5°	12.5	12.5	12.6	12.6	12.6	12.6	12.7	12.7
95°	25.0	25.0	25.0	24.9	24.7	24.5	24.4	24.2
97.5°	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
100°	53.8	53.8	53.8	53.8	53.7	53.6	53.6	53.5
102.5°	66.7	66.8	66.9	66.9	66.8	66.7	66.6	66.6
105°	86.2	86.4	86.5	86.6	86.6	86.6	86.6	86.6
107.5°	107.1	107.2	107.3	107.1	106.7	106.2	105.9	105.5
110°	121.3	121.3	121.3	121.1	120.9	120.6	120.4	120.1





TEST NUMBER: P331808-935

CATALOG NUMBER: S122RDIW-S675D435U935-4F0-1E-UDD-F1

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	135.6	135.3	135.2	134.9	134.7	134.6	134.4	134.2
115°	157.4	157.3	157.2	157.0	156.8	156.5	156.3	156.0
117.5°	178.6	178.3	178.1	177.9	177.6	177.4	177.1	176.8
120°	192.7	192.7	192.7	192.6	192.3	192.1	191.8	191.6
122.5°	207.2	207.1	206.8	206.6	206.5	206.3	206.0	205.9
125°	228.9	228.6	228.3	228.2	228.1	228.0	227.9	227.8
127.5°	249.8	249.5	249.2	248.9	248.6	248.3	248.1	247.8
130°	264.2	264.0	263.8	263.6	263.2	262.9	262.5	262.2
132.5°	278.1	277.7	277.3	277.0	276.7	276.4	276.1	275.9
135°	298.6	298.5	298.4	298.3	298.0	297.7	297.5	297.2
137.5°	318.3	318.2	318.2	318.0	317.6	317.3	316.9	316.6
140°	331.6	331.6	331.6	331.4	331.1	330.7	330.4	330.0
142.5°	343.5	343.6	343.7	343.5	343.2	342.9	342.5	342.2
145°	361.8	361.9	362.0	361.8	361.4	361.1	360.8	360.4
147.5°	377.7	378.0	378.2	378.1	377.7	377.4	377.0	376.8
150°	387.9	388.1	388.4	388.4	388.1	387.9	387.6	387.4
152.5°	398.0	398.3	398.6	398.6	398.3	398.0	397.7	397.4
155°	410.9	411.3	411.7	411.8	411.6	411.3	411.0	410.8
157.5°	422.7	423.3	423.9	424.0	423.5	423.1	422.8	422.3
160°	429.7	430.2	430.8	430.8	430.5	430.2	429.8	429.5
162.5°	436.1	436.7	437.3	437.4	437.0	436.5	436.1	435.8
165°	444.4	445.0	445.6	445.7	445.2	444.8	444.4	443.9
167.5°	451.2	451.8	452.4	452.5	451.9	451.5	451.1	450.6
170°	454.9	455.5	456.1	456.2	455.6	455.1	454.6	454.1
172.5°	457.7	458.3	458.9	458.9	458.4	457.9	457.4	456.8
175°	460.7	461.3	461.9	462.0	461.5	461.0	460.5	459.9
177.5°	462.2	462.5	463.0	463.0	462.5	462.2	461.8	461.3
180°	462.3	462.3	462.3	462.3	462.3	462.3	462.3	462.3

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