

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: P333041-930

Luminaire Tested: **S124RDIW-S575D770U930-4F0-1E-UDD-F**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P333041-930  
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: S124RDIW-S575D770U930-4F0-1E-UDD-F  
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 770 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4419.6 lumens  
Efficiency: N/A  
Efficacy: 117.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

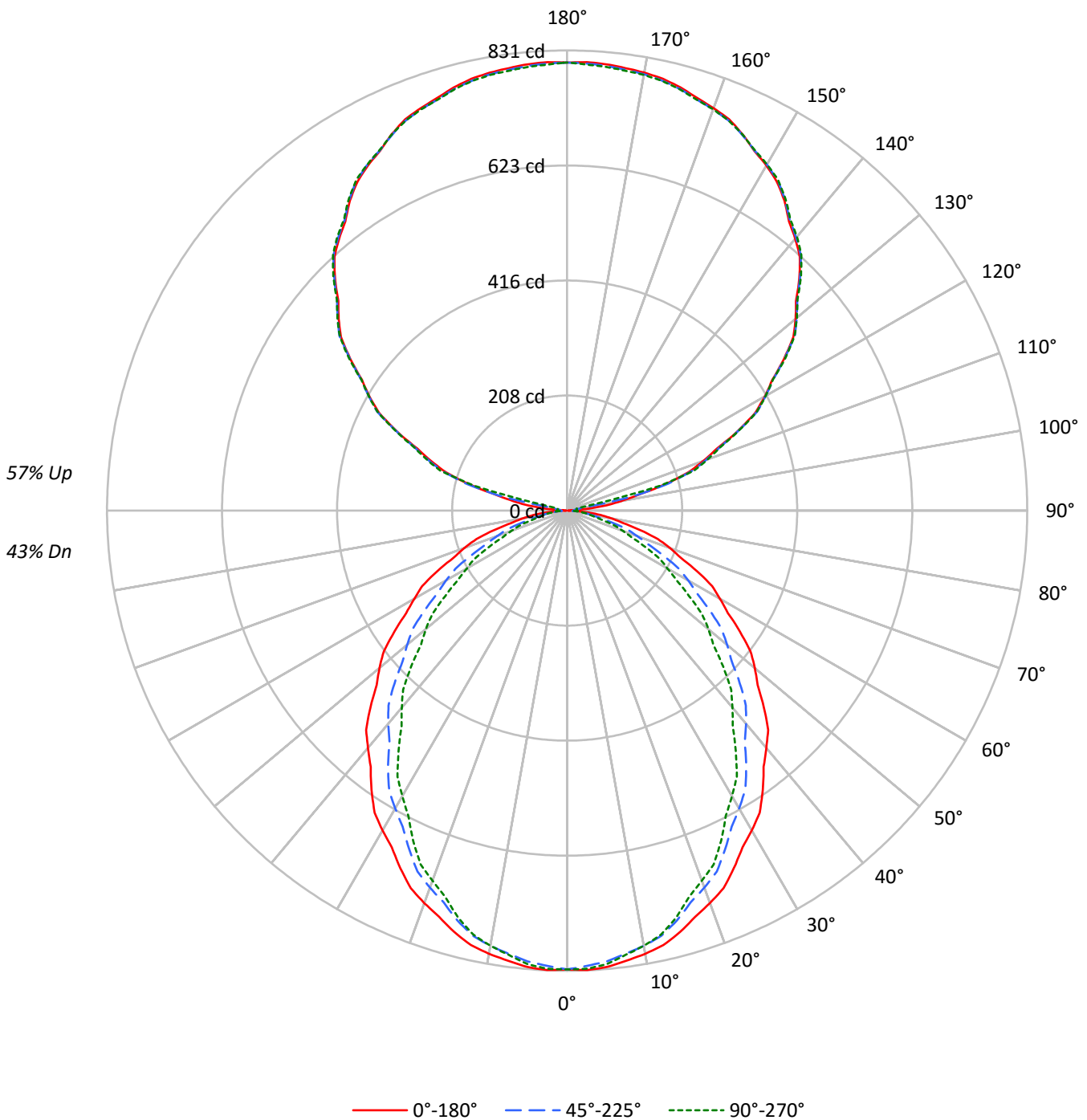
Input Watts (W): 37.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	43
1	97	92	89	85	88	85	81	79	70	68	66	57	55	54	45	44	43	37
2	88	81	75	70	80	74	69	65	62	58	55	50	48	45	39	38	36	31
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	35	33	31	27
4	74	63	55	50	67	58	51	46	49	44	40	40	36	33	32	29	27	23
5	68	56	48	43	62	52	45	40	44	38	34	36	32	29	29	26	24	20
6	62	51	43	37	57	47	40	35	39	34	30	32	28	25	26	23	21	18
7	58	46	38	32	53	42	35	30	36	30	26	29	25	22	24	21	19	16
8	53	41	34	29	49	38	32	27	32	27	23	27	23	20	22	19	17	14
9	50	38	30	26	46	35	29	24	30	25	21	25	21	18	20	17	15	13
10	47	35	28	23	43	32	26	22	27	22	19	23	19	16	19	16	14	12

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

	0°	45°	90°
0°	6689	6689	6689
5°	6704	6622	6663
10°	6662	6542	6542
15°	6586	6405	6358
20°	6480	6225	6110
25°	6347	6013	5860
30°	6216	5790	5547
35°	6071	5558	5233
40°	5896	5296	4894
45°	5737	5034	4548
50°	5554	4732	4182
55°	5358	4421	3786
60°	5142	4077	3381
65°	4946	3647	2980
70°	4657	3175	2530
75°	4295	2633	2059
80°	3747	2004	1888
85°	3168	1815	1704



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.8	1.8
10°-20°	217.0	4.9
20°-30°	313.4	7.1
30°-40°	355.3	8.0
40°-50°	343.1	7.8
50°-60°	285.3	6.5
60°-70°	197.0	4.5
70°-80°	99.8	2.3
80°-90°	28.0	0.6
90°-100°	27.7	0.6
100°-110°	176.5	4.0
110°-120°	337.5	7.6
120°-130°	428.5	9.7
130°-140°	458.5	10.4
140°-150°	428.7	9.7
150°-160°	345.7	7.8
160°-170°	223.0	5.0
170°-180°	76.9	1.7
0°-30°	608.3	13.8
0°-40°	963.6	21.8
0°-60°	1591.9	36.0
0°-90°	1916.7	43.4
90°-120°	541.7	12.3
90°-150°	1857.3	42.0
90°-180°	2503.0	56.6
0°-180°	4419.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	827	824	817	823	822	78
15°	788	782	766	765	761	222
25°	712	700	675	664	658	328
35°	616	595	564	543	531	385
45°	502	478	441	411	398	387
55°	381	354	314	282	269	340
65°	259	231	191	165	156	256
75°	138	114	84	70	66	145
85°	34	22	20	18	18	39
90°	2	8	13	17	18	3
95°	33	14	13	17	18	43
105°	182	186	189	193	172	191
115°	340	342	341	342	342	335
125°	478	480	479	481	482	427
135°	593	593	595	596	597	457
145°	684	686	686	686	688	427
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	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	830.6	830.1	829.7	829.2	828.8	827.9	826.7	825.5	824.2	823.0	824.2
5°	827.3	826.7	826.1	825.6	825.1	823.9	822.2	820.5	818.8	817.2	818.6
7.5°	819.8	819.2	818.6	818.1	817.4	816.0	813.8	811.6	809.4	807.2	808.1
10°	812.7	812.0	811.3	810.6	809.9	808.3	805.8	803.2	800.6	798.1	798.7
12.5°	803.6	802.7	801.9	801.1	800.3	798.4	795.4	792.4	789.5	786.4	786.8
15°	788.0	786.7	785.5	784.2	782.9	780.5	777.0	773.5	769.9	766.4	766.1
17.5°	769.1	767.2	765.4	763.5	761.7	758.7	754.5	750.2	746.0	741.8	741.0
20°	754.3	752.5	750.6	748.9	747.0	743.7	738.9	734.1	729.3	724.6	723.4
22.5°	738.1	736.1	734.0	731.9	729.9	726.3	721.1	716.0	710.9	705.7	704.0
25°	712.5	710.0	707.4	704.8	702.3	698.1	692.4	686.6	680.8	675.1	672.6
27.5°	685.6	682.4	679.2	676.0	672.8	668.1	661.9	655.8	649.6	643.4	640.5
30°	666.8	663.2	659.7	656.2	652.7	647.6	641.0	634.4	627.7	621.1	617.6
32.5°	647.0	643.0	639.0	635.0	631.1	625.7	618.8	612.0	605.1	598.3	594.2
35°	616.0	611.6	607.0	602.5	598.0	592.2	585.1	578.1	571.0	564.0	559.2
37.5°	582.9	578.3	573.6	569.0	564.3	558.1	550.2	542.4	534.7	526.8	521.5
40°	559.5	554.9	550.2	545.6	541.0	534.6	526.6	518.5	510.5	502.5	496.5
42.5°	537.2	532.4	527.5	522.6	517.7	511.1	502.7	494.3	486.0	477.6	471.6
45°	502.5	497.3	492.0	486.8	481.6	474.7	466.3	457.9	449.4	440.9	434.0
47.5°	466.6	461.2	455.8	450.4	445.0	437.9	429.1	420.4	411.6	402.8	395.6
50°	442.2	436.7	431.2	425.7	420.2	412.9	403.9	394.9	385.9	376.8	369.8
52.5°	417.4	412.0	406.6	401.2	395.7	388.5	379.2	370.0	360.7	351.5	344.3
55°	380.7	375.0	369.4	363.7	358.1	350.7	341.5	332.4	323.2	314.1	306.7
57.5°	344.4	338.5	332.6	326.8	320.9	313.5	304.4	295.4	286.4	277.4	269.9
60°	318.5	312.8	307.2	301.6	296.0	288.6	279.6	270.5	261.5	252.5	245.2
62.5°	295.1	289.3	283.4	277.5	271.7	264.2	254.9	245.6	236.4	227.1	220.4
65°	258.9	252.8	246.7	240.7	234.6	227.1	218.0	209.0	200.0	190.9	184.9
67.5°	221.2	215.3	209.5	203.7	198.0	190.9	182.5	174.1	165.8	157.4	152.1
70°	197.3	191.4	185.5	179.5	173.7	166.6	158.6	150.6	142.5	134.5	129.9
72.5°	171.9	166.6	161.2	155.9	150.5	144.1	136.5	128.9	121.2	113.7	109.7
75°	137.7	132.5	127.3	122.1	116.8	110.9	104.3	97.6	91.0	84.4	81.1
77.5°	102.9	98.5	94.1	89.6	85.2	80.3	74.9	69.6	64.2	58.9	57.0
80°	80.6	76.5	72.4	68.3	64.2	60.1	55.8	51.6	47.4	43.1	42.7
82.5°	61.3	57.6	53.8	50.1	46.3	43.2	40.8	38.3	36.0	33.5	33.2
85°	34.2	31.5	28.6	25.8	23.0	21.4	21.0	20.5	20.1	19.6	19.4
87.5°	12.1	11.4	10.8	10.2	9.6	9.4	9.5	9.5	9.7	9.8	9.8
90°	1.8	3.3	4.8	6.3	7.7	9.0	10.1	11.2	12.2	13.3	14.1
92.5°	7.7	7.7	7.8	7.8	7.9	8.6	9.6	10.7	11.7	12.8	13.6
95°	33.3	28.7	24.1	19.6	15.0	12.8	12.9	13.0	13.2	13.3	14.1
97.5°	70.7	73.5	76.4	79.2	82.1	76.0	61.0	46.0	31.0	16.0	16.1
100°	99.2	101.7	104.1	106.5	108.9	100.9	82.3	63.8	45.2	26.7	24.4
102.5°	131.2	133.0	134.8	136.6	138.3	137.9	135.6	133.1	130.7	128.3	103.6
105°	182.1	183.0	183.8	184.6	185.4	186.1	186.8	187.4	188.2	188.8	190.0
107.5°	229.5	229.9	230.3	230.7	231.1	231.8	232.7	233.6	234.5	235.4	236.0
110°	261.5	261.9	262.3	262.7	263.0	263.7	264.5	265.3	266.1	266.8	267.2



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	292.4	293.2	293.9	294.6	295.3	295.9	296.3	296.6	297.0	297.4	297.3
115°	340.1	340.6	341.0	341.3	341.7	341.9	341.7	341.6	341.4	341.3	341.6
117.5°	383.1	383.6	384.2	384.7	385.2	385.6	386.0	386.2	386.5	386.9	386.8
120°	412.1	412.7	413.2	413.8	414.3	414.5	414.3	414.3	414.1	413.9	414.3
122.5°	439.3	439.5	439.9	440.2	440.5	440.8	441.0	441.2	441.3	441.6	441.7
125°	478.1	478.7	479.2	479.7	480.2	480.4	480.1	479.9	479.6	479.3	479.7
127.5°	514.9	515.0	515.2	515.3	515.4	515.8	516.4	517.1	517.6	518.3	518.2
130°	538.6	538.7	538.9	539.0	539.2	539.4	539.8	540.2	540.6	541.0	541.2
132.5°	560.4	560.7	560.9	561.1	561.3	561.7	562.2	562.8	563.3	563.8	563.9
135°	593.0	593.0	592.8	592.6	592.6	592.7	593.3	593.8	594.4	594.9	595.2
137.5°	622.0	622.1	622.2	622.2	622.2	622.6	623.1	623.7	624.4	624.9	625.2
140°	640.9	641.2	641.4	641.7	642.0	642.2	642.5	642.8	643.0	643.4	643.7
142.5°	657.9	658.4	658.8	659.3	659.7	660.1	660.2	660.4	660.6	660.7	661.0
145°	683.9	684.3	684.7	685.1	685.5	685.7	685.7	685.7	685.7	685.7	685.8
147.5°	704.6	705.3	706.0	706.8	707.6	707.8	707.8	707.6	707.4	707.4	707.4
150°	719.6	720.1	720.6	721.2	721.7	721.9	721.8	721.6	721.5	721.4	721.4
152.5°	732.1	732.5	733.0	733.4	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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	828.6	828.6	828.6	828.6	828.6	828.6	828.6	828.6
2.5°	825.5	826.7	827.9	828.5	828.4	828.3	828.2	828.1
5°	819.9	821.4	822.8	823.4	823.0	822.8	822.5	822.2
7.5°	809.0	809.9	810.9	811.1	810.7	810.2	809.8	809.3
10°	799.2	799.8	800.4	800.4	799.8	799.2	798.7	798.1
12.5°	787.1	787.4	787.8	787.6	786.8	786.0	785.2	784.4
15°	765.8	765.6	765.2	764.7	763.6	762.6	761.7	760.7
17.5°	740.2	739.4	738.6	737.4	736.0	734.5	733.0	731.5
20°	722.3	721.1	720.0	718.5	716.7	714.9	713.1	711.2
22.5°	702.4	700.7	699.0	697.4	695.9	694.4	692.9	691.4
25°	670.3	667.8	665.4	663.6	662.1	660.7	659.3	657.9
27.5°	637.5	634.5	631.6	629.1	627.0	625.0	623.1	621.0
30°	614.1	610.5	607.0	604.1	601.9	599.6	597.4	595.1
32.5°	590.1	586.0	581.9	578.8	576.7	574.5	572.3	570.2
35°	554.4	549.6	544.9	541.2	538.7	536.1	533.5	531.0
37.5°	516.1	510.8	505.4	501.5	498.9	496.4	493.8	491.3
40°	490.6	484.7	478.7	474.6	472.0	469.4	466.9	464.4
42.5°	465.5	459.5	453.5	449.1	446.5	443.8	441.2	438.5
45°	427.1	420.2	413.3	408.5	406.0	403.5	401.0	398.4
47.5°	388.4	381.2	374.1	369.1	366.3	363.5	360.8	357.9
50°	362.7	355.7	348.6	343.8	341.1	338.4	335.7	333.0
52.5°	337.1	330.0	322.9	317.9	315.0	312.3	309.5	306.7
55°	299.4	292.0	284.7	279.7	277.0	274.3	271.7	269.0
57.5°	262.4	255.0	247.6	242.9	240.8	238.8	236.8	234.7
60°	237.8	230.5	223.1	218.4	216.1	213.9	211.7	209.4
62.5°	213.6	206.8	200.1	195.8	194.0	192.2	190.4	188.6
65°	178.9	172.8	166.7	162.8	161.2	159.5	157.8	156.0
67.5°	146.9	141.7	136.5	133.0	131.1	129.2	127.3	125.5
70°	125.2	120.6	115.9	112.8	111.5	110.1	108.6	107.2
72.5°	105.7	101.7	97.8	95.1	93.8	92.5	91.2	89.9
75°	77.9	74.7	71.4	69.4	68.5	67.7	66.9	66.0
77.5°	55.1	53.2	51.3	50.2	50.0	49.7	49.5	49.2
80°	42.3	41.9	41.4	41.2	41.0	40.8	40.8	40.6
82.5°	32.9	32.5	32.3	32.0	31.9	31.7	31.6	31.5
85°	19.1	18.8	18.5	18.4	18.4	18.4	18.4	18.4
87.5°	9.9	9.9	9.9	10.1	10.3	10.4	10.6	10.8
90°	14.9	15.7	16.6	17.0	17.4	17.6	17.9	18.2
92.5°	14.4	15.2	16.1	16.5	16.6	16.6	16.6	16.7
95°	14.9	15.7	16.6	17.0	17.1	17.3	17.4	17.5
97.5°	16.1	16.2	16.3	16.4	16.6	16.7	16.8	17.0
100°	22.1	19.7	17.4	16.4	16.6	16.7	16.8	17.0
102.5°	79.0	54.3	29.7	17.3	17.4	17.4	17.4	17.4
105°	191.3	192.4	193.6	191.8	187.0	182.1	177.3	172.5
107.5°	236.6	237.2	237.8	238.3	238.9	239.4	239.9	240.4
110°	267.4	267.7	268.0	268.3	268.7	269.1	269.5	269.9





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	297.3	297.3	297.2	297.4	297.9	298.4	299.0	299.5
115°	341.9	342.1	342.4	342.5	342.5	342.5	342.5	342.5
117.5°	386.7	386.7	386.6	386.5	386.5	386.5	386.4	386.4
120°	414.5	414.7	415.0	415.0	414.7	414.5	414.3	413.9
122.5°	441.9	442.1	442.2	442.1	441.9	441.6	441.3	441.1
125°	480.1	480.5	480.9	481.2	481.4	481.4	481.6	481.8
127.5°	518.1	518.0	518.0	517.9	517.8	517.6	517.6	517.5
130°	541.3	541.4	541.6	541.6	541.6	541.6	541.6	541.6
132.5°	564.0	564.2	564.4	564.4	564.3	564.1	564.0	563.9
135°	595.4	595.7	596.0	596.2	596.5	596.8	597.0	597.3
137.5°	625.5	625.8	626.1	626.2	626.1	626.1	626.0	625.9
140°	644.1	644.5	644.9	645.2	645.3	645.5	645.6	645.7
142.5°	661.4	661.6	661.9	662.1	662.1	662.1	662.2	662.2
145°	685.9	686.1	686.2	686.4	686.6	687.0	687.2	687.5
147.5°	707.5	707.7	707.8	707.9	708.0	708.2	708.3	708.4
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)