

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: P332900-930

Luminaire Tested: **SA4XXRDIP-C575D365U930-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

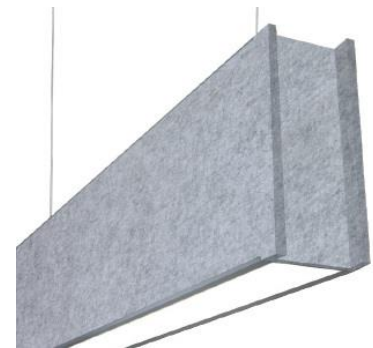
Test Information

Test Method: LM-79-08
Report Number: P332900-930
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA4XXRDIP-C575D365U930-4F0-1E-UDD-F4
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 575 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2981.8 lumens
Efficiency: N/A
Efficacy: 108.4 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: Semi-Direct

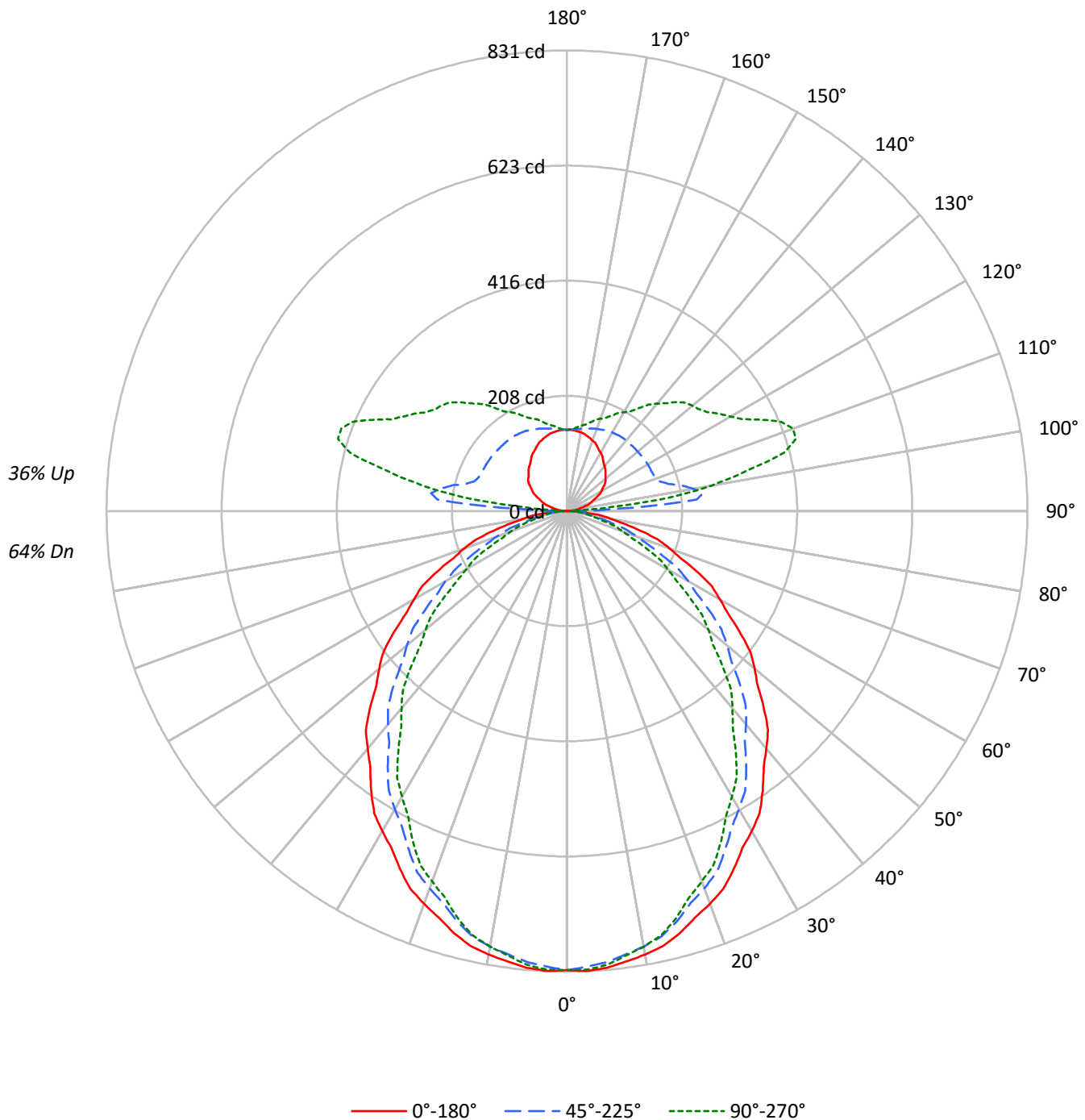
Input Watts (W): 27.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	111	111	111	111	104	104	104	104	91	91	91	80	80	80	69	69	69
1	101	97	93	90	95	91	88	85	81	78	76	71	69	67	62	60	59
2	93	85	79	74	87	80	75	70	71	67	63	63	59	57	55	52	50
3	85	75	68	62	79	71	64	59	63	58	54	56	52	48	49	46	43
4	78	67	59	53	73	63	56	51	56	51	46	50	45	42	44	40	38
5	71	60	52	46	67	57	49	44	51	45	40	45	40	36	40	36	33
6	66	54	46	40	62	51	44	38	46	40	35	41	36	32	36	32	29
7	61	49	41	35	57	46	39	34	42	36	31	37	32	29	33	29	26
8	57	44	37	31	53	42	35	30	38	32	28	34	29	26	30	26	23
9	53	41	33	28	50	39	32	27	35	29	25	31	27	23	28	24	21
10	50	37	30	25	47	36	29	24	32	27	23	29	24	21	26	22	19

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	2.6
10°-20°	217.0	7.3
20°-30°	313.4	10.5
30°-40°	355.3	11.9
40°-50°	343.1	11.5
50°-60°	285.3	9.6
60°-70°	197.0	6.6
70°-80°	99.8	3.3
80°-90°	26.4	0.9
90°-100°	105.9	3.6
100°-110°	220.5	7.4
110°-120°	197.5	6.6
120°-130°	166.1	5.6
130°-140°	138.5	4.6
140°-150°	105.8	3.5
150°-160°	74.4	2.5
160°-170°	43.7	1.5
170°-180°	14.2	0.5
0°-30°	608.3	20.4
0°-40°	963.6	32.3
0°-60°	1591.9	53.4
0°-90°	1915.2	64.2
90°-120°	523.9	17.6
90°-150°	934.3	31.3
90°-180°	1067.0	35.8
0°-180°	2981.8	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°	0	2	5	6	6	2
95°	10	30	235	116	70	11
105°	34	49	189	407	405	36
115°	59	74	169	324	389	59
125°	83	98	168	276	311	74
135°	98	117	166	245	278	76
145°	113	130	165	206	227	71
155°	129	139	161	182	190	59
165°	140	145	154	163	166	40
175°	146	147	148	150	149	14
180°	147	147	147	147	147	

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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°	11.7	10.9	10.2	9.4	8.6	8.0	8.2	8.2	8.2	8.2	8.0
90°	0.3	0.9	1.7	2.0	2.3	2.3	4.0	4.0	4.6	5.2	4.9
92.5°	3.3	4.8	7.5	11.0	15.2	21.2	35.9	58.2	80.0	91.4	76.1
95°	9.5	10.4	13.3	17.0	23.9	36.0	61.1	108.4	177.2	234.8	241.5
97.5°	17.0	17.0	19.6	23.0	28.9	39.1	58.4	97.4	165.8	247.4	303.4
100°	21.9	21.9	23.9	27.4	32.9	42.1	59.1	91.6	150.4	231.7	305.4
102.5°	26.5	27.0	28.8	32.0	37.3	46.0	61.4	90.0	140.1	212.1	288.1
105°	33.8	34.6	36.0	39.5	44.7	53.0	66.9	90.7	131.1	189.0	256.7
107.5°	41.7	42.2	43.7	47.4	52.3	60.6	73.2	95.1	129.5	176.1	231.4
110°	47.0	47.5	49.0	52.4	57.6	65.4	78.1	98.2	130.0	171.7	218.7

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	52.0	52.6	54.3	57.5	62.7	70.4	82.7	101.7	131.3	169.7	211.6
115°	59.4	60.3	62.2	65.1	70.6	78.4	89.9	107.2	134.0	168.6	204.9
117.5°	66.9	67.8	69.5	72.7	77.9	85.9	96.9	112.8	136.8	168.3	201.9
120°	72.1	72.6	74.6	77.8	82.7	90.7	101.7	116.7	138.9	168.3	200.2
122.5°	76.6	77.2	79.2	82.2	87.6	95.4	106.3	120.4	141.0	168.0	198.4
125°	82.7	83.8	85.6	88.8	94.2	102.3	112.7	125.9	144.1	167.7	195.3
127.5°	88.1	88.9	91.1	94.7	100.4	108.5	118.5	130.7	146.6	167.1	191.3
130°	91.1	92.2	94.5	98.8	104.3	112.7	122.5	133.7	148.4	166.8	188.7
132.5°	94.1	95.0	98.0	102.1	108.0	115.9	125.7	136.7	150.0	166.6	186.5
135°	98.2	99.4	102.3	107.2	113.2	120.7	130.2	140.6	152.5	166.2	183.0
137.5°	102.5	103.5	106.7	111.4	117.6	124.8	133.7	143.4	153.8	166.2	180.0
140°	105.5	106.3	109.5	114.4	120.4	127.3	136.0	145.2	155.0	166.0	178.4
142.5°	108.7	109.6	112.5	117.2	122.9	129.6	138.1	146.6	156.0	166.0	177.0
145°	113.2	114.1	117.0	121.0	126.5	132.8	140.3	148.1	156.5	165.4	174.6
147.5°	118.4	118.6	121.2	125.3	129.9	135.6	142.6	149.4	156.8	164.4	172.5
150°	121.6	121.9	124.2	127.7	132.0	137.5	143.8	150.1	156.8	163.6	170.9
152.5°	124.6	124.7	126.9	130.2	134.0	139.1	144.7	150.6	156.3	162.5	169.0
155°	128.8	129.1	130.9	133.7	136.9	141.2	146.1	151.0	155.6	160.8	166.2
157.5°	132.9	132.9	134.5	136.7	139.5	142.9	147.1	151.0	154.8	159.0	163.5
160°	135.4	135.4	136.6	138.6	140.9	144.1	147.6	151.0	154.2	157.6	161.3
162.5°	137.7	137.5	138.4	140.2	142.3	144.8	148.0	151.0	153.4	156.2	159.6
165°	140.3	140.3	140.9	142.4	143.8	145.5	148.1	150.4	152.1	154.2	156.5
167.5°	142.9	142.6	142.9	144.0	144.8	146.2	148.1	149.7	150.7	152.1	153.7
170°	144.1	143.8	144.1	145.0	145.5	146.3	147.8	149.3	149.9	150.7	151.9
172.5°	145.2	145.0	145.0	145.6	145.9	146.6	147.6	148.8	149.0	149.3	150.3
175°	146.3	146.1	146.1	146.3	146.7	146.7	147.2	148.1	147.8	147.8	148.4
177.5°	146.9	146.7	146.4	146.7	146.7	146.7	146.9	147.3	146.9	146.9	147.2
180°	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7

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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°	7.9	7.8	7.8	7.8	8.0	8.2	8.2	8.3
90°	5.2	5.5	5.8	5.8	6.0	6.4	6.0	6.0
92.5°	56.6	42.6	33.9	28.1	24.7	23.2	22.2	22.2
95°	213.5	168.8	130.2	102.3	88.1	79.2	74.0	70.3
97.5°	315.4	298.9	270.7	240.6	219.9	202.6	194.0	187.9
100°	347.5	353.3	339.2	317.8	292.8	275.2	266.5	264.2
102.5°	345.9	374.5	378.5	369.7	354.3	341.6	332.5	330.6
105°	322.7	372.6	401.1	412.9	413.5	411.2	407.2	405.4
107.5°	289.8	342.9	383.0	408.8	423.0	429.6	432.4	433.2
110°	270.0	319.8	361.7	393.3	413.8	425.9	431.0	433.7

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	255.4	299.5	339.0	370.7	394.0	408.6	415.9	420.0
115°	240.9	276.3	310.1	337.7	360.4	377.7	387.0	389.3
117.5°	233.7	263.1	289.6	313.1	332.5	347.0	356.3	358.1
120°	230.5	257.3	280.4	300.8	317.2	330.0	337.5	340.6
122.5°	227.7	253.6	274.6	292.5	306.4	317.2	323.6	326.8
125°	223.1	247.8	267.7	283.6	295.1	303.5	308.9	310.6
127.5°	217.3	240.9	260.8	275.8	287.4	294.8	299.5	301.2
130°	212.6	235.5	255.0	270.3	282.1	289.3	293.9	295.6
132.5°	207.8	229.2	248.3	263.6	275.2	283.3	287.7	289.4
135°	201.1	219.9	237.4	251.8	263.3	271.4	276.1	277.8
137.5°	195.1	210.9	225.8	238.7	249.6	257.5	261.3	263.3
140°	191.6	205.1	218.1	230.2	240.4	246.6	250.7	253.0
142.5°	188.4	200.3	211.4	221.9	230.9	236.8	240.4	241.9
145°	183.8	193.6	202.3	210.3	217.5	222.4	225.3	226.7
147.5°	180.1	187.8	194.8	201.1	206.4	210.7	212.8	213.4
150°	177.8	184.4	190.2	195.3	200.0	203.7	205.5	205.7
152.5°	175.3	181.0	186.3	190.5	194.4	197.5	198.5	198.9
155°	171.5	176.0	180.3	183.8	186.7	189.0	189.9	189.9
157.5°	167.4	171.2	174.9	177.7	179.8	181.6	182.1	182.1
160°	164.9	168.0	171.1	173.5	175.2	176.9	177.2	177.2
162.5°	162.3	165.0	167.5	169.6	170.8	172.5	172.8	172.6
165°	158.7	160.5	162.5	164.0	165.1	166.2	166.0	165.7
167.5°	155.4	156.7	158.3	159.1	159.7	160.5	160.5	160.2
170°	153.3	154.2	155.3	156.2	156.8	157.0	156.8	156.8
172.5°	151.5	152.1	152.8	153.4	153.8	154.0	153.8	153.3
175°	149.0	149.3	149.9	149.9	149.9	150.4	149.9	149.3
177.5°	147.3	147.6	147.6	147.8	147.6	147.8	147.3	146.9
180°	146.7	146.7	146.7	146.7	146.7	146.7	146.7	146.7

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