

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: P331293-927

Luminaire Tested: **SA2XXDIP-C485D330U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331293-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXDIP-C485D330U927-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

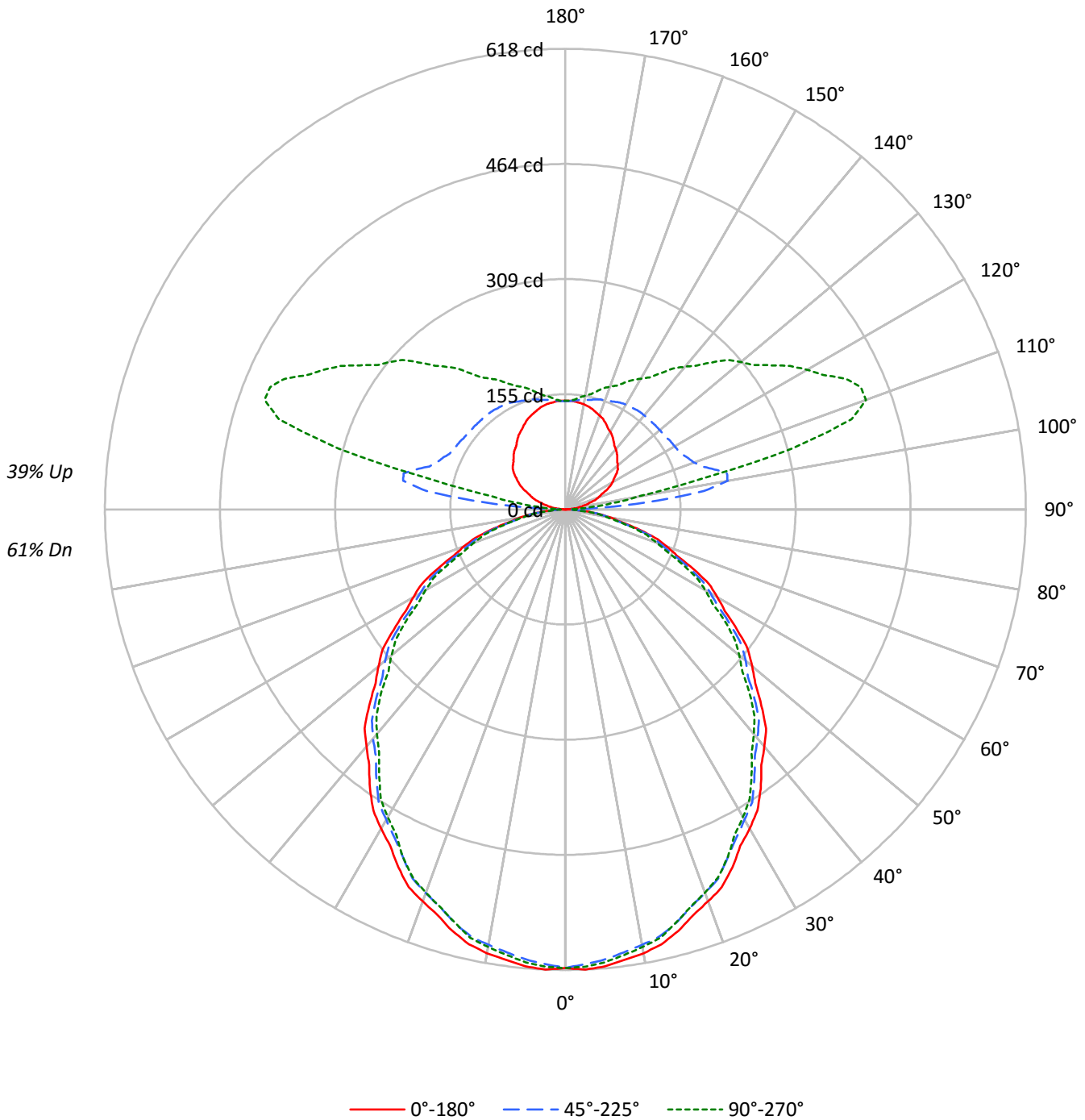
Lumens per Lamp: N/A
Luminaire Lumens: 2579.6 lumens
Efficiency: N/A
Efficacy: 93.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: Semi-Direct

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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	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	66	66	66	61																
1	100	96	92	88	94	90	86	83	78	76	73	68	66	64	58	57	56	56	56	56	51																
2	91	84	77	72	85	78	73	68	69	64	61	60	57	54	51	49	47	47	47	47	43																
3	83	74	66	60	78	69	62	57	61	55	51	53	49	45	46	43	40	40	40	40	36																
4	76	65	57	51	71	61	54	48	54	48	44	47	43	39	41	37	34	34	34	34	31																
5	70	58	50	44	65	55	47	42	48	42	38	42	38	34	37	33	30	30	30	30	27																
6	65	52	44	38	60	49	42	36	44	38	33	38	33	30	33	29	26	26	26	26	24																
7	60	47	39	33	56	45	37	32	40	34	29	35	30	26	30	27	24	24	24	24	21																
8	55	43	35	30	52	41	33	28	36	30	26	32	27	24	28	24	21	21	21	21	19																
9	52	39	32	26	48	37	30	25	33	27	23	29	25	21	26	22	19	19	19	19	17																
10	48	36	29	24	45	34	27	23	31	25	21	27	23	19	24	20	17	17	17	17	15																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9935	9935	9935
5°	9972	9828	9887
10°	9914	9729	9778
15°	9790	9603	9593
20°	9617	9414	9402
25°	9444	9180	9180
30°	9221	8968	8889
35°	9014	8712	8584
40°	8753	8456	8292
45°	8499	8200	7996
50°	8219	7935	7654
55°	7927	7626	7344
60°	7601	7259	6991
65°	7255	6896	6575
70°	6812	6453	6146
75°	6201	5939	5795
80°	5504	5337	5058
85°	4483	4279	3835



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.9	2.2
10°-20°	162.8	6.3
20°-30°	239.3	9.3
30°-40°	278.0	10.8
40°-50°	277.7	10.8
50°-60°	242.1	9.4
60°-70°	179.0	6.9
70°-80°	101.4	3.9
80°-90°	28.6	1.1
90°-100°	58.2	2.3
100°-110°	197.5	7.7
110°-120°	209.8	8.1
120°-130°	172.7	6.7
130°-140°	138.7	5.4
140°-150°	104.8	4.1
150°-160°	73.7	2.9
160°-170°	43.4	1.7
170°-180°	14.1	0.5
0°-30°	459.9	17.8
0°-40°	737.9	28.6
0°-60°	1257.7	48.8
0°-90°	1566.7	60.7
90°-120°	465.5	18.0
90°-150°	881.7	34.2
90°-180°	1013.0	39.3
0°-180°	2579.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	615	613	606	611	610	58
15°	586	582	574	577	574	165
25°	530	525	515	516	515	244
35°	457	451	442	438	436	285
45°	372	368	359	353	350	287
55°	282	278	271	264	261	252
65°	190	186	180	175	172	188
75°	99	98	95	92	93	106
85°	24	24	23	21	21	28
90°	0	4	10	9	9	2
95°	10	24	110	41	32	10
105°	34	52	207	371	315	36
115°	60	76	174	358	415	60
125°	84	99	167	290	337	75
135°	98	118	165	244	279	76
145°	112	129	164	204	223	71
155°	128	138	159	180	187	59
165°	139	144	153	162	164	39
175°	145	145	147	148	148	14
180°	146	146	146	146	146	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	618.1	617.6	617.1	616.6	616.0	615.2	614.0	612.9	611.7	610.5	611.6
5°	615.3	614.7	614.3	613.7	613.2	612.2	610.8	609.3	607.8	606.4	607.4
7.5°	609.8	609.0	608.2	607.4	606.6	605.5	604.0	602.5	601.0	599.5	600.6
10°	604.7	603.7	602.8	601.9	600.9	599.7	598.1	596.6	595.0	593.4	594.5
12.5°	597.5	596.8	595.9	595.1	594.3	593.1	591.5	589.9	588.4	586.8	587.5
15°	585.7	584.9	584.2	583.4	582.6	581.3	579.6	577.9	576.2	574.5	575.0
17.5°	570.5	569.8	569.0	568.2	567.4	566.2	564.4	562.7	560.9	559.2	559.8
20°	559.7	558.9	558.1	557.3	556.5	555.2	553.3	551.5	549.7	547.9	548.3
22.5°	548.8	547.7	546.6	545.5	544.4	543.0	541.2	539.5	537.7	536.0	536.1
25°	530.1	529.0	528.0	527.0	525.9	524.3	522.0	519.8	517.5	515.3	515.6
27.5°	508.8	507.9	506.9	506.0	505.0	503.7	501.9	500.1	498.4	496.6	496.2
30°	494.6	493.5	492.5	491.5	490.4	488.9	486.9	485.0	483.0	481.0	480.6
32.5°	479.4	478.6	477.8	476.9	476.1	474.6	472.5	470.5	468.4	466.4	465.6
35°	457.3	456.0	454.7	453.4	452.1	450.4	448.3	446.2	444.0	442.0	441.2
37.5°	432.4	431.2	430.1	428.9	427.7	426.1	424.0	421.9	419.8	417.7	416.7
40°	415.3	414.2	413.2	412.2	411.1	409.6	407.4	405.4	403.2	401.2	400.0
42.5°	398.8	397.7	396.6	395.6	394.6	393.0	390.9	388.8	386.7	384.5	383.3
45°	372.2	371.2	370.3	369.4	368.4	367.0	365.0	363.1	361.1	359.1	357.7
47.5°	345.6	344.8	343.9	343.0	342.1	340.7	338.7	336.6	334.5	332.5	331.0
50°	327.2	326.5	325.8	325.2	324.6	323.3	321.5	319.6	317.7	315.9	314.1
52.5°	309.2	308.3	307.4	306.6	305.7	304.4	302.7	301.0	299.2	297.5	296.0
55°	281.6	280.8	280.0	279.2	278.5	277.3	275.7	274.1	272.5	270.9	269.4
57.5°	253.9	253.3	252.6	252.1	251.4	250.3	248.5	246.8	245.0	243.3	241.7
60°	235.4	235.0	234.4	233.9	233.4	232.2	230.4	228.5	226.6	224.8	223.4
62.5°	217.5	216.7	215.8	214.9	214.1	213.0	211.6	210.2	208.7	207.3	206.0
65°	189.9	189.1	188.3	187.5	186.8	185.7	184.4	183.1	181.7	180.5	179.3
67.5°	161.8	161.2	160.6	159.9	159.3	158.4	157.2	156.1	154.9	153.7	152.8
70°	144.3	143.9	143.3	142.8	142.3	141.4	140.2	139.0	137.8	136.7	135.8
72.5°	126.4	125.9	125.3	124.8	124.3	123.7	122.9	122.1	121.4	120.6	119.6
75°	99.4	99.1	98.9	98.6	98.3	97.9	97.2	96.6	95.9	95.2	94.4
77.5°	75.3	74.8	74.4	73.9	73.4	73.1	72.9	72.6	72.3	72.1	71.7
80°	59.2	59.0	58.9	58.8	58.6	58.5	58.1	57.9	57.7	57.4	57.0
82.5°	44.0	44.0	44.0	44.0	43.9	43.8	43.6	43.5	43.3	43.2	42.7
85°	24.2	24.2	24.0	23.8	23.8	23.6	23.4	23.4	23.2	23.1	22.7
87.5°	8.6	8.6	8.6	8.5	8.3	8.3	8.4	8.6	8.7	8.6	8.2
90°	0.3	1.1	2.2	2.8	3.3	4.2	5.6	7.5	9.3	9.5	9.3
92.5°	3.4	4.9	7.0	8.2	10.1	12.7	19.0	28.0	35.9	36.4	30.7
95°	9.8	10.9	13.7	16.2	20.7	27.4	40.3	64.6	97.1	109.7	96.0
97.5°	15.9	17.4	20.4	24.2	29.4	37.0	53.2	87.1	141.1	187.3	196.5
100°	21.5	22.4	24.9	29.4	35.0	42.9	57.7	91.8	152.3	221.1	261.4
102.5°	26.7	27.3	29.9	34.3	40.2	48.0	61.7	92.1	148.0	222.2	285.6
105°	34.1	35.3	37.2	41.4	47.6	55.5	68.6	93.5	139.7	207.4	281.9
107.5°	42.2	43.1	45.0	48.9	55.0	62.9	75.7	97.4	135.5	191.5	257.3
110°	47.6	48.7	50.4	54.0	59.9	68.0	80.3	100.4	134.7	183.9	241.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	52.5	53.6	55.5	58.9	64.6	73.0	84.8	103.9	134.8	179.0	231.1
115°	60.2	61.6	63.3	66.6	72.2	79.8	91.8	108.8	136.0	173.6	217.8
117.5°	68.1	69.2	70.9	73.9	79.3	87.1	98.2	114.2	138.1	170.9	209.4
120°	73.0	74.1	75.9	78.3	84.0	91.8	102.7	117.9	139.4	169.4	204.9
122.5°	77.8	78.7	80.3	83.1	88.6	96.7	106.9	121.0	140.9	168.4	201.1
125°	84.0	84.8	86.5	89.8	95.5	103.3	113.4	126.0	143.3	166.8	195.7
127.5°	88.9	90.0	92.4	96.1	101.4	109.5	119.3	130.6	145.7	165.9	190.6
130°	91.8	92.9	95.7	99.7	105.3	113.0	122.9	133.5	147.5	165.4	187.3
132.5°	94.5	95.9	98.9	103.0	108.8	116.7	126.0	136.4	149.3	165.2	184.6
135°	98.5	99.7	103.0	107.2	113.7	121.4	130.5	140.2	151.5	164.9	180.8
137.5°	102.3	103.7	107.0	111.5	117.9	125.2	134.0	143.1	153.4	164.8	178.2
140°	105.3	106.4	109.7	114.2	120.3	127.6	136.0	144.7	154.2	164.6	176.6
142.5°	108.1	109.1	112.2	116.7	122.6	129.4	137.6	146.1	154.9	164.6	175.1
145°	112.5	113.7	116.5	120.6	126.3	132.4	140.0	147.8	155.6	164.0	173.0
147.5°	117.2	118.0	120.7	124.6	129.3	134.8	141.9	148.8	155.8	163.0	170.9
150°	120.3	121.2	123.4	127.1	131.3	136.3	142.8	149.2	155.6	162.3	169.1
152.5°	123.5	123.9	126.1	129.3	133.3	137.8	143.6	149.4	155.2	161.2	167.5
155°	127.9	128.2	129.8	132.9	136.0	140.2	145.0	149.7	154.5	159.2	164.6
157.5°	131.6	131.9	133.2	135.9	138.4	141.9	145.9	149.7	153.2	157.2	161.8
160°	134.0	134.4	135.5	137.7	140.0	143.1	146.4	149.7	152.6	155.9	159.8
162.5°	136.6	136.3	137.5	139.3	141.3	143.7	146.6	149.5	151.9	154.8	158.0
165°	139.4	139.1	139.7	141.3	142.8	144.4	146.9	148.9	150.6	152.6	155.0
167.5°	141.7	141.4	141.9	143.0	144.0	145.0	146.9	148.5	149.3	150.6	152.2
170°	143.3	142.8	143.1	143.9	144.4	145.3	146.6	148.1	148.6	149.5	150.6
172.5°	144.2	143.9	143.7	144.6	144.9	145.5	146.5	147.4	147.7	148.1	149.0
175°	145.3	145.0	144.7	145.3	145.3	145.5	146.1	146.6	146.4	146.6	146.9
177.5°	145.8	145.3	145.1	145.5	145.5	145.5	145.8	146.2	145.8	145.5	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	615.3	615.3	615.3	615.3	615.3	615.3	615.3	615.3
2.5°	612.7	613.7	614.7	615.2	615.0	614.7	614.6	614.3
5°	608.6	609.6	610.6	611.0	610.8	610.5	610.2	610.0
7.5°	601.7	602.7	603.8	604.1	603.9	603.6	603.2	603.0
10°	595.5	596.6	597.6	597.9	597.5	597.1	596.8	596.4
12.5°	588.3	589.0	589.7	589.9	589.6	589.4	589.1	588.7
15°	575.5	576.1	576.6	576.5	575.8	575.2	574.6	573.9
17.5°	560.4	561.0	561.7	561.6	560.9	560.4	559.8	559.1
20°	548.7	549.1	549.5	549.4	548.8	548.3	547.8	547.2
22.5°	536.1	536.2	536.3	536.2	535.9	535.6	535.3	535.0
25°	515.9	516.1	516.3	516.3	516.1	515.9	515.6	515.3
27.5°	495.8	495.4	495.0	494.6	493.9	493.3	492.7	492.0
30°	480.2	479.8	479.4	479.0	478.4	477.9	477.4	476.8
32.5°	464.9	464.2	463.5	462.9	462.3	461.8	461.3	460.7
35°	440.4	439.6	438.8	438.1	437.4	436.7	436.1	435.5
37.5°	415.7	414.8	413.8	413.0	412.3	411.7	411.1	410.5
40°	398.8	397.6	396.4	395.5	395.0	394.5	394.0	393.4
42.5°	382.0	380.7	379.4	378.4	377.6	376.9	376.2	375.4
45°	356.2	354.8	353.3	352.4	351.8	351.3	350.8	350.2
47.5°	329.5	327.9	326.4	325.3	324.5	323.8	323.0	322.2
50°	312.3	310.4	308.6	307.3	306.7	306.0	305.3	304.7
52.5°	294.5	292.9	291.4	290.2	289.3	288.4	287.6	286.7
55°	267.8	266.3	264.7	263.6	262.8	262.2	261.6	260.9
57.5°	240.2	238.6	237.1	236.1	235.5	235.0	234.6	234.0
60°	221.9	220.5	219.0	218.1	217.7	217.3	216.9	216.5
62.5°	204.6	203.3	201.9	201.1	200.5	200.0	199.6	199.0
65°	178.1	176.9	175.7	174.8	174.1	173.5	172.9	172.1
67.5°	151.9	150.9	150.0	149.3	148.8	148.2	147.7	147.2
70°	134.8	133.9	133.0	132.3	131.7	131.2	130.7	130.2
72.5°	118.7	117.8	116.9	116.2	115.8	115.3	114.9	114.5
75°	93.6	92.9	92.1	91.8	92.1	92.4	92.6	92.9
77.5°	71.3	70.9	70.5	70.1	69.7	69.4	69.0	68.6
80°	56.6	56.2	55.8	55.5	55.2	55.0	54.7	54.4
82.5°	42.2	41.7	41.2	40.9	40.9	40.8	40.7	40.7
85°	22.3	21.9	21.5	21.2	21.1	21.0	20.8	20.7
87.5°	7.8	7.4	7.1	7.0	6.9	6.8	6.7	6.6
90°	9.0	8.4	9.0	9.3	9.3	9.3	9.3	9.3
92.5°	24.4	20.9	18.6	16.9	16.6	15.8	15.9	15.5
95°	73.4	56.2	44.5	38.3	34.7	32.5	31.6	31.9
97.5°	171.1	140.0	109.7	89.5	76.1	69.2	65.2	62.8
100°	255.6	220.9	182.5	148.6	125.4	113.4	105.3	100.2
102.5°	310.9	303.0	275.0	239.1	213.8	193.3	183.2	176.3
105°	340.1	371.7	375.3	366.1	348.7	331.4	319.3	315.4
107.5°	319.0	366.7	395.8	409.3	411.5	410.6	408.1	403.0
110°	300.9	351.0	386.8	409.8	421.8	427.1	429.7	429.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	284.3	332.4	370.7	397.0	413.8	422.6	427.4	428.9
115°	264.0	307.0	343.7	372.6	392.4	405.3	412.6	415.1
117.5°	248.6	286.5	319.7	346.7	367.0	380.6	388.2	390.4
120°	241.0	275.7	305.4	330.8	350.5	363.6	371.7	374.5
122.5°	235.0	266.7	294.9	317.8	335.4	348.4	355.6	357.9
125°	226.2	255.0	279.6	300.6	316.9	327.5	334.5	336.8
127.5°	217.5	243.6	266.8	286.1	300.3	310.3	316.3	318.1
130°	211.9	236.0	258.1	276.6	290.3	299.8	305.4	307.6
132.5°	206.5	228.8	249.1	266.5	280.0	289.5	294.6	296.7
135°	199.0	217.5	236.0	251.6	263.6	272.9	278.0	279.1
137.5°	193.1	208.5	223.2	236.8	247.8	255.7	260.2	261.8
140°	189.2	202.6	215.6	227.8	236.8	244.1	248.3	249.9
142.5°	186.1	197.5	208.6	218.9	227.4	234.0	237.7	238.1
145°	181.6	190.9	199.6	207.7	214.4	219.2	222.0	222.8
147.5°	178.2	185.5	192.3	198.2	203.7	207.6	209.5	210.0
150°	175.8	182.0	187.8	192.8	197.0	200.4	202.1	202.4
152.5°	173.3	179.0	184.0	188.4	191.7	194.6	195.8	195.9
155°	169.9	174.4	178.6	181.6	184.7	186.7	187.8	187.3
157.5°	166.0	169.7	173.2	175.6	177.8	179.4	179.9	179.9
160°	163.4	166.5	169.6	171.6	173.6	174.9	175.2	175.2
162.5°	161.0	163.7	166.3	167.8	169.8	170.7	171.0	170.7
165°	157.3	159.2	161.2	162.3	163.4	164.6	164.6	164.3
167.5°	153.8	155.3	156.6	157.6	158.1	158.8	158.7	158.4
170°	152.0	152.8	153.9	154.5	154.8	155.6	155.3	154.8
172.5°	150.0	150.6	151.5	151.8	152.1	152.5	152.2	151.9
175°	147.8	148.1	148.4	148.6	148.6	148.9	148.6	148.1
177.5°	146.2	146.2	146.5	146.5	146.5	146.5	146.2	145.8
180°	145.5	145.5	145.5	145.5	145.5	145.5	145.5	145.5

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