

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: P331290-940

Luminaire Tested: **SA2XXDIP-C485D330U940-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331290-940
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-C485D330U940-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 330 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

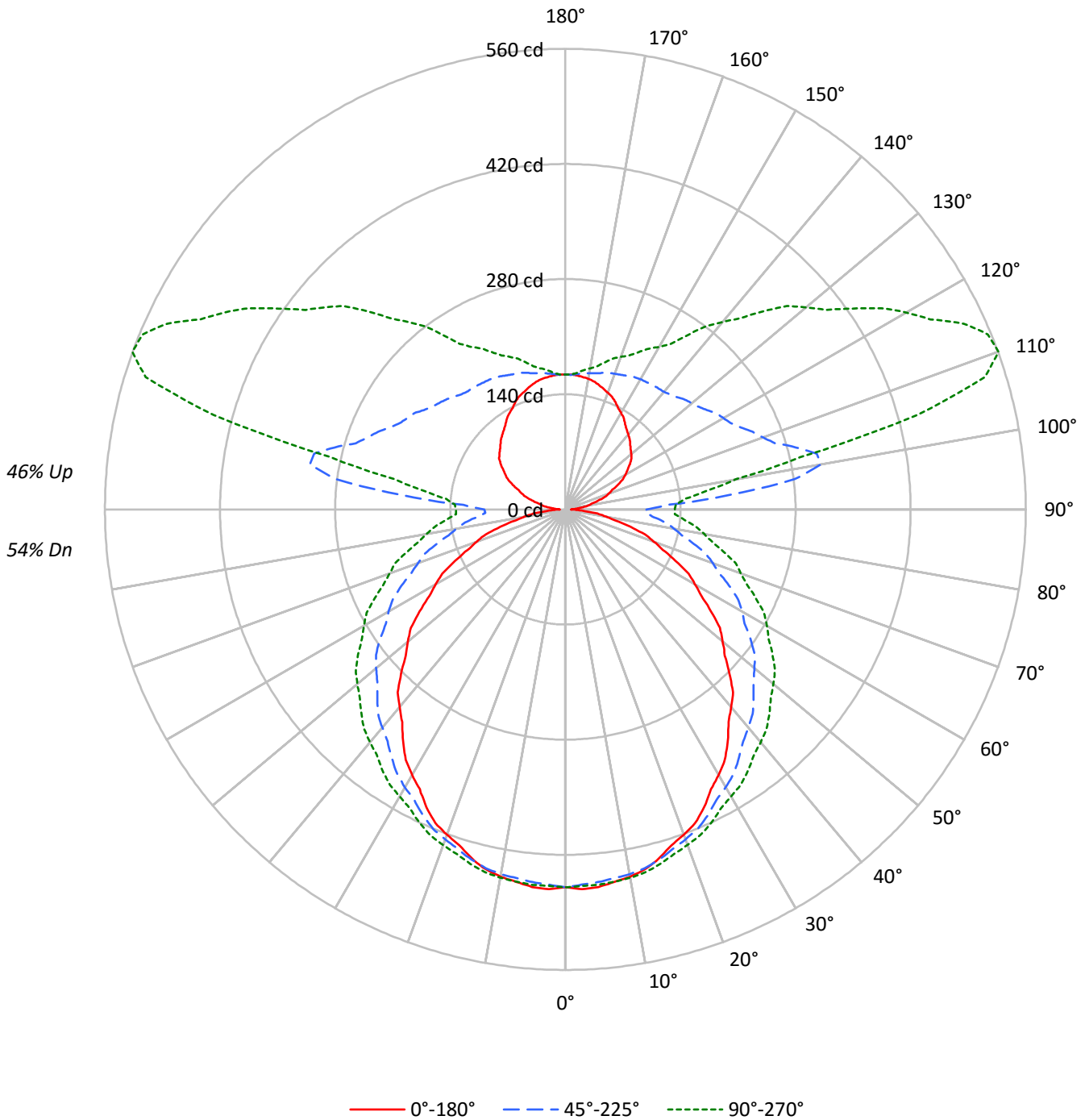
Lumens per Lamp: N/A
Luminaire Lumens: 2894.6 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	108	108	108	108	100	100	100	100	85	85	85	72	72	72	60	60	60	54					54			
1	97	92	87	83	90	85	81	78	73	70	67	61	59	57	50	49	47	42					42			
2	88	79	73	67	81	74	68	62	63	58	54	53	49	46	43	41	38	34					34			
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	38	35	32	28					28			
4	73	61	52	46	67	57	49	43	48	42	38	41	36	32	33	30	27	24					24			
5	66	54	45	39	61	50	43	37	43	37	32	36	31	28	30	26	23	20					20			
6	61	48	40	34	56	45	37	32	39	32	28	33	28	24	27	23	20	17					17			
7	56	44	35	29	52	41	33	28	35	29	24	30	25	21	25	21	18	15					15			
8	52	40	31	26	48	37	30	24	32	26	22	27	22	19	23	19	16	14					14			
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12					12			
10	46	33	26	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11					11			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.5	1.5
10°-20°	124.9	4.3
20°-30°	189.2	6.5
30°-40°	230.5	8.0
40°-50°	247.9	8.6
50°-60°	240.8	8.3
60°-70°	210.2	7.3
70°-80°	161.8	5.6
80°-90°	110.1	3.8
90°-100°	140.3	4.8
100°-110°	276.9	9.6
110°-120°	272.3	9.4
120°-130°	214.6	7.4
130°-140°	164.6	5.7
140°-150°	119.4	4.1
150°-160°	82.9	2.9
160°-170°	48.8	1.7
170°-180°	15.9	0.5
0°-30°	357.6	12.4
0°-40°	588.1	20.3
0°-60°	1076.8	37.2
0°-90°	1558.9	53.9
90°-120°	689.5	23.8
90°-150°	1188.1	41.0
90°-180°	1336.0	46.2
0°-180°	2894.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	7	50	99	124	133	5
95°	16	64	200	148	146	16
105°	42	82	291	497	443	45
115°	70	97	235	462	534	70
125°	96	114	210	367	426	85
135°	112	133	193	295	341	86
145°	127	146	185	233	258	80
155°	144	155	179	203	211	66
165°	157	162	172	182	185	44
175°	164	164	165	167	167	16
180°	164	164	164	164	164	



TEST NUMBER: P331290-940

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.1	22.1	31.2	40.1	49.1	58.4	68.2	78.1	88.0	97.5	103.4
90°	7.0	16.5	26.3	35.6	44.8	54.8	65.8	77.5	88.8	98.6	104.2
92.5°	10.0	19.7	30.0	39.3	49.4	61.0	77.2	96.3	114.4	124.0	123.5
95°	16.3	24.6	34.7	44.5	56.4	72.0	95.3	131.6	177.0	200.1	190.3
97.5°	22.6	30.5	40.0	50.5	62.5	78.4	105.1	151.9	221.1	281.7	297.5
100°	28.9	35.3	43.7	54.1	66.0	81.7	106.6	153.4	229.7	315.5	366.3
102.5°	34.2	39.9	47.7	57.8	69.3	84.6	108.2	150.3	221.4	313.0	389.7
105°	41.7	47.3	53.9	62.9	74.1	88.9	111.4	147.1	206.8	290.7	379.7
107.5°	50.7	55.1	60.7	68.5	78.8	93.1	114.9	146.7	197.0	267.4	346.4
110°	56.3	60.5	65.3	72.3	81.9	96.1	117.3	147.2	192.9	255.7	325.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	61.8	65.5	70.2	76.5	85.3	99.4	119.7	148.0	189.8	246.4	309.8
115°	70.4	73.6	77.1	82.6	90.4	103.1	123.3	149.2	186.5	235.3	289.5
117.5°	78.6	81.0	84.0	88.4	95.5	107.9	126.6	150.8	183.7	226.9	274.6
120°	84.3	86.1	88.5	92.0	98.9	110.9	129.2	152.1	182.3	221.9	266.1
122.5°	89.5	90.8	92.9	96.2	102.7	114.8	131.8	153.1	181.2	217.7	258.5
125°	95.9	96.8	98.7	102.5	108.8	119.9	136.1	155.0	179.2	210.4	246.8
127.5°	101.4	102.5	105.0	109.1	114.9	125.8	140.7	157.2	178.1	204.6	236.0
130°	104.7	105.8	108.8	113.1	119.2	129.5	143.7	158.7	177.5	200.8	229.0
132.5°	107.7	109.1	112.4	116.8	123.2	133.2	146.1	160.2	177.1	197.4	222.7
135°	111.6	112.8	116.6	121.4	128.6	138.1	149.7	162.2	176.3	192.9	213.9
137.5°	115.8	117.3	121.1	126.1	133.2	141.8	152.4	163.3	175.4	189.0	206.8
140°	119.1	120.2	123.9	128.8	135.5	143.8	153.6	163.6	174.6	186.6	202.5
142.5°	122.4	123.2	126.6	131.5	138.0	145.7	155.0	164.5	174.6	185.6	199.2
145°	126.6	128.0	131.1	135.8	142.1	149.0	157.6	166.4	175.1	184.6	195.6
147.5°	132.0	132.9	135.9	140.3	145.5	151.7	159.7	167.5	175.4	183.5	192.4
150°	135.5	136.4	138.9	143.0	147.8	153.5	160.7	167.9	175.1	182.7	190.3
152.5°	139.0	139.5	142.0	145.5	150.1	155.2	161.7	168.2	174.7	181.5	188.5
155°	144.0	144.3	146.2	149.6	153.1	157.8	163.2	168.5	173.9	179.2	185.3
157.5°	148.1	148.5	150.0	153.0	155.8	159.7	164.3	168.5	172.5	177.0	182.2
160°	150.9	151.2	152.5	155.0	157.6	161.0	164.8	168.5	171.7	175.5	179.9
162.5°	153.7	153.5	154.8	156.8	159.1	161.8	165.1	168.3	170.9	174.2	177.9
165°	156.9	156.6	157.2	159.1	160.7	162.6	165.4	167.6	169.5	171.7	174.5
167.5°	159.5	159.2	159.7	161.0	162.1	163.3	165.3	167.2	168.1	169.5	171.3
170°	161.3	160.7	161.0	161.9	162.6	163.5	165.1	166.7	167.3	168.3	169.5
172.5°	162.3	161.9	161.8	162.7	163.1	163.8	164.9	165.9	166.3	166.7	167.7
175°	163.5	163.2	162.9	163.5	163.5	163.8	164.4	165.1	164.8	165.1	165.4
177.5°	164.1	163.5	163.4	163.8	163.8	163.8	164.1	164.6	164.1	163.8	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	109.5	115.4	121.5	125.6	127.4	129.4	131.3	133.1
90°	109.9	115.1	121.6	125.8	127.6	129.4	131.2	133.0
92.5°	122.2	124.1	127.2	129.0	130.6	131.3	133.4	134.6
95°	170.4	156.8	149.2	146.0	143.7	142.9	143.7	145.8
97.5°	274.5	244.9	216.2	197.2	183.8	177.8	175.0	174.1
100°	365.2	331.6	293.9	259.3	234.8	222.9	215.4	211.3
102.5°	423.5	420.0	393.8	357.0	330.1	308.6	298.8	292.7
105°	450.4	491.2	500.5	493.5	475.6	457.7	445.8	443.0
107.5°	420.9	479.5	517.2	535.7	539.8	540.4	539.3	535.1
110°	396.8	457.9	503.0	532.0	547.2	554.8	559.3	560.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	374.4	433.3	481.1	513.9	534.4	546.0	553.0	556.3
115°	346.0	398.9	444.6	480.1	504.1	520.2	530.0	534.5
117.5°	323.1	370.1	411.9	445.2	469.6	486.4	496.6	500.4
120°	310.9	354.1	391.6	423.2	446.8	463.2	474.0	478.8
122.5°	300.6	340.5	376.1	404.7	425.9	441.8	451.4	455.4
125°	285.2	321.6	353.4	379.7	399.3	412.6	421.8	425.6
127.5°	270.0	303.0	332.9	357.1	374.3	386.9	395.0	398.3
130°	260.3	290.9	319.3	342.5	359.1	371.0	378.5	382.2
132.5°	250.7	279.3	305.6	327.4	343.8	355.7	362.7	366.1
135°	237.6	261.4	285.3	305.1	319.9	331.4	338.3	340.7
137.5°	226.1	246.3	265.6	282.8	296.1	306.0	312.1	315.0
140°	219.1	236.6	253.4	268.9	279.9	288.9	294.5	297.3
142.5°	213.5	228.3	242.6	255.6	265.9	274.1	279.1	280.3
145°	206.3	217.6	228.2	238.2	246.5	252.5	256.5	258.2
147.5°	200.9	209.2	217.0	223.8	230.4	235.1	237.6	238.5
150°	197.9	204.8	211.4	217.0	221.8	225.6	227.5	227.8
152.5°	195.1	201.5	207.1	212.0	215.8	219.0	220.4	220.5
155°	191.3	196.3	201.0	204.5	207.9	210.2	211.4	210.8
157.5°	186.8	191.0	194.9	197.7	200.1	202.0	202.5	202.5
160°	184.0	187.4	190.9	193.1	195.4	196.9	197.2	197.2
162.5°	181.2	184.2	187.2	188.9	191.1	192.2	192.4	192.2
165°	177.1	179.2	181.5	182.7	184.0	185.3	185.3	184.9
167.5°	173.1	174.8	176.3	177.5	178.0	178.7	178.6	178.3
170°	171.1	172.0	173.3	173.9	174.2	175.1	174.9	174.2
172.5°	168.8	169.5	170.5	170.9	171.2	171.7	171.3	170.9
175°	166.4	166.7	167.0	167.3	167.3	167.6	167.3	166.7
177.5°	164.6	164.6	164.9	164.9	164.9	164.9	164.6	164.1
180°	163.8	163.8	163.8	163.8	163.8	163.8	163.8	163.8

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