

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: P332540-840

Luminaire Tested: **S124DIP-S575D365U840-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332540-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DIP-S575D365U840-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 575 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3714.4 lumens  
Efficiency: N/A  
Efficacy: 135.1 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

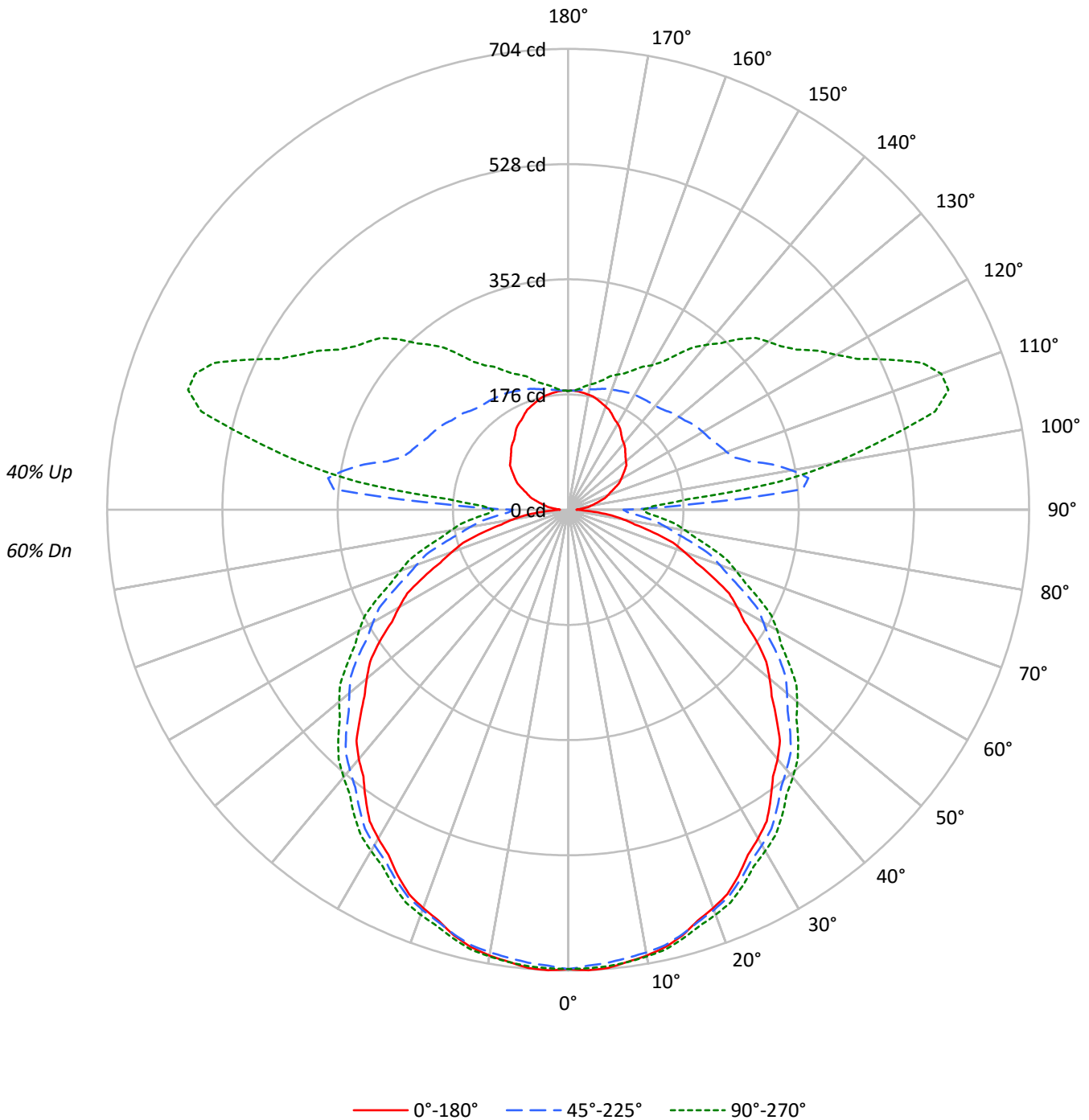
Input Watts (W): 27.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	50	30	10	50	30	10	0		
RCR																										
0	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60								
1	99	94	89	85	92	88	84	80	76	73	70	65	63	61	55	54	52	48								
2	89	81	74	69	83	76	70	65	66	61	57	57	53	50	48	46	43	39								
3	81	71	63	57	75	66	59	54	58	52	48	50	45	42	42	39	36	32								
4	74	63	54	48	69	59	51	45	51	45	40	44	39	35	37	34	31	27								
5	68	56	47	41	63	52	44	39	46	39	35	39	34	31	34	30	27	24								
6	63	50	41	35	58	47	39	33	41	35	30	35	30	27	30	26	23	21								
7	58	45	37	31	54	42	35	29	37	31	26	32	27	23	28	24	21	18								
8	54	41	33	27	50	38	31	26	34	28	23	29	24	21	25	21	18	16								
9	50	37	29	24	46	35	28	23	31	25	21	27	22	19	23	19	17	14								
10	47	34	27	22	43	32	25	21	28	23	19	25	20	17	22	18	15	13								

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

	0°	45°	90°
0°	5666	5666	5666
5°	5683	5537	5552
10°	5649	5446	5442
15°	5598	5341	5312
20°	5521	5226	5185
25°	5435	5096	5047
30°	5342	4967	4904
35°	5237	4834	4779
40°	5153	4710	4648
45°	5027	4594	4537
50°	4920	4460	4418
55°	4811	4333	4278
60°	4641	4173	4153
65°	4454	4001	3997
70°	4226	3805	3816
75°	3910	3587	3652
80°	3559	3381	3492
85°	3112	3195	3398



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.5	1.8
10°-20°	190.4	5.1
20°-30°	287.9	7.8
30°-40°	348.3	9.4
40°-50°	368.3	9.9
50°-60°	346.6	9.3
60°-70°	287.5	7.7
70°-80°	202.0	5.4
80°-90°	115.2	3.1
90°-100°	199.0	5.4
100°-110°	323.3	8.7
110°-120°	278.3	7.5
120°-130°	224.8	6.1
130°-140°	179.8	4.8
140°-150°	132.7	3.6
150°-160°	92.1	2.5
160°-170°	54.2	1.5
170°-180°	17.6	0.5
0°-30°	544.7	14.7
0°-40°	893.1	24.0
0°-60°	1607.9	43.3
0°-90°	2212.6	59.6
90°-120°	800.6	21.6
90°-150°	1337.9	36.0
90°-180°	1502.0	40.4
0°-180°	3714.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	702	702	702	702	702	
5°	703	700	695	700	700	67
15°	674	674	672	678	678	190
25°	616	621	623	631	633	284
35°	539	548	556	567	570	337
45°	450	464	479	492	497	347
55°	352	369	392	407	412	314
65°	244	269	296	314	321	241
75°	135	164	197	218	226	144
85°	42	75	110	133	142	44
90°	13	47	84	107	114	9
95°	22	74	359	233	184	21
105°	49	84	286	575	580	53
115°	78	105	246	455	542	78
125°	106	125	230	378	426	94
135°	123	147	213	322	368	96
145°	141	161	205	260	289	89
155°	160	172	199	226	235	74
165°	174	179	191	202	205	49
175°	181	182	183	186	185	17
180°	182	182	182	182	182	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	704.3	703.9	703.5	703.0	702.6	701.9	700.7	699.6	698.4	697.3	698.3
5°	702.6	702.1	701.5	700.9	700.4	699.5	698.3	697.1	695.9	694.7	696.1
7.5°	696.6	696.2	695.9	695.6	695.3	694.7	693.7	692.7	691.6	690.5	692.2
10°	691.6	691.4	691.2	691.1	690.8	690.3	689.4	688.5	687.7	686.8	688.4
12.5°	684.6	684.6	684.6	684.5	684.5	684.2	683.6	683.0	682.4	681.8	683.2
15°	673.5	673.7	673.8	674.0	674.2	674.0	673.5	673.0	672.4	671.9	673.5
17.5°	658.2	658.7	659.2	659.7	660.4	660.6	660.5	660.4	660.2	660.1	661.7
20°	647.5	648.0	648.5	649.1	649.6	649.9	650.2	650.4	650.5	650.7	652.4
22.5°	635.6	636.2	636.9	637.5	638.2	638.7	639.0	639.3	639.6	640.0	641.8
25°	616.1	617.1	618.2	619.2	620.3	621.1	621.6	622.1	622.7	623.2	625.1
27.5°	594.4	595.9	597.4	599.1	600.6	601.7	602.5	603.3	604.1	604.9	606.7
30°	580.0	581.4	582.7	584.1	585.5	586.8	588.0	589.3	590.5	591.8	593.7
32.5°	564.2	565.9	567.5	569.3	571.0	572.5	573.8	575.2	576.5	577.9	580.1
35°	539.1	541.2	543.3	545.3	547.4	549.4	551.1	552.9	554.6	556.3	558.9
37.5°	513.8	516.1	518.6	521.0	523.4	525.7	527.9	530.1	532.2	534.3	536.8
40°	497.5	499.7	502.0	504.2	506.5	508.9	511.3	513.7	516.2	518.7	521.3
42.5°	478.6	481.1	483.6	486.3	488.8	491.5	494.3	497.2	500.1	502.9	505.8
45°	449.5	452.8	456.2	459.5	462.7	466.1	469.4	472.7	476.1	479.4	482.3
47.5°	421.7	425.1	428.5	431.9	435.4	439.0	442.8	446.7	450.5	454.3	457.5
50°	401.5	405.4	409.2	413.1	417.0	420.8	424.6	428.5	432.3	436.2	439.6
52.5°	381.4	385.3	389.1	392.9	396.8	400.9	405.4	409.7	414.1	418.5	422.0
55°	352.0	355.7	359.4	363.0	366.7	371.1	376.4	381.6	386.9	392.1	395.7
57.5°	319.2	323.8	328.3	332.9	337.4	342.2	347.4	352.6	357.9	363.0	367.2
60°	297.8	302.4	306.9	311.4	316.0	321.1	326.9	332.6	338.4	344.2	348.2
62.5°	277.1	282.1	287.0	292.0	296.9	302.3	308.0	313.8	319.6	325.4	329.3
65°	243.6	249.2	254.8	260.3	266.0	271.8	277.6	283.6	289.5	295.5	299.8
67.5°	211.4	217.3	223.3	229.2	235.1	241.3	247.6	254.0	260.3	266.7	271.1
70°	189.3	195.3	201.3	207.2	213.2	219.4	226.0	232.7	239.3	246.0	250.6
72.5°	168.0	174.1	180.2	186.2	192.3	198.8	205.9	213.0	220.0	227.1	231.7
75°	135.1	141.6	148.0	154.5	161.0	167.9	175.2	182.6	190.0	197.2	202.2
77.5°	104.5	111.4	118.3	125.0	131.9	139.2	146.8	154.5	162.2	169.9	174.8
80°	85.6	92.6	99.7	106.6	113.6	120.9	128.7	136.3	144.0	151.7	156.9
82.5°	66.8	74.0	81.3	88.6	95.8	103.3	111.0	118.7	126.3	134.1	139.5
85°	41.6	49.0	56.4	63.6	71.0	78.6	86.4	94.3	102.2	110.0	115.2
87.5°	23.3	30.6	38.0	45.1	52.3	59.7	67.8	75.4	83.2	91.0	96.0
90°	12.9	20.6	28.7	36.1	43.3	50.6	60.3	67.8	76.0	84.2	89.0
92.5°	16.1	24.1	33.8	44.4	55.9	70.3	95.9	131.1	165.6	187.2	173.3
95°	22.0	28.8	38.2	48.6	62.9	84.3	122.6	188.2	280.7	359.2	372.1
97.5°	30.4	35.3	43.4	52.6	64.9	83.5	114.5	170.0	261.9	369.9	443.8
100°	35.7	40.3	47.4	56.1	67.5	84.6	112.5	159.6	239.2	346.7	442.7
102.5°	41.5	46.0	52.2	60.2	70.7	86.8	112.6	154.7	223.4	319.2	418.1
105°	48.9	53.4	58.7	66.4	76.3	91.7	115.3	151.4	207.8	286.0	374.3
107.5°	58.6	62.1	66.8	74.2	83.2	97.9	119.7	152.8	201.6	265.5	338.2
110°	64.4	67.7	71.8	78.6	87.5	101.4	123.2	154.3	199.7	257.5	319.7



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	70.1	73.0	77.3	83.4	92.0	105.6	126.5	156.0	198.5	251.8	307.6
115°	78.3	80.9	84.9	90.1	98.5	111.7	131.5	158.5	197.3	245.7	294.6
117.5°	87.5	89.5	92.6	97.5	104.7	117.9	136.6	161.5	196.5	240.7	285.9
120°	93.1	94.4	97.5	101.9	108.5	121.3	139.9	163.5	196.0	237.5	280.6
122.5°	98.9	99.7	102.3	106.0	112.8	124.9	143.3	165.5	195.7	234.1	275.2
125°	105.5	106.8	108.8	112.5	119.2	131.3	148.5	169.3	196.1	229.7	267.3
127.5°	112.1	113.0	115.4	119.8	126.6	138.3	154.1	172.5	195.5	224.2	257.3
130°	115.1	116.4	119.1	124.2	130.9	142.5	157.4	174.2	195.2	220.8	251.1
132.5°	118.9	119.9	123.4	128.3	135.4	146.2	160.6	176.5	195.2	218.0	245.6
135°	123.3	124.7	128.3	134.3	141.9	151.7	164.7	178.8	194.7	213.0	236.5
137.5°	128.5	129.7	133.4	139.1	146.6	155.7	167.3	179.9	193.5	209.3	228.9
140°	132.2	133.1	136.8	142.7	150.1	158.6	169.6	181.1	193.4	207.1	224.8
142.5°	135.5	136.6	140.2	145.9	153.1	161.4	171.7	182.1	193.6	205.9	221.6
145°	141.1	142.0	145.3	150.2	156.7	164.5	173.8	183.5	193.8	204.9	217.3
147.5°	147.4	147.5	150.6	155.5	161.0	167.9	176.6	185.1	194.2	203.6	213.8
150°	151.4	151.6	154.3	158.3	163.6	170.3	178.1	185.9	194.2	202.7	211.7
152.5°	154.5	154.5	157.3	161.3	166.0	172.3	179.3	186.5	193.6	201.3	209.3
155°	159.6	159.9	162.1	165.6	169.6	174.9	181.0	187.0	192.8	199.1	205.9
157.5°	164.6	164.6	166.6	169.4	172.8	177.0	182.2	187.0	191.8	196.9	202.5
160°	167.7	167.7	169.2	171.7	174.5	178.4	182.8	187.0	191.0	195.2	199.9
162.5°	170.6	170.4	171.5	173.7	176.2	179.4	183.3	187.0	190.1	193.5	197.6
165°	173.8	173.8	174.5	176.3	178.1	180.3	183.5	186.3	188.4	191.0	193.8
167.5°	177.0	176.6	177.0	178.3	179.4	181.1	183.4	185.4	186.7	188.3	190.4
170°	178.4	178.1	178.4	179.6	180.3	181.3	183.1	184.9	185.6	186.6	188.1
172.5°	179.9	179.6	179.6	180.4	180.8	181.6	182.8	184.3	184.5	184.9	186.1
175°	181.3	181.0	181.0	181.3	181.7	181.7	182.4	183.5	183.1	183.1	183.8
177.5°	182.0	181.7	181.4	181.7	181.7	181.7	182.0	182.5	182.0	182.0	182.3
180°	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	701.8	701.8	701.8	701.8	701.8	701.8	701.8	701.8
2.5°	699.3	700.2	701.3	701.7	701.6	701.4	701.3	701.1
5°	697.5	698.8	700.2	700.8	700.7	700.5	700.3	700.1
7.5°	693.8	695.3	696.9	697.6	697.4	697.2	697.0	696.9
10°	689.9	691.6	693.1	693.8	693.7	693.5	693.3	693.1
12.5°	684.7	686.1	687.5	688.2	688.2	688.1	688.1	688.1
15°	675.0	676.6	678.1	678.8	678.7	678.5	678.3	678.1
17.5°	663.3	664.9	666.5	667.2	667.1	667.0	666.8	666.7
20°	654.2	655.9	657.6	658.5	658.5	658.5	658.5	658.5
22.5°	643.5	645.2	646.9	648.0	648.2	648.5	648.8	649.1
25°	627.0	628.9	630.9	631.9	632.1	632.3	632.4	632.6
27.5°	608.5	610.3	612.1	613.1	613.3	613.5	613.7	613.9
30°	595.6	597.5	599.5	600.6	600.9	601.3	601.6	602.0
32.5°	582.3	584.5	586.7	587.9	588.3	588.7	589.1	589.4
35°	561.3	563.7	566.1	567.6	568.2	568.7	569.2	569.8
37.5°	539.4	541.8	544.3	545.8	546.3	546.9	547.4	548.1
40°	523.9	526.5	529.2	530.8	531.5	532.2	532.9	533.6
42.5°	508.8	511.6	514.5	516.2	516.8	517.4	518.0	518.5
45°	485.3	488.3	491.2	493.1	494.0	494.9	495.7	496.7
47.5°	460.5	463.6	466.7	468.7	469.8	470.8	471.9	472.9
50°	443.1	446.7	450.1	452.4	453.4	454.4	455.6	456.6
52.5°	425.6	429.0	432.5	434.7	435.9	436.9	437.9	439.0
55°	399.1	402.6	406.1	408.4	409.4	410.5	411.5	412.5
57.5°	371.3	375.6	379.7	382.2	383.2	384.2	385.2	386.2
60°	352.2	356.3	360.2	362.9	364.4	365.8	367.2	368.6
62.5°	333.4	337.4	341.4	344.1	345.5	346.9	348.3	349.7
65°	304.2	308.6	313.0	315.8	317.2	318.6	320.0	321.4
67.5°	275.6	280.0	284.5	287.3	288.7	290.0	291.4	292.8
70°	255.4	260.1	264.8	267.8	269.0	270.2	271.5	272.7
72.5°	236.2	240.9	245.4	248.3	249.7	251.1	252.5	253.8
75°	207.0	211.9	216.8	220.0	221.6	223.2	224.8	226.3
77.5°	179.9	184.8	189.8	193.1	194.7	196.4	198.0	199.8
80°	162.2	167.3	172.6	175.9	177.3	178.7	180.2	181.6
82.5°	144.8	150.2	155.6	159.1	160.6	162.1	163.6	165.2
85°	120.5	125.7	131.0	134.5	136.2	137.9	139.7	141.5
87.5°	101.2	106.3	111.4	114.7	116.3	118.0	119.4	121.0
90°	94.3	99.8	105.2	108.5	110.2	111.9	113.0	114.4
92.5°	154.0	141.6	135.7	131.7	128.9	128.4	128.6	130.0
95°	342.2	291.6	248.5	217.1	201.2	191.7	186.8	183.7
97.5°	463.4	447.4	417.1	382.8	358.7	338.7	329.5	323.7
100°	499.6	511.4	498.7	475.2	445.4	424.9	415.4	413.7
102.5°	494.1	534.1	543.8	535.7	518.1	503.6	493.7	492.8
105°	460.3	526.4	566.1	583.7	585.8	584.3	580.7	580.0
107.5°	414.9	484.9	539.0	573.6	592.5	601.9	606.7	608.8
110°	387.3	453.0	508.8	550.8	577.4	593.9	601.7	606.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	365.9	424.3	477.1	519.0	549.2	568.7	579.1	585.7
115°	343.0	390.7	436.4	473.1	502.5	525.2	537.9	541.9
117.5°	329.0	369.0	405.5	437.0	462.4	481.8	494.8	498.5
120°	321.6	358.3	390.3	418.1	439.9	457.0	467.7	472.9
122.5°	315.0	350.5	380.0	404.7	423.0	437.8	446.9	452.0
125°	304.9	338.9	366.9	388.7	403.9	415.4	423.2	426.4
127.5°	292.7	325.2	352.8	373.7	389.2	399.6	406.5	409.8
130°	283.9	315.2	342.5	363.6	379.3	389.2	396.0	399.2
132.5°	275.1	304.6	331.2	352.1	367.6	378.7	385.2	388.4
135°	261.8	287.8	312.4	332.1	347.4	358.5	365.3	368.4
137.5°	250.1	272.4	293.3	311.1	325.3	336.1	341.6	345.1
140°	243.5	262.5	280.8	297.4	310.7	319.5	325.4	329.1
142.5°	237.6	254.4	270.1	284.6	296.3	304.4	309.5	312.3
145°	229.8	243.0	254.8	265.6	275.2	282.0	286.3	288.7
147.5°	223.4	233.1	241.9	250.0	257.1	263.0	266.2	267.4
150°	220.3	228.4	235.6	242.0	247.7	252.4	254.5	254.8
152.5°	217.1	224.2	230.8	236.0	240.9	244.6	245.9	246.3
155°	212.4	218.0	223.4	227.7	231.3	234.1	235.2	235.2
157.5°	207.3	212.1	216.6	220.0	222.7	224.9	225.5	225.5
160°	204.2	208.0	212.0	214.9	217.0	219.1	219.5	219.5
162.5°	201.1	204.4	207.4	210.1	211.6	213.7	214.1	213.8
165°	196.6	198.8	201.3	203.1	204.5	205.9	205.6	205.2
167.5°	192.5	194.1	196.1	197.1	197.8	198.8	198.7	198.4
170°	189.9	191.0	192.4	193.5	194.2	194.5	194.2	194.2
172.5°	187.6	188.3	189.2	190.1	190.5	190.8	190.5	189.9
175°	184.5	184.9	185.6	185.6	185.6	186.3	185.6	184.9
177.5°	182.5	182.8	182.8	183.1	182.8	183.1	182.5	182.0
180°	181.7	181.7	181.7	181.7	181.7	181.7	181.7	181.7

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