

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: P331924-927

Luminaire Tested: **S123DIP-S560D585U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331924-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D585U927-4F0-1E-UDD-D4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 585 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3553.0 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.08')
CIE Type: General Diffuse

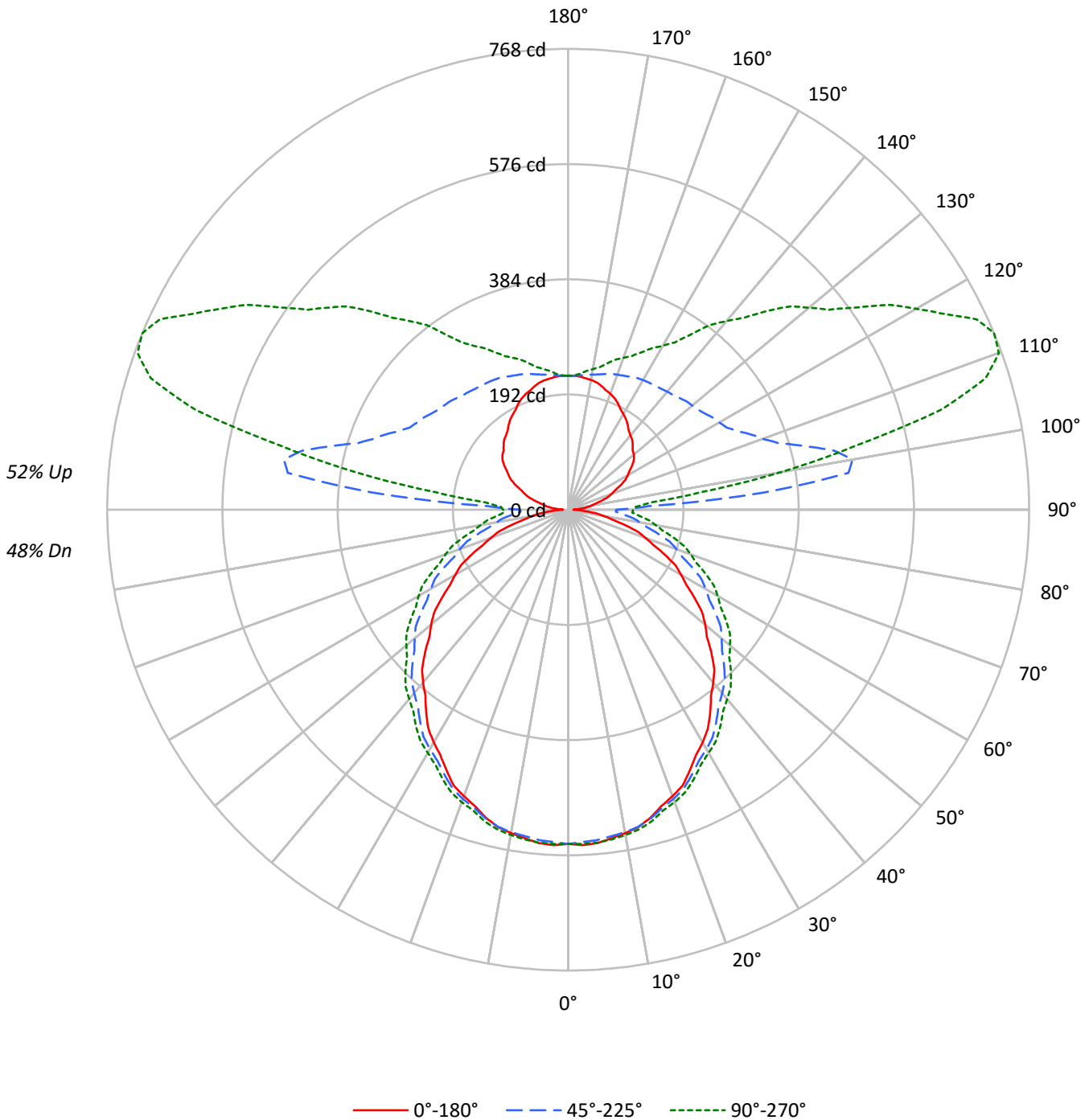
Input Watts (W): 32.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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									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	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48						48														
1	96	92	87	83	88	84	81	77	71	68	65	58	56	54	47	45	44	39						39														
2	87	79	73	67	80	73	67	63	61	57	53	50	47	45	40	38	36	32						32														
3	79	69	62	56	73	64	57	52	54	49	44	44	41	37	35	33	30	26						26														
4	73	61	53	47	66	57	49	44	48	42	38	39	35	32	32	28	26	22						22														
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19						19														
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17						17														
7	56	44	36	30	52	41	33	28	35	29	25	29	24	21	23	20	17	15						15														
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	21	18	16	13						13														
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12						12														
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11						11														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5997	5997	5997
5°	6015	5845	5849
10°	5961	5711	5682
15°	5884	5558	5501
20°	5774	5383	5300
25°	5639	5182	5090
30°	5500	5002	4877
35°	5344	4810	4707
40°	5195	4636	4524
45°	5031	4469	4378
50°	4868	4304	4219
55°	4689	4134	4074
60°	4513	3964	3925
65°	4335	3780	3750
70°	4066	3576	3568
75°	3724	3338	3386
80°	3326	3109	3176
85°	2963	2948	3053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.8	1.5
10°-20°	150.5	4.2
20°-30°	225.2	6.3
30°-40°	268.9	7.6
40°-50°	281.3	7.9
50°-60°	264.0	7.4
60°-70°	220.5	6.2
70°-80°	157.8	4.4
80°-90°	95.8	2.7
90°-100°	183.2	5.2
100°-110°	395.1	11.1
110°-120°	375.0	10.6
120°-130°	292.5	8.2
130°-140°	225.0	6.3
140°-150°	164.0	4.6
150°-160°	113.2	3.2
160°-170°	66.5	1.9
170°-180°	21.6	0.6
0°-30°	428.5	12.1
0°-40°	697.4	19.6
0°-60°	1242.7	35.0
0°-90°	1716.7	48.3
90°-120°	953.3	26.8
90°-150°	1634.9	46.0
90°-180°	1836.0	51.7
0°-180°	3553.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	558	556	553	557	557	53
15°	531	533	532	538	538	149
25°	479	485	487	495	495	221
35°	413	422	430	439	442	258
45°	337	352	367	378	384	260
55°	257	277	299	315	320	230
65°	178	202	228	246	252	176
75°	96	125	155	175	183	103
85°	30	60	92	112	119	31
90°	9	43	80	101	108	6
95°	22	81	328	156	137	22
105°	57	98	409	697	643	61
115°	96	127	310	656	751	95
125°	131	155	279	502	588	116
135°	152	181	263	405	468	118
145°	173	197	252	322	357	108
155°	196	211	244	278	290	90
165°	214	220	234	248	252	60
175°	223	223	225	228	227	21
180°	223	223	223	223	223	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	559.5	559.2	558.9	558.5	558.2	557.6	556.7	555.9	555.0	554.1	555.0
5°	557.7	557.4	557.1	556.9	556.6	556.0	555.2	554.4	553.7	552.8	553.9
7.5°	552.2	552.2	552.3	552.4	552.5	552.1	551.3	550.5	549.7	548.9	550.2
10°	547.4	547.6	547.9	548.2	548.4	548.3	547.6	546.9	546.2	545.6	546.9
12.5°	541.5	541.9	542.3	542.6	543.0	543.0	542.6	542.1	541.6	541.1	542.4
15°	531.0	531.4	531.8	532.2	532.6	532.7	532.6	532.4	532.3	532.2	533.5
17.5°	517.6	518.4	519.3	520.1	520.9	521.3	521.2	521.1	521.1	521.0	522.2
20°	507.9	508.7	509.5	510.3	511.1	511.7	512.0	512.2	512.5	512.8	514.0
22.5°	497.7	498.5	499.3	500.2	501.0	501.5	501.9	502.3	502.7	503.0	504.6
25°	479.4	480.8	482.1	483.5	484.8	485.7	486.1	486.5	486.9	487.3	489.0
27.5°	461.0	462.5	464.1	465.6	467.1	468.3	469.1	470.0	470.9	471.7	473.2
30°	447.8	449.6	451.3	453.1	454.9	456.3	457.3	458.4	459.5	460.6	462.2
32.5°	433.2	435.2	437.2	439.2	441.2	442.8	444.3	445.6	447.0	448.5	450.2
35°	412.6	414.8	416.9	419.1	421.3	423.3	425.0	426.7	428.5	430.2	432.3
37.5°	390.8	393.2	395.6	398.1	400.5	402.8	405.0	407.1	409.2	411.5	413.8
40°	376.2	378.7	381.1	383.5	386.0	388.5	391.2	393.9	396.6	399.3	401.6
42.5°	360.2	363.2	366.1	369.1	372.1	374.9	377.8	380.6	383.4	386.2	388.7
45°	337.4	340.6	343.9	347.1	350.3	353.6	357.0	360.4	363.8	367.1	369.7
47.5°	313.5	317.2	320.8	324.5	328.1	331.9	335.8	339.6	343.5	347.4	350.2
50°	297.9	301.7	305.5	309.3	313.1	317.0	321.2	325.4	329.5	333.7	336.8
52.5°	281.5	285.4	289.5	293.4	297.4	301.7	306.3	310.9	315.5	320.2	323.4
55°	257.3	261.7	266.2	270.6	275.1	279.7	284.6	289.5	294.3	299.1	302.8
57.5°	233.8	238.4	243.0	247.6	252.3	257.3	262.6	267.9	273.2	278.5	282.2
60°	217.2	222.1	227.0	231.8	236.6	241.9	247.4	252.9	258.4	264.0	267.8
62.5°	201.7	206.7	211.7	216.6	221.6	227.0	232.8	238.7	244.5	250.4	254.1
65°	177.8	183.1	188.3	193.6	198.8	204.5	210.4	216.3	222.2	228.1	232.2
67.5°	153.5	159.1	164.7	170.2	175.9	181.6	187.7	193.8	199.8	205.8	210.2
70°	136.6	142.4	148.1	153.9	159.7	165.9	172.3	178.8	185.3	191.8	196.1
72.5°	121.0	126.8	132.6	138.4	144.2	150.4	157.1	163.8	170.5	177.2	181.6
75°	96.5	102.8	109.2	115.5	121.8	128.4	135.1	141.9	148.6	155.3	159.8
77.5°	75.1	81.5	87.9	94.3	100.7	107.3	114.1	120.9	127.7	134.5	139.2
80°	60.0	66.7	73.3	79.9	86.5	93.3	100.3	107.3	114.4	121.4	126.0
82.5°	47.0	53.7	60.4	67.1	73.8	80.7	87.9	95.0	102.1	109.2	113.8
85°	29.7	36.4	43.3	50.0	56.7	63.6	70.8	78.0	85.1	92.2	96.8
87.5°	16.3	23.2	30.1	37.1	44.0	50.9	58.1	65.3	72.4	79.5	84.1
90°	8.8	16.3	23.8	31.8	39.3	46.9	55.1	63.4	71.6	79.9	84.0
92.5°	13.0	21.7	31.4	41.0	50.7	63.7	82.3	108.5	134.4	134.2	121.6
95°	22.0	28.7	38.9	51.8	68.8	92.4	137.4	211.4	292.1	328.0	281.6
97.5°	32.2	37.4	45.9	57.4	73.8	98.3	141.3	223.6	353.4	471.0	504.0
100°	38.9	43.6	51.2	61.8	76.9	99.8	137.7	210.7	335.8	480.7	573.6
102.5°	46.0	50.7	57.4	67.3	80.9	102.0	136.5	199.4	311.2	454.3	574.2
105°	57.3	61.9	67.8	76.4	88.2	106.8	137.0	189.3	280.5	408.8	542.2
107.5°	68.7	72.7	78.1	86.2	97.0	114.2	141.1	185.2	259.6	368.2	489.6
110°	76.8	80.6	85.3	92.7	102.8	119.4	145.1	184.8	250.8	345.2	456.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	84.8	88.2	92.4	99.3	109.0	124.9	149.0	186.0	244.5	328.5	427.3
115°	95.7	99.1	103.4	109.6	118.8	134.3	156.3	188.7	239.6	310.1	391.4
117.5°	107.0	110.1	113.4	118.5	128.1	142.2	163.7	192.8	236.5	297.1	367.9
120°	114.5	116.5	119.5	124.6	133.9	147.7	168.5	196.4	235.7	290.7	355.3
122.5°	121.4	123.0	125.6	130.9	139.5	153.8	173.9	199.9	236.0	285.7	344.4
125°	130.6	131.5	134.2	139.2	147.7	161.9	181.6	205.4	236.5	278.8	329.9
127.5°	138.1	139.3	142.5	147.4	156.8	170.6	189.1	210.2	237.8	273.5	316.7
130°	142.8	144.0	148.0	153.2	162.6	176.1	193.7	213.6	238.8	270.0	309.2
132.5°	145.9	147.6	152.0	158.5	167.9	180.9	197.6	216.5	239.1	267.2	301.9
135°	152.1	153.8	158.7	165.2	174.6	187.5	203.0	219.8	239.4	263.0	292.1
137.5°	158.0	159.8	164.5	171.7	180.9	192.6	206.9	222.4	239.3	259.1	283.6
140°	161.4	163.7	168.3	175.5	184.5	196.0	209.5	223.5	239.2	256.8	278.3
142.5°	165.8	167.6	172.4	178.8	187.7	198.3	211.0	224.3	238.7	254.1	273.2
145°	172.8	174.0	177.9	184.6	192.1	202.4	214.2	226.4	239.0	252.5	268.2
147.5°	179.2	180.0	184.0	189.9	197.3	206.1	216.9	227.8	239.0	250.9	263.6
150°	183.9	184.3	188.0	193.8	200.2	208.3	218.7	228.1	239.0	249.4	260.7
152.5°	188.6	188.7	192.3	197.5	203.0	210.8	219.8	228.9	238.0	247.6	257.9
155°	195.7	195.7	198.4	202.9	207.9	214.2	221.9	229.1	236.8	244.5	253.5
157.5°	201.2	201.6	203.7	207.8	212.0	216.9	223.0	229.6	235.2	241.6	248.6
160°	205.6	205.6	207.4	211.0	214.2	218.7	224.1	229.6	234.5	239.5	245.3
162.5°	208.8	208.8	210.3	213.2	215.9	219.8	224.5	229.2	233.1	237.3	242.1
165°	213.7	213.3	214.2	216.4	218.2	221.4	225.0	228.1	230.9	234.1	237.7
167.5°	217.5	216.9	217.3	219.0	220.3	222.3	224.9	227.4	228.7	230.8	233.5
170°	219.6	218.7	219.1	220.5	221.4	222.3	224.6	226.4	227.3	228.6	230.9
172.5°	221.0	220.5	220.6	221.6	222.1	222.7	224.6	226.0	226.2	226.8	228.4
175°	222.8	222.3	221.9	222.8	222.8	223.2	224.1	225.0	224.6	224.6	225.5
177.5°	223.6	223.2	222.8	223.2	223.2	223.2	223.6	224.3	223.6	223.2	223.6
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	555.9	556.7	557.6	558.0	557.9	557.8	557.7	557.5
5°	555.0	556.0	557.1	557.6	557.5	557.3	557.2	557.1
7.5°	551.6	552.9	554.4	554.9	554.8	554.6	554.4	554.3
10°	548.3	549.6	551.0	551.4	551.2	551.0	550.6	550.4
12.5°	543.7	544.9	546.1	546.6	546.4	546.1	545.8	545.6
15°	534.9	536.2	537.6	538.2	538.1	537.9	537.8	537.7
17.5°	523.5	524.7	525.9	526.4	526.2	526.0	525.9	525.6
20°	515.2	516.4	517.6	518.3	518.4	518.6	518.7	518.8
22.5°	506.1	507.7	509.2	509.9	509.8	509.8	509.7	509.6
25°	490.8	492.6	494.3	495.2	495.2	495.2	495.2	495.2
27.5°	474.8	476.3	477.8	478.6	478.7	478.8	479.0	479.0
30°	463.8	465.4	467.1	467.9	467.9	467.9	467.9	467.9
32.5°	451.9	453.6	455.3	456.4	456.7	457.0	457.3	457.6
35°	434.3	436.3	438.3	439.6	440.1	440.7	441.2	441.8
37.5°	416.0	418.3	420.6	422.0	422.4	422.8	423.3	423.7
40°	403.9	406.2	408.4	409.9	410.4	411.0	411.5	412.0
42.5°	391.2	393.7	396.2	397.8	398.6	399.3	400.1	400.8
45°	372.2	374.8	377.4	379.2	380.2	381.4	382.5	383.5
47.5°	353.2	356.0	358.9	360.8	361.6	362.4	363.3	364.1
50°	339.9	343.1	346.2	348.2	349.1	350.1	351.0	352.0
52.5°	326.6	329.8	333.0	335.2	336.4	337.5	338.7	339.8
55°	306.4	310.1	313.7	316.1	317.2	318.2	319.3	320.4
57.5°	285.9	289.5	293.2	295.6	296.9	298.2	299.4	300.7
60°	271.6	275.3	279.1	281.7	283.2	284.6	286.1	287.6
62.5°	257.9	261.7	265.5	268.1	269.4	270.8	272.2	273.5
65°	236.2	240.3	244.4	247.1	248.4	249.8	251.1	252.5
67.5°	214.7	219.1	223.6	226.3	227.4	228.5	229.7	230.8
70°	200.4	204.7	209.1	211.8	213.2	214.5	215.9	217.2
72.5°	186.0	190.4	194.9	197.8	199.2	200.5	201.8	203.2
75°	164.2	168.7	173.2	176.2	177.8	179.4	181.0	182.7
77.5°	143.9	148.5	153.2	156.2	157.5	158.7	159.9	161.2
80°	130.6	135.1	139.7	142.7	144.0	145.4	146.7	148.1
82.5°	118.4	122.9	127.5	130.6	131.9	133.2	134.6	135.9
85°	101.4	106.0	110.6	113.5	114.9	116.2	117.6	118.9
87.5°	88.7	93.4	98.1	101.2	102.5	103.9	105.4	106.6
90°	89.0	94.1	99.1	103.0	103.9	105.7	107.5	108.4
92.5°	111.7	108.3	109.2	109.8	110.2	110.1	111.8	112.2
95°	231.1	182.8	163.1	149.6	142.4	139.7	137.8	137.4
97.5°	469.2	392.5	338.3	286.9	254.9	235.9	225.1	222.5
100°	593.3	560.6	511.7	450.2	405.8	374.2	358.0	359.7
102.5°	632.5	635.1	608.1	570.1	535.8	511.1	497.7	488.7
105°	640.5	689.4	701.8	692.5	673.0	657.0	643.7	642.7
107.5°	600.3	677.2	720.5	738.9	740.5	735.9	732.2	729.2
110°	563.6	650.3	710.7	744.7	758.4	763.1	763.3	763.4



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	526.9	615.3	682.5	725.4	749.7	762.2	766.8	768.1
115°	478.2	560.2	629.8	681.2	716.1	737.1	747.3	750.6
117.5°	441.7	512.8	575.7	627.7	664.2	687.9	702.0	706.2
120°	422.1	486.2	543.5	591.1	627.8	654.0	665.8	669.5
122.5°	406.1	464.3	517.5	561.9	594.5	618.2	631.1	635.5
125°	384.3	436.4	482.6	520.6	550.5	571.3	583.5	587.6
127.5°	364.8	411.4	453.2	487.8	514.5	532.4	543.6	547.4
130°	352.4	395.6	434.7	467.1	491.9	509.0	519.3	523.7
132.5°	340.7	380.6	417.1	448.1	471.5	488.7	498.0	501.5
135°	324.8	359.3	391.1	418.4	441.2	455.4	464.3	468.1
137.5°	310.2	338.6	366.1	389.8	409.1	423.5	431.0	433.8
140°	301.5	326.6	350.3	371.1	389.0	402.3	410.2	410.4
142.5°	293.0	314.6	335.2	353.3	368.7	380.6	387.7	387.9
145°	283.7	299.7	315.2	329.1	341.0	350.9	355.1	356.6
147.5°	276.1	288.3	300.2	310.0	319.0	325.9	329.9	330.7
150°	271.1	281.5	291.0	299.7	306.7	312.0	315.0	315.2
152.5°	267.1	276.1	284.5	291.7	297.1	301.7	303.4	303.4
155°	261.2	268.4	275.2	280.6	284.6	288.3	289.1	289.6
157.5°	254.8	260.9	266.2	270.4	273.9	276.6	277.3	277.3
160°	251.2	256.2	260.7	263.9	267.0	269.7	269.7	269.3
162.5°	246.9	251.1	255.3	258.1	260.2	262.5	262.5	262.1
165°	241.3	244.0	247.2	249.4	251.2	253.0	252.5	252.5
167.5°	236.4	238.4	240.3	241.9	242.7	244.0	243.5	243.5
170°	233.1	234.5	236.3	237.2	237.7	238.6	238.1	238.1
172.5°	230.3	231.2	232.7	233.2	233.3	234.2	233.5	233.1
175°	226.4	226.8	227.8	227.8	227.8	228.1	227.8	227.3
177.5°	223.9	224.3	224.7	224.7	224.3	224.7	223.9	223.9
180°	223.2	223.2	223.2	223.2	223.2	223.2	223.2	223.2

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