

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: P332594-927

Luminaire Tested: **S124DIP-S795D590U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P332594-927  
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-S795D590U927-4F0-1E-UDD-D4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 590 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4239.2 lumens  
Efficiency: N/A  
Efficacy: 105.2 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

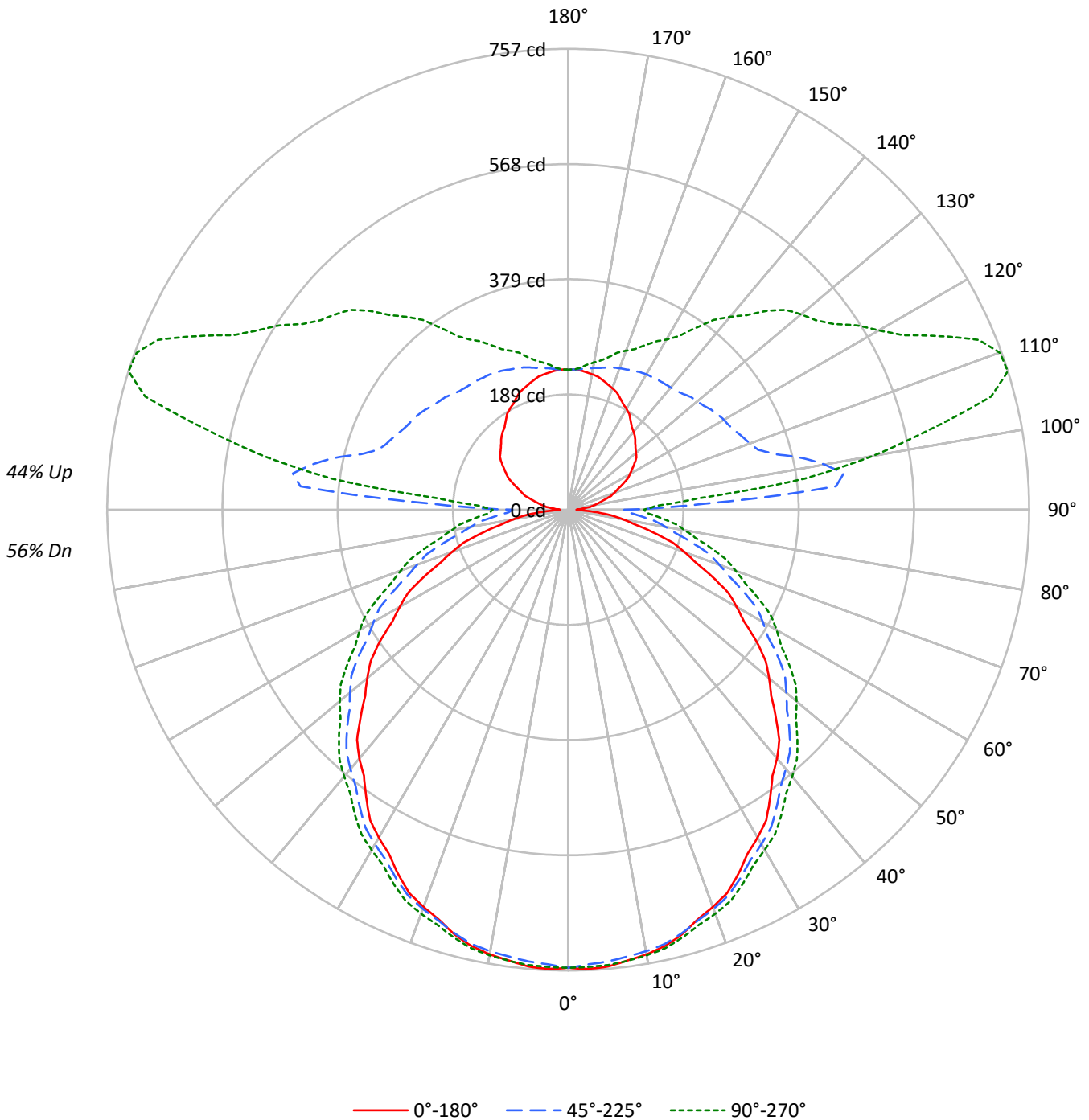
Input Watts (W): 40.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	98	93	89	85	91	87	83	79	74	71	69	63	61	59	53	51	50	45
2	89	81	74	68	82	75	69	64	64	60	56	55	51	48	46	43	41	37
3	81	71	63	56	74	66	59	53	56	51	47	48	44	40	40	37	34	30
4	74	62	54	47	68	58	50	45	50	44	39	42	38	34	36	32	29	26
5	67	55	47	40	62	52	44	38	45	38	34	38	33	29	32	28	25	22
6	62	49	41	35	57	46	39	33	40	34	29	34	29	26	29	25	22	19
7	57	45	36	30	53	42	34	29	36	30	26	31	26	23	26	22	20	17
8	53	40	32	27	49	38	31	25	33	27	23	28	24	20	24	20	17	15
9	50	37	29	24	46	35	28	23	30	24	20	26	21	18	22	18	16	14
10	46	34	26	21	43	32	25	20	28	22	18	24	19	16	21	17	14	12

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

	0°	45°	90°
0°	6075	6075	6075
5°	6093	5937	5954
10°	6056	5839	5835
15°	6002	5727	5695
20°	5920	5603	5561
25°	5828	5464	5411
30°	5728	5326	5258
35°	5615	5184	5124
40°	5525	5049	4984
45°	5391	4925	4864
50°	5277	4781	4738
55°	5160	4647	4588
60°	4976	4475	4453
65°	4776	4290	4285
70°	4532	4078	4091
75°	4196	3847	3915
80°	3817	3624	3742
85°	3344	3427	3643



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.3	1.7
10°-20°	204.2	4.8
20°-30°	308.7	7.3
30°-40°	373.5	8.8
40°-50°	394.9	9.3
50°-60°	371.6	8.8
60°-70°	308.3	7.3
70°-80°	216.6	5.1
80°-90°	123.7	2.9
90°-100°	238.8	5.6
100°-110°	399.6	9.4
110°-120°	345.8	8.2
120°-130°	280.9	6.6
130°-140°	226.0	5.3
140°-150°	167.7	4.0
150°-160°	116.7	2.8
160°-170°	68.6	1.6
170°-180°	22.3	0.5
0°-30°	584.1	13.8
0°-40°	957.6	22.6
0°-60°	1724.1	40.7
0°-90°	2372.7	56.0
90°-120°	984.3	23.2
90°-150°	1658.9	39.1
90°-180°	1866.0	44.0
0°-180°	4239.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	753	751	745	751	751	71
15°	722	723	720	728	727	203
25°	661	666	668	677	678	304
35°	578	588	597	608	611	362
45°	482	498	514	528	532	372
55°	378	396	420	437	442	336
65°	261	288	317	337	345	259
75°	145	176	212	234	243	154
85°	45	80	118	142	152	48
90°	14	51	92	116	124	10
95°	26	86	442	278	214	25
105°	60	102	352	714	719	65
115°	98	131	304	565	674	98
125°	133	158	287	471	532	119
135°	156	186	268	404	462	121
145°	178	203	259	328	364	112
155°	202	218	252	286	298	93
165°	220	227	242	256	260	62
175°	230	230	232	235	234	22
180°	230	230	230	230	230	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	755.2	754.7	754.2	753.8	753.4	752.6	751.3	750.1	748.9	747.7	748.8
5°	753.3	752.7	752.2	751.6	751.1	750.1	748.8	747.5	746.2	744.9	746.4
7.5°	746.9	746.6	746.2	745.9	745.5	744.8	743.8	742.7	741.6	740.5	742.2
10°	741.5	741.3	741.2	740.9	740.8	740.2	739.3	738.3	737.4	736.4	738.2
12.5°	734.1	734.0	734.0	734.0	734.0	733.6	733.0	732.3	731.7	731.0	732.6
15°	722.2	722.3	722.5	722.7	722.9	722.7	722.2	721.6	721.0	720.4	722.2
17.5°	705.8	706.3	706.9	707.5	708.1	708.2	708.1	708.1	707.9	707.8	709.6
20°	694.3	694.9	695.5	696.0	696.6	697.0	697.1	697.3	697.5	697.7	699.6
22.5°	681.5	682.2	682.9	683.7	684.4	684.9	685.2	685.6	685.9	686.3	688.1
25°	660.6	661.7	662.9	664.0	665.1	666.0	666.5	667.1	667.7	668.2	670.3
27.5°	637.4	639.0	640.6	642.3	644.0	645.2	646.1	646.9	647.8	648.6	650.5
30°	621.9	623.4	624.9	626.4	627.9	629.2	630.6	631.8	633.2	634.5	636.5
32.5°	605.0	606.8	608.6	610.4	612.2	613.8	615.3	616.7	618.2	619.6	622.0
35°	578.1	580.3	582.6	584.8	587.0	589.1	591.0	592.9	594.7	596.6	599.2
37.5°	550.9	553.5	556.1	558.6	561.3	563.7	566.0	568.3	570.7	573.0	575.7
40°	533.4	535.8	538.2	540.7	543.1	545.7	548.3	550.9	553.5	556.1	559.0
42.5°	513.2	515.9	518.6	521.3	524.1	527.0	530.0	533.1	536.2	539.2	542.4
45°	482.0	485.5	489.1	492.7	496.2	499.8	503.4	506.9	510.4	514.0	517.2
47.5°	452.2	455.8	459.5	463.2	466.8	470.7	474.8	479.0	483.1	487.2	490.5
50°	430.6	434.7	438.8	442.9	447.0	451.1	455.3	459.4	463.5	467.6	471.4
52.5°	409.0	413.1	417.2	421.4	425.5	429.9	434.6	439.3	444.1	448.8	452.5
55°	377.5	381.4	385.4	389.3	393.2	398.0	403.6	409.2	414.9	420.5	424.2
57.5°	342.3	347.1	352.0	356.9	361.7	366.9	372.6	378.1	383.7	389.3	393.7
60°	319.3	324.2	329.1	334.0	338.8	344.4	350.5	356.7	362.9	369.1	373.4
62.5°	297.1	302.5	307.8	313.1	318.4	324.2	330.3	336.5	342.7	348.9	353.2
65°	261.2	267.2	273.2	279.2	285.2	291.4	297.7	304.1	310.5	316.8	321.5
67.5°	226.6	233.1	239.4	245.7	252.2	258.7	265.5	272.4	279.2	286.0	290.7
70°	203.0	209.5	215.8	222.2	228.5	235.3	242.4	249.5	256.6	263.7	268.8
72.5°	180.1	186.6	193.2	199.7	206.2	213.3	220.9	228.4	236.0	243.5	248.4
75°	145.0	151.9	158.8	165.7	172.6	180.1	187.9	195.7	203.7	211.5	216.7
77.5°	112.1	119.4	126.7	134.1	141.4	149.2	157.5	165.7	174.0	182.2	187.5
80°	91.8	99.3	106.8	114.3	121.8	129.7	137.9	146.2	154.4	162.6	168.3
82.5°	71.6	79.4	87.2	95.0	102.7	110.8	119.1	127.3	135.5	143.8	149.5
85°	44.7	52.5	60.4	68.3	76.1	84.3	92.7	101.1	109.6	118.0	123.6
87.5°	25.0	32.9	40.8	48.5	56.2	64.2	72.9	81.1	89.4	97.8	103.2
90°	13.9	22.3	31.2	39.1	47.1	54.8	65.6	73.7	82.6	91.6	96.6
92.5°	18.0	27.0	38.0	50.3	63.6	80.4	111.5	154.6	196.8	222.7	204.1
95°	25.9	33.4	44.1	56.2	73.2	99.1	146.1	227.8	343.6	441.6	457.1
97.5°	36.7	42.0	51.3	61.9	76.6	98.9	136.8	205.7	320.6	456.0	548.7
100°	43.6	48.5	56.5	66.8	80.2	100.8	134.8	193.1	292.6	427.4	548.1
102.5°	50.9	55.8	62.9	72.2	84.8	104.2	135.5	187.5	273.1	393.2	517.5
105°	60.4	65.6	71.5	80.7	92.6	111.1	139.7	184.1	254.3	352.0	463.0
107.5°	72.7	76.8	82.1	90.9	101.8	119.5	145.9	186.6	247.2	326.9	418.2
110°	80.4	83.9	88.8	96.9	107.6	124.4	150.8	189.0	245.3	317.3	395.3



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	87.7	90.9	95.9	103.2	113.7	130.2	155.6	191.7	244.4	310.8	380.6
115°	98.2	101.2	106.1	112.3	122.6	138.6	162.6	195.7	243.8	304.0	365.0
117.5°	109.9	112.2	116.0	122.0	131.0	146.9	169.8	200.3	243.5	298.5	355.1
120°	117.2	118.7	122.4	127.9	136.2	151.8	174.4	203.4	243.6	295.1	349.0
122.5°	124.5	125.4	128.7	133.4	142.0	156.9	179.2	206.4	243.8	291.4	342.7
125°	133.1	134.7	137.2	142.0	150.4	165.3	186.2	211.8	244.9	286.6	333.5
127.5°	141.3	142.6	145.6	151.1	159.9	174.4	193.7	216.3	244.8	280.5	321.9
130°	145.4	146.9	150.4	156.9	165.3	179.9	198.2	218.9	244.9	276.8	314.5
132.5°	150.0	151.3	155.8	162.0	171.1	184.7	202.4	222.0	245.3	273.8	308.1
135°	155.8	157.6	162.1	169.8	179.3	191.7	207.9	225.5	245.3	268.3	297.5
137.5°	162.4	163.9	168.7	175.9	185.5	196.9	211.5	227.3	244.4	264.4	288.7
140°	167.1	168.3	173.0	180.5	189.8	200.7	214.4	229.1	244.6	262.0	283.8
142.5°	171.4	172.8	177.4	184.7	193.8	204.1	217.2	230.5	245.0	260.6	280.0
145°	178.5	179.6	183.9	190.0	198.4	208.3	220.1	232.3	245.4	259.4	275.0
147.5°	186.5	186.7	190.5	196.9	203.8	212.7	223.7	234.3	245.8	257.8	270.7
150°	191.5	191.8	195.3	200.5	207.1	215.6	225.5	235.4	245.8	256.7	268.0
152.5°	195.6	195.6	199.2	204.2	210.2	218.1	227.0	236.1	245.1	254.8	265.1
155°	202.0	202.5	205.2	209.7	214.7	221.4	229.1	236.8	244.0	252.2	260.7
157.5°	208.4	208.4	211.0	214.4	218.8	224.1	230.7	236.8	242.9	249.4	256.4
160°	212.4	212.4	214.2	217.4	220.9	225.9	231.4	236.8	241.8	247.2	253.1
162.5°	216.0	215.6	217.1	219.9	223.2	227.0	232.1	236.8	240.7	245.0	250.2
165°	220.1	220.1	220.9	223.2	225.5	228.2	232.3	235.9	238.6	241.8	245.4
167.5°	224.1	223.7	224.1	225.9	227.1	229.2	232.2	234.8	236.5	238.5	241.1
170°	225.9	225.5	225.9	227.3	228.2	229.6	231.8	234.1	235.0	236.3	238.1
172.5°	227.8	227.3	227.4	228.4	228.9	229.9	231.5	233.4	233.5	234.2	235.6
175°	229.6	229.1	229.1	229.6	230.0	230.0	230.9	232.3	231.8	231.8	232.7
177.5°	230.4	230.0	229.7	230.0	230.0	230.0	230.4	231.1	230.4	230.4	230.8
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	752.5	752.5	752.5	752.5	752.5	752.5	752.5	752.5
2.5°	749.8	750.9	751.9	752.4	752.3	752.1	751.9	751.8
5°	747.9	749.4	750.8	751.5	751.3	751.1	751.0	750.8
7.5°	743.9	745.5	747.3	748.0	747.8	747.6	747.4	747.3
10°	739.8	741.5	743.2	743.9	743.8	743.5	743.4	743.2
12.5°	734.1	735.7	737.2	737.9	737.9	737.8	737.8	737.8
15°	723.8	725.5	727.1	727.9	727.8	727.5	727.4	727.1
17.5°	711.2	713.0	714.7	715.5	715.3	715.2	715.0	714.9
20°	701.4	703.3	705.2	706.2	706.2	706.2	706.2	706.2
22.5°	690.0	691.8	693.7	694.8	695.1	695.4	695.7	696.0
25°	672.3	674.4	676.4	677.6	677.7	677.9	678.1	678.3
27.5°	652.4	654.3	656.3	657.4	657.6	657.8	658.1	658.2
30°	638.6	640.6	642.7	644.0	644.4	644.7	645.1	645.5
32.5°	624.4	626.8	629.1	630.5	630.8	631.2	631.6	632.0
35°	601.8	604.4	607.0	608.6	609.2	609.7	610.4	610.9
37.5°	578.3	581.0	583.6	585.3	585.8	586.5	587.0	587.6
40°	561.7	564.6	567.4	569.1	569.9	570.6	571.4	572.1
42.5°	545.5	548.6	551.7	553.6	554.1	554.8	555.4	556.0
45°	520.4	523.6	526.7	528.8	529.7	530.7	531.6	532.5
47.5°	493.8	497.1	500.4	502.6	503.7	504.9	506.0	507.1
50°	475.2	478.9	482.6	485.1	486.2	487.4	488.5	489.6
52.5°	456.3	460.0	463.7	466.2	467.3	468.4	469.5	470.7
55°	427.9	431.7	435.5	437.9	439.0	440.1	441.2	442.4
57.5°	398.2	402.7	407.1	409.9	410.9	411.9	413.0	414.1
60°	377.7	382.0	386.3	389.2	390.7	392.2	393.7	395.2
62.5°	357.4	361.8	366.1	369.0	370.5	372.0	373.4	374.9
65°	326.2	330.9	335.6	338.7	340.2	341.7	343.1	344.6
67.5°	295.5	300.2	305.0	308.1	309.6	311.0	312.5	313.9
70°	273.9	278.9	284.0	287.2	288.4	289.8	291.0	292.4
72.5°	253.3	258.3	263.2	266.3	267.8	269.3	270.7	272.2
75°	222.0	227.2	232.5	235.9	237.7	239.3	241.0	242.6
77.5°	192.8	198.1	203.4	207.0	208.8	210.6	212.4	214.2
80°	173.9	179.5	185.1	188.6	190.1	191.6	193.1	194.6
82.5°	155.3	161.1	166.8	170.6	172.1	173.8	175.5	177.1
85°	129.2	134.8	140.5	144.2	146.1	147.9	149.8	151.7
87.5°	108.7	114.2	119.8	123.3	125.0	126.7	128.3	130.0
90°	102.4	108.3	114.2	117.6	119.6	121.5	122.6	124.1
92.5°	178.7	162.0	153.6	148.0	144.2	143.2	143.1	144.7
95°	418.3	353.3	297.8	257.3	236.9	224.6	218.1	213.9
97.5°	572.7	551.5	512.2	468.3	437.4	411.9	399.9	392.1
100°	619.2	633.3	616.2	585.9	547.9	521.7	509.4	507.1
102.5°	612.9	662.7	674.0	663.3	640.6	622.1	609.3	607.8
105°	571.1	653.9	703.4	725.0	727.4	725.3	720.5	719.2
107.5°	514.4	602.3	669.9	713.2	736.9	748.5	754.4	756.9
110°	480.1	562.5	632.4	685.0	718.6	739.0	748.7	754.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	453.6	527.0	593.0	645.5	683.4	707.9	720.8	728.9
115°	425.6	485.4	542.3	588.4	625.4	653.9	669.6	674.5
117.5°	408.9	458.8	504.3	543.8	575.8	600.0	616.2	620.4
120°	400.2	445.9	485.8	520.5	547.8	569.2	582.4	588.9
122.5°	392.4	436.8	473.4	504.1	527.2	545.6	556.8	563.2
125°	380.5	422.9	457.6	484.8	504.1	518.2	528.0	531.8
127.5°	366.0	406.5	441.0	466.9	486.3	499.2	507.8	511.7
130°	355.4	394.5	428.6	454.8	474.4	486.9	495.2	499.1
132.5°	344.8	381.6	414.8	440.9	460.2	474.0	482.0	485.9
135°	329.0	361.4	392.0	416.6	435.8	449.6	457.9	461.8
137.5°	315.1	342.7	368.7	390.9	408.8	422.2	429.0	433.2
140°	307.0	330.7	353.5	374.1	390.9	401.8	409.1	413.6
142.5°	300.1	320.9	340.5	358.4	373.2	383.2	389.6	392.9
145°	290.6	307.0	321.7	335.3	347.4	355.8	361.1	364.1
147.5°	282.7	295.1	306.1	316.4	325.3	332.5	336.5	337.9
150°	278.8	289.2	298.3	306.4	313.6	319.5	322.2	322.7
152.5°	274.8	283.8	292.1	298.8	304.9	309.7	311.3	311.8
155°	268.9	276.1	282.9	288.3	292.9	296.4	297.8	297.8
157.5°	262.4	268.5	274.2	278.5	282.0	284.7	285.5	285.5
160°	258.5	263.5	268.4	272.0	274.7	277.5	277.9	277.9
162.5°	254.5	258.7	262.6	265.9	267.9	270.6	271.1	270.7
165°	249.0	251.7	254.8	257.1	259.0	260.7	260.3	259.8
167.5°	243.7	245.7	248.3	249.6	250.6	251.7	251.6	251.3
170°	240.4	241.8	243.6	244.9	245.8	246.3	245.8	245.8
172.5°	237.5	238.5	239.6	240.6	241.1	241.6	241.1	240.4
175°	233.6	234.1	235.0	235.0	235.0	235.9	235.0	234.1
177.5°	231.1	231.5	231.5	231.8	231.5	231.8	231.1	230.4
180°	230.0	230.0	230.0	230.0	230.0	230.0	230.0	230.0

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