

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: P331978-927

Luminaire Tested: **S123DIP-S775D805U927-4F0-1E-UDD-D4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331978-927  
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-S775D805U927-4F0-1E-UDD-D4  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4863.0 lumens  
Efficiency: N/A  
Efficacy: 105.9 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

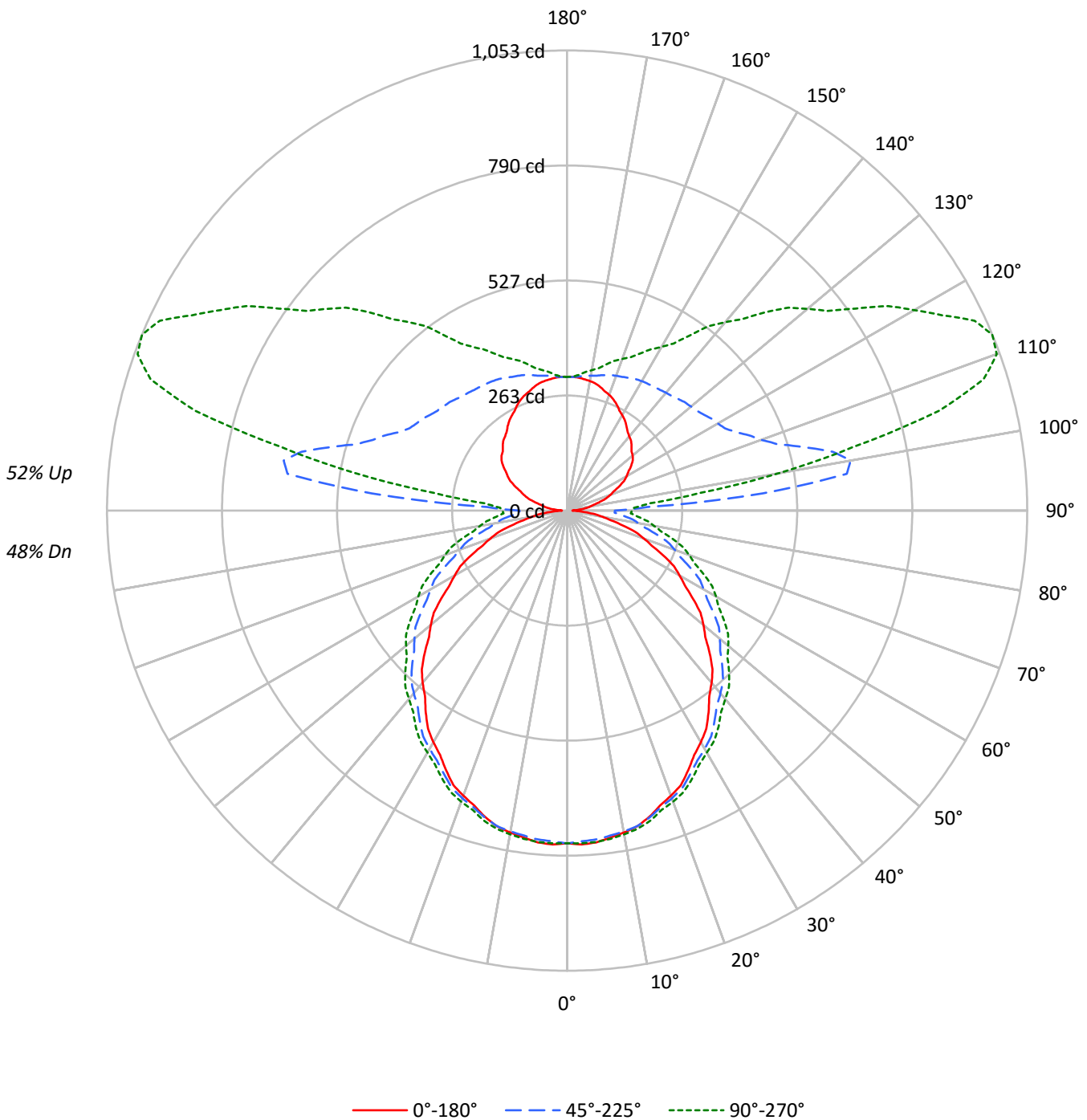
Input Watts (W): 45.9  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																		
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48
1	96	92	87	83	88	84	81	77	71	68	65	58	56	54	47	45	44	39
2	87	79	73	67	80	73	67	63	61	57	53	50	47	45	40	38	36	31
3	79	69	62	56	73	64	57	52	54	49	44	44	40	37	35	33	30	26
4	72	61	53	47	66	57	49	44	48	42	38	39	35	32	32	28	26	22
5	66	54	46	40	61	50	43	37	42	37	32	35	31	27	28	25	22	19
6	61	49	40	34	56	45	38	32	38	32	28	32	27	24	26	22	20	17
7	56	44	36	30	52	41	33	28	34	29	25	29	24	21	23	20	17	15
8	52	40	32	26	48	37	30	25	31	26	22	26	22	19	21	18	16	13
9	49	36	29	23	45	34	27	22	29	23	19	24	20	17	20	16	14	12
10	45	33	26	21	42	31	24	20	26	21	17	22	18	15	18	15	13	11

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

	0°	45°	90°
0°	8196	8196	8196
5°	8222	7990	7994
10°	8148	7806	7766
15°	8043	7597	7518
20°	7893	7358	7245
25°	7708	7084	6957
30°	7517	6836	6666
35°	7305	6575	6434
40°	7102	6337	6184
45°	6877	6109	5986
50°	6655	5883	5766
55°	6409	5652	5569
60°	6171	5417	5366
65°	5924	5168	5126
70°	5555	4887	4879
75°	5090	4566	4628
80°	4551	4249	4341
85°	4050	4032	4175



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	1.5
10°-20°	205.8	4.2
20°-30°	307.8	6.3
30°-40°	367.5	7.6
40°-50°	384.5	7.9
50°-60°	360.9	7.4
60°-70°	301.4	6.2
70°-80°	215.6	4.4
80°-90°	131.0	2.7
90°-100°	250.9	5.2
100°-110°	541.4	11.1
110°-120°	513.9	10.6
120°-130°	400.9	8.2
130°-140°	308.4	6.3
140°-150°	224.8	4.6
150°-160°	155.2	3.2
160°-170°	91.2	1.9
170°-180°	29.7	0.6
0°-30°	585.7	12.0
0°-40°	953.3	19.6
0°-60°	1698.6	34.9
0°-90°	2346.6	48.3
90°-120°	1306.3	26.9
90°-150°	2240.4	46.1
90°-180°	2516.0	51.7
0°-180°	4863.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	762	760	756	762	761	72
15°	726	728	728	735	735	204
25°	655	663	666	676	677	302
35°	564	577	588	600	604	353
45°	461	481	502	517	524	356
55°	352	379	409	430	438	315
65°	243	276	312	336	345	240
75°	132	171	212	239	250	141
85°	41	82	126	153	163	43
90°	12	59	109	138	148	9
95°	30	110	449	214	188	30
105°	78	134	560	955	881	83
115°	131	173	425	898	1029	130
125°	179	212	382	687	805	159
135°	208	248	360	555	642	161
145°	237	270	346	442	489	148
155°	268	289	335	381	397	123
165°	293	301	321	340	346	83
175°	305	306	308	312	312	29
180°	306	306	306	306	306	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	764.8	764.3	763.9	763.4	763.0	762.2	761.0	759.9	758.7	757.5	758.7
5°	762.3	761.9	761.5	761.2	760.8	760.1	759.0	757.9	756.8	755.7	757.2
7.5°	754.8	754.9	754.9	755.0	755.1	754.6	753.5	752.5	751.4	750.4	752.2
10°	748.2	748.5	748.9	749.3	749.6	749.4	748.5	747.6	746.6	745.7	747.6
12.5°	740.2	740.8	741.2	741.8	742.3	742.3	741.6	741.0	740.4	739.7	741.4
15°	725.8	726.4	726.9	727.5	728.0	728.2	728.0	727.9	727.6	727.5	729.3
17.5°	707.6	708.7	709.8	710.8	711.9	712.5	712.4	712.3	712.3	712.2	713.8
20°	694.3	695.4	696.5	697.6	698.7	699.4	699.8	700.2	700.5	700.9	702.6
22.5°	680.3	681.4	682.5	683.7	684.8	685.6	686.1	686.6	687.1	687.6	689.8
25°	655.3	657.1	658.9	660.8	662.7	663.8	664.4	665.0	665.5	666.1	668.4
27.5°	630.1	632.2	634.3	636.4	638.5	640.1	641.3	642.5	643.6	644.8	646.9
30°	612.1	614.6	617.0	619.3	621.7	623.7	625.1	626.6	628.1	629.5	631.8
32.5°	592.2	594.9	597.6	600.3	603.0	605.3	607.2	609.2	611.1	613.0	615.4
35°	564.0	567.0	570.0	572.9	575.8	578.5	580.9	583.3	585.7	588.1	590.9
37.5°	534.2	537.5	540.8	544.2	547.5	550.6	553.6	556.5	559.4	562.4	565.5
40°	514.3	517.6	520.9	524.3	527.5	531.1	534.7	538.4	542.1	545.8	548.9
42.5°	492.3	496.5	500.5	504.5	508.6	512.5	516.3	520.2	524.0	527.9	531.3
45°	461.2	465.6	470.0	474.4	478.9	483.4	488.0	492.6	497.3	501.8	505.3
47.5°	428.5	433.6	438.6	443.5	448.5	453.7	459.0	464.2	469.5	474.8	478.7
50°	407.3	412.4	417.6	422.8	427.9	433.3	439.1	444.8	450.5	456.2	460.4
52.5°	384.7	390.1	395.6	401.1	406.5	412.4	418.7	425.0	431.3	437.6	442.0
55°	351.7	357.7	363.8	369.9	376.0	382.4	389.0	395.7	402.3	408.9	413.9
57.5°	319.5	325.8	332.2	338.5	344.9	351.6	358.9	366.2	373.4	380.7	385.7
60°	297.0	303.6	310.2	316.9	323.5	330.6	338.2	345.7	353.2	360.8	366.0
62.5°	275.7	282.5	289.3	296.0	302.9	310.2	318.2	326.2	334.2	342.2	347.4
65°	243.0	250.3	257.4	264.6	271.8	279.4	287.6	295.6	303.8	311.9	317.4
67.5°	209.8	217.5	225.1	232.7	240.3	248.3	256.6	264.8	273.1	281.4	287.4
70°	186.6	194.6	202.5	210.4	218.3	226.7	235.6	244.4	253.3	262.1	268.0
72.5°	165.4	173.3	181.3	189.2	197.1	205.7	214.8	223.9	233.1	242.2	248.3
75°	131.9	140.5	149.2	157.9	166.5	175.5	184.7	193.9	203.1	212.4	218.4
77.5°	102.7	111.5	120.2	128.9	137.6	146.6	156.0	165.2	174.5	183.8	190.2
80°	82.1	91.2	100.2	109.2	118.3	127.5	137.1	146.7	156.3	165.9	172.1
82.5°	64.2	73.4	82.5	91.7	100.9	110.4	120.1	129.8	139.6	149.3	155.6
85°	40.6	49.8	59.1	68.3	77.5	87.0	96.8	106.5	116.3	126.1	132.4
87.5°	22.3	31.8	41.2	50.7	60.1	69.7	79.5	89.2	99.0	108.8	114.9
90°	12.0	22.3	32.6	43.5	53.7	64.2	75.4	86.7	98.0	109.2	114.9
92.5°	17.8	29.6	43.0	56.0	69.3	87.2	112.6	148.5	183.9	183.7	166.4
95°	30.2	39.2	53.2	71.0	94.3	126.5	188.1	289.5	400.1	449.4	385.7
97.5°	44.0	51.2	63.0	78.7	101.0	134.7	193.6	306.3	484.2	645.3	690.5
100°	53.3	59.8	70.0	84.6	105.4	136.7	188.5	288.7	460.1	658.7	786.0
102.5°	63.1	69.5	78.6	92.1	110.7	139.7	187.0	273.1	426.5	622.5	786.9
105°	78.5	84.8	92.9	104.7	121.0	146.3	187.7	259.4	384.4	560.2	743.1
107.5°	94.1	99.7	107.0	118.1	132.9	156.4	193.3	253.8	355.7	504.5	670.9
110°	105.3	110.5	116.9	127.1	140.9	163.6	198.8	253.3	343.6	473.0	625.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	116.2	120.8	126.6	136.2	149.4	171.2	204.1	254.8	335.0	450.2	585.5
115°	131.1	135.8	141.7	150.1	162.9	184.0	214.2	258.6	328.4	424.8	536.5
117.5°	146.7	150.9	155.3	162.4	175.5	194.8	224.3	264.3	324.2	407.2	504.2
120°	156.9	159.7	163.7	170.8	183.5	202.5	230.9	269.2	323.0	398.4	486.9
122.5°	166.4	168.7	172.2	179.4	191.2	210.8	238.4	273.9	323.4	391.6	472.0
125°	179.0	180.2	183.9	190.8	202.6	222.0	249.0	281.5	324.1	382.1	452.2
127.5°	189.3	191.0	195.4	202.1	214.9	233.8	259.1	288.1	326.0	374.9	434.1
130°	195.7	197.4	202.8	210.0	222.8	241.3	265.5	292.7	327.3	370.0	423.7
132.5°	200.0	202.3	208.3	217.2	230.2	247.9	270.8	296.8	327.7	366.2	413.8
135°	208.5	210.8	217.5	226.6	239.4	257.0	278.2	301.3	328.1	360.5	400.4
137.5°	216.5	219.0	225.5	235.3	248.0	264.0	283.6	304.8	328.0	355.1	388.6
140°	221.3	224.4	230.6	240.5	252.9	268.6	287.2	306.3	327.9	352.0	381.4
142.5°	227.3	229.7	236.2	245.0	257.3	271.7	289.3	307.5	327.2	348.4	374.5
145°	236.8	238.4	243.8	252.9	263.3	277.5	293.6	310.3	327.6	346.2	367.5
147.5°	245.7	246.8	252.2	260.2	270.4	282.6	297.3	312.3	327.6	343.9	361.2
150°	252.1	252.7	257.6	265.7	274.3	285.5	299.8	312.8	327.6	341.9	357.4
152.5°	258.5	258.6	263.6	270.7	278.3	289.0	301.3	313.8	326.1	339.4	353.4
155°	268.2	268.2	271.9	278.1	284.9	293.6	304.1	314.0	324.6	335.1	347.5
157.5°	275.8	276.3	279.3	284.8	290.6	297.3	305.7	314.7	322.4	331.2	340.8
160°	281.8	281.8	284.3	289.2	293.6	299.8	307.2	314.7	321.5	328.3	336.3
162.5°	286.3	286.3	288.3	292.2	296.0	301.3	307.7	314.1	319.5	325.3	331.8
165°	292.9	292.3	293.6	296.7	299.1	303.5	308.4	312.8	316.5	320.8	325.7
167.5°	298.0	297.3	297.9	300.2	302.0	304.8	308.3	311.8	313.5	316.4	320.0
170°	301.0	299.8	300.4	302.2	303.5	304.8	307.8	310.3	311.6	313.4	316.5
172.5°	303.0	302.2	302.4	303.7	304.4	305.2	307.8	309.8	310.1	310.9	313.0
175°	305.3	304.8	304.1	305.3	305.3	305.9	307.2	308.4	307.8	307.8	309.0
177.5°	306.4	305.9	305.5	305.9	305.9	305.9	306.4	307.4	306.4	305.9	306.4
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	759.9	761.0	762.2	762.7	762.6	762.4	762.2	762.2
5°	758.6	760.1	761.5	762.2	762.0	761.8	761.7	761.4
7.5°	754.0	755.9	757.7	758.5	758.3	758.1	757.9	757.6
10°	749.4	751.2	753.0	753.8	753.4	753.0	752.7	752.3
12.5°	743.1	744.8	746.5	747.2	746.8	746.5	746.1	745.7
15°	731.1	733.0	734.8	735.6	735.5	735.3	735.1	734.9
17.5°	715.5	717.2	718.8	719.5	719.3	719.0	718.7	718.5
20°	704.3	705.9	707.6	708.4	708.7	708.8	709.0	709.2
22.5°	691.8	694.0	696.0	697.0	697.0	696.8	696.7	696.6
25°	670.9	673.3	675.7	676.8	676.8	676.8	676.8	676.8
27.5°	649.0	651.0	653.1	654.2	654.3	654.5	654.7	654.8
30°	634.0	636.2	638.4	639.5	639.5	639.5	639.5	639.5
32.5°	617.7	620.0	622.4	623.8	624.2	624.7	625.1	625.6
35°	593.7	596.4	599.1	600.9	601.7	602.4	603.1	603.9
37.5°	568.6	571.8	574.9	576.8	577.3	578.0	578.5	579.2
40°	552.1	555.2	558.3	560.2	561.0	561.7	562.4	563.2
42.5°	534.7	538.1	541.6	543.8	544.9	545.9	546.9	548.0
45°	508.8	512.3	515.9	518.3	519.8	521.3	522.8	524.3
47.5°	482.7	486.6	490.6	493.1	494.2	495.4	496.5	497.6
50°	464.7	468.9	473.2	475.9	477.2	478.5	479.8	481.1
52.5°	446.4	450.8	455.2	458.2	459.8	461.4	463.0	464.5
55°	418.9	423.9	428.8	432.1	433.6	435.0	436.5	438.0
57.5°	390.8	395.8	400.8	404.2	405.9	407.7	409.3	411.1
60°	371.1	376.3	381.4	385.1	387.1	389.1	391.2	393.2
62.5°	352.6	357.7	362.9	366.4	368.3	370.2	372.1	373.9
65°	323.0	328.4	334.0	337.7	339.5	341.4	343.3	345.1
67.5°	293.4	299.5	305.5	309.3	310.9	312.4	314.0	315.5
70°	273.9	279.8	285.7	289.5	291.4	293.3	295.1	297.0
72.5°	254.3	260.3	266.4	270.4	272.2	274.0	275.8	277.7
75°	224.5	230.6	236.7	240.8	243.0	245.3	247.5	249.7
77.5°	196.6	203.0	209.5	213.5	215.2	216.9	218.6	220.3
80°	178.4	184.7	191.0	195.0	196.9	198.7	200.6	202.4
82.5°	161.8	168.1	174.4	178.4	180.3	182.1	183.9	185.8
85°	138.6	144.9	151.1	155.2	157.0	158.9	160.7	162.6
87.5°	121.3	127.7	134.1	138.4	140.1	142.1	144.0	145.8
90°	121.8	128.7	135.5	140.9	142.0	144.5	146.9	148.2
92.5°	152.8	148.1	149.4	150.1	150.7	150.5	152.9	153.4
95°	316.5	250.4	223.2	204.8	194.8	191.1	188.6	188.0
97.5°	642.9	537.8	463.4	393.0	349.1	323.1	308.2	304.8
100°	813.1	768.3	701.2	616.8	556.0	512.7	490.4	492.8
102.5°	866.7	870.4	833.3	781.1	734.3	700.3	681.9	669.6
105°	877.7	944.8	961.7	949.0	922.2	900.3	882.2	880.7
107.5°	822.6	928.1	987.4	1012.6	1014.8	1008.4	1003.5	999.3
110°	772.5	891.2	974.0	1020.5	1039.3	1045.8	1046.0	1046.2





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	722.1	843.2	935.3	994.1	1027.5	1044.4	1050.8	1052.7
115°	655.5	767.6	863.1	933.5	981.4	1010.2	1024.1	1028.6
117.5°	605.3	702.7	788.9	860.3	910.1	942.9	962.1	967.7
120°	578.5	666.3	744.8	810.2	860.4	896.4	912.5	917.5
122.5°	556.5	636.3	709.2	770.0	814.8	847.3	864.9	870.9
125°	526.6	598.0	661.4	713.5	754.4	783.0	799.7	805.3
127.5°	499.9	563.8	621.1	668.6	705.2	729.7	745.0	750.2
130°	482.9	542.2	595.9	640.2	674.2	697.6	711.7	717.8
132.5°	466.9	521.6	571.6	614.1	646.2	669.7	682.5	687.2
135°	445.2	492.5	536.1	573.5	604.8	624.2	636.3	641.6
137.5°	425.2	464.1	501.7	534.2	560.6	580.4	590.7	594.5
140°	413.3	447.7	480.1	508.6	533.1	551.3	562.1	562.4
142.5°	401.6	431.2	459.5	484.3	505.3	521.6	531.4	531.7
145°	388.8	410.7	432.0	451.1	467.3	481.0	486.7	488.7
147.5°	378.4	395.1	411.5	424.8	437.3	446.7	452.1	453.3
150°	371.6	385.9	398.9	410.8	420.5	427.6	431.7	432.1
152.5°	366.1	378.4	389.9	399.7	407.2	413.5	415.8	415.9
155°	358.0	367.9	377.2	384.6	390.1	395.1	396.4	397.0
157.5°	349.3	357.6	364.8	370.6	375.4	379.1	380.2	380.0
160°	344.4	351.2	357.4	361.7	366.1	369.7	369.7	369.2
162.5°	338.4	344.2	349.9	353.8	356.6	359.8	359.8	359.3
165°	330.7	334.5	338.8	341.9	344.4	346.8	346.2	346.2
167.5°	324.0	326.9	329.4	331.6	332.7	334.5	333.8	333.8
170°	319.6	321.5	323.9	325.2	325.7	327.0	326.4	326.4
172.5°	315.6	317.0	318.9	319.7	319.8	321.1	320.0	319.5
175°	310.3	310.9	312.1	312.1	312.1	312.8	312.1	311.6
177.5°	307.0	307.4	307.9	307.9	307.4	307.9	307.0	307.0
180°	305.9	305.9	305.9	305.9	305.9	305.9	305.9	305.9

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