

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: P331891-840

Luminaire Tested: **S123DIP-S340D805U840-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331891-840
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-S340D805U840-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 340 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4361.4 lumens
Efficiency: N/A
Efficacy: 139.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Indirect

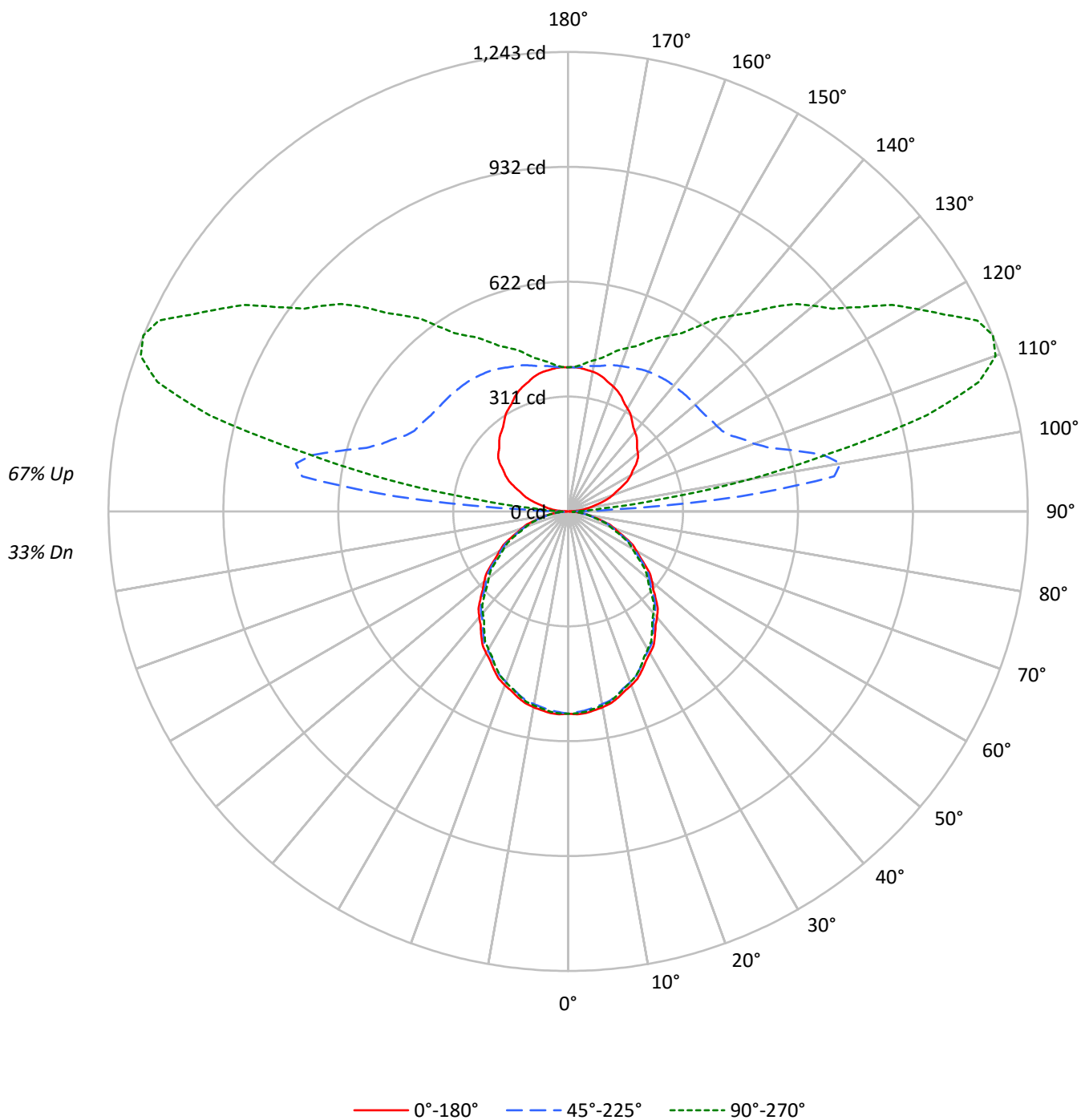
Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	103	103	103	103	93	93	93	93	74	74	74	56	56	56	40	40	40
1	94	90	86	82	84	81	78	75	64	62	60	49	48	47	35	35	34
2	85	78	72	67	77	71	66	61	56	53	50	43	41	39	31	30	28
3	78	69	62	56	70	62	56	51	50	45	42	38	35	33	28	26	24
4	71	61	53	47	64	55	48	43	44	39	36	34	31	28	25	23	21
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	20	18
6	60	48	40	35	54	44	37	32	35	30	26	27	24	21	20	18	16
7	55	43	36	30	50	39	33	28	32	27	23	25	21	19	18	16	14
8	51	39	32	27	46	36	29	25	29	24	21	23	19	17	17	14	13
9	48	36	28	24	43	33	26	22	27	22	18	21	17	15	15	13	11
10	44	33	26	21	40	30	24	19	24	20	16	19	16	13	14	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5890	5890	5890
5°	5919	5837	5877
10°	5879	5786	5822
15°	5810	5721	5731
20°	5730	5628	5632
25°	5621	5516	5505
30°	5504	5392	5351
35°	5380	5261	5194
40°	5251	5117	5039
45°	5107	4985	4864
50°	4963	4823	4687
55°	4778	4654	4511
60°	4590	4456	4316
65°	4422	4241	4111
70°	4176	3997	3821
75°	3818	3681	3523
80°	3440	3298	3267
85°	3013	2902	2791

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	1.2
10°-20°	145.6	3.3
20°-30°	215.0	4.9
30°-40°	251.2	5.8
40°-50°	252.5	5.8
50°-60°	221.8	5.1
60°-70°	165.2	3.8
70°-80°	94.1	2.2
80°-90°	30.0	0.7
90°-100°	217.1	5.0
100°-110°	614.6	14.1
110°-120°	604.6	13.9
120°-130°	482.3	11.1
130°-140°	380.2	8.7
140°-150°	283.8	6.5
150°-160°	197.8	4.5
160°-170°	116.2	2.7
170°-180°	37.8	0.9
0°-30°	412.1	9.4
0°-40°	663.3	15.2
0°-60°	1137.6	26.1
0°-90°	1427.0	32.7
90°-120°	1436.3	32.9
90°-150°	2582.6	59.2
90°-180°	2934.0	67.3
0°-180°	4361.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	547	547	547	547	547	
5°	548	545	540	545	544	52
15°	521	519	513	517	514	147
25°	473	470	464	465	464	218
35°	409	406	400	398	395	256
45°	336	333	328	322	320	259
55°	255	254	248	243	240	228
65°	174	171	166	163	161	171
75°	92	90	88	86	85	98
85°	24	24	24	23	23	27
90°	2	10	20	22	23	3
95°	27	87	468	137	92	29
105°	92	135	635	1110	1004	97
115°	162	202	486	1065	1221	160
125°	225	266	453	821	963	200
135°	264	315	447	676	781	204
145°	301	345	441	555	610	189
155°	342	369	427	486	506	157
165°	373	384	409	434	441	105
175°	389	390	392	398	397	37
180°	390	390	390	390	390	

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	547.2	547.2	547.2	547.2	547.2	547.2	547.2	547.2	547.2	547.2	547.2
2.5°	549.2	548.8	548.5	548.2	547.8	547.1	546.2	545.3	544.4	543.5	544.3
5°	547.8	547.1	546.6	546.1	545.6	544.8	543.6	542.5	541.3	540.2	541.2
7.5°	542.4	541.8	541.3	540.8	540.3	539.4	538.3	537.0	535.8	534.6	535.5
10°	537.9	537.3	536.7	536.2	535.7	534.8	533.4	532.1	530.7	529.4	530.3
12.5°	531.8	531.4	530.9	530.5	530.1	529.2	528.0	526.6	525.3	524.1	524.8
15°	521.4	521.0	520.5	520.1	519.7	518.8	517.5	516.0	514.7	513.4	514.2
17.5°	509.2	508.7	508.2	507.6	507.1	506.1	504.7	503.4	502.0	500.7	501.2
20°	500.2	499.6	499.0	498.3	497.7	496.7	495.3	493.9	492.6	491.3	491.7
22.5°	490.0	489.4	488.8	488.2	487.6	486.6	485.1	483.8	482.4	481.1	481.4
25°	473.3	472.7	472.1	471.5	470.9	469.9	468.5	467.2	465.7	464.4	464.5
27.5°	455.6	454.9	454.3	453.7	453.1	452.1	450.7	449.2	447.8	446.3	446.4
30°	442.8	442.2	441.7	441.2	440.7	439.7	438.3	436.8	435.4	433.8	433.8
32.5°	430.0	429.3	428.6	427.9	427.3	426.3	425.2	424.0	422.9	421.8	421.2
35°	409.4	408.8	408.1	407.5	406.9	405.9	404.6	403.1	401.8	400.4	399.8
37.5°	388.3	387.5	386.7	385.9	385.2	384.1	382.6	381.2	379.9	378.5	377.8
40°	373.7	372.9	372.3	371.7	371.1	370.0	368.6	367.1	365.7	364.2	363.3
42.5°	358.9	358.2	357.5	356.8	356.1	355.0	353.6	352.0	350.6	349.1	348.3
45°	335.5	335.1	334.7	334.3	333.9	333.0	331.5	330.2	328.8	327.5	326.3
47.5°	312.3	311.6	311.0	310.4	309.8	308.9	307.6	306.3	305.1	303.8	302.6
50°	296.4	295.9	295.4	294.9	294.4	293.4	292.1	290.7	289.3	288.0	286.8
52.5°	279.8	279.5	279.1	278.8	278.4	277.5	276.1	274.7	273.3	271.8	270.8
55°	254.6	254.5	254.4	254.3	254.2	253.4	252.1	250.6	249.3	248.0	246.8
57.5°	230.5	230.1	229.7	229.4	229.0	228.3	227.2	226.1	225.1	224.0	223.0
60°	213.2	213.1	213.0	212.9	212.8	212.1	210.8	209.5	208.3	207.0	206.1
62.5°	197.7	197.4	197.2	196.9	196.6	195.9	194.6	193.4	192.1	190.9	190.0
65°	173.6	173.1	172.6	172.1	171.6	170.8	169.8	168.6	167.6	166.5	165.7
67.5°	148.1	147.6	147.2	146.7	146.3	145.6	144.9	144.1	143.3	142.5	141.8
70°	132.7	132.1	131.5	130.8	130.2	129.6	129.0	128.3	127.6	127.0	126.3
72.5°	116.5	116.0	115.6	115.1	114.6	114.1	113.4	112.7	112.0	111.3	110.6
75°	91.8	91.3	90.9	90.5	90.1	89.7	89.4	89.1	88.8	88.5	88.0
77.5°	69.8	69.6	69.4	69.2	68.9	68.6	68.3	67.9	67.5	67.1	66.8
80°	55.5	55.2	54.9	54.6	54.2	54.0	53.8	53.6	53.4	53.2	53.0
82.5°	41.6	41.5	41.5	41.4	41.3	41.3	41.2	41.2	41.2	41.1	40.9
85°	24.4	24.2	24.0	23.8	23.6	23.5	23.5	23.5	23.5	23.5	23.3
87.5°	10.1	10.2	10.2	10.5	10.5	10.7	11.1	11.4	11.8	12.2	12.0
90°	1.6	3.1	4.7	7.1	8.7	10.3	12.6	15.0	17.4	19.7	19.0
92.5°	9.8	14.5	21.2	27.4	33.9	45.6	66.3	100.3	133.6	121.4	91.6
95°	26.9	29.2	37.9	51.3	71.8	102.6	169.8	287.4	416.9	468.2	379.8
97.5°	45.7	46.6	53.4	65.0	85.2	118.6	182.7	315.4	531.2	725.6	776.3
100°	58.5	59.2	64.7	75.8	94.7	125.5	180.8	297.6	505.3	747.7	903.2
102.5°	71.7	73.1	78.0	88.5	105.5	133.7	183.3	282.5	467.4	706.6	909.6
105°	91.6	93.9	98.7	108.2	123.2	147.6	190.3	271.6	420.8	634.8	861.4
107.5°	112.7	115.1	119.7	129.0	143.1	165.8	203.2	270.8	391.1	571.3	777.1
110°	127.9	130.3	134.2	142.9	156.3	178.4	214.0	274.0	379.8	535.3	724.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	141.8	144.2	148.1	156.8	170.3	191.7	224.7	280.2	373.4	511.3	677.9
115°	161.9	165.0	169.8	177.6	191.1	212.4	242.4	290.5	371.1	485.5	622.2
117.5°	181.9	185.5	189.5	196.7	211.8	231.5	261.2	304.2	372.5	470.4	588.5
120°	195.8	198.1	202.1	210.1	225.0	244.8	273.2	314.3	375.1	463.4	570.9
122.5°	207.8	210.2	214.1	222.7	237.0	258.0	285.8	323.7	379.4	459.1	556.3
125°	225.0	226.6	231.4	240.0	255.0	276.3	304.0	338.7	386.1	453.2	537.7
127.5°	238.1	240.4	246.3	255.2	271.8	293.1	319.7	351.0	393.6	450.4	521.3
130°	246.3	248.7	255.8	265.3	281.9	303.2	329.2	359.2	398.7	448.5	512.4
132.5°	252.7	255.7	263.4	274.8	291.3	312.0	337.4	366.8	402.5	447.8	504.2
135°	263.7	266.9	275.6	287.4	304.0	325.3	349.7	376.6	408.2	446.9	493.4
137.5°	274.1	277.4	286.0	298.6	315.0	334.8	358.3	383.8	412.0	445.1	484.1
140°	281.0	285.0	293.0	305.6	321.3	341.0	364.0	387.7	414.5	444.5	478.5
142.5°	288.6	292.0	300.5	311.8	327.7	346.1	368.4	391.4	416.4	443.2	473.4
145°	300.8	303.2	310.3	322.1	335.6	353.8	374.3	395.6	417.7	441.3	466.7
147.5°	313.2	314.6	321.5	331.7	344.7	360.2	379.0	398.1	417.7	438.4	460.0
150°	321.3	322.1	328.4	338.7	349.7	364.0	382.1	398.7	417.7	435.9	455.6
152.5°	329.5	329.7	336.0	345.1	354.8	368.4	384.1	400.0	415.8	432.6	450.5
155°	341.8	341.8	346.6	354.5	363.1	374.3	387.7	400.3	413.7	427.2	442.9
157.5°	351.6	352.2	356.1	363.0	370.4	379.0	389.7	401.1	411.0	422.2	434.4
160°	359.2	359.2	362.4	368.7	374.3	382.1	391.6	401.1	409.8	418.5	428.7
162.5°	365.0	365.0	367.5	372.5	377.4	384.1	392.2	400.4	407.3	414.7	423.0
165°	373.4	372.6	374.3	378.2	381.3	386.9	393.1	398.7	403.4	409.0	415.3
167.5°	379.9	379.0	379.8	382.7	385.0	388.5	393.0	397.5	399.7	403.3	407.9
170°	383.7	382.1	382.9	385.3	386.9	388.5	392.4	395.6	397.2	399.5	403.4
172.5°	386.3	385.3	385.5	387.2	388.1	389.1	392.4	395.0	395.3	396.4	399.0
175°	389.2	388.5	387.7	389.2	389.2	390.0	391.6	393.1	392.4	392.4	393.9
177.5°	390.6	390.0	389.4	390.0	390.0	390.0	390.6	391.9	390.6	390.0	390.6
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	547.2	547.2	547.2	547.2	547.2	547.2	547.2	547.2
2.5°	545.1	546.0	546.8	547.2	547.1	547.0	546.9	546.8
5°	542.3	543.3	544.4	544.8	544.6	544.4	544.1	543.9
7.5°	536.5	537.5	538.4	538.8	538.7	538.6	538.5	538.3
10°	531.3	532.2	533.1	533.5	533.3	533.1	532.9	532.7
12.5°	525.4	526.1	526.8	527.1	527.0	526.8	526.7	526.6
15°	515.0	515.8	516.7	516.8	516.1	515.5	514.9	514.3
17.5°	501.8	502.4	503.0	503.2	502.9	502.7	502.5	502.3
20°	492.1	492.5	492.9	493.0	492.6	492.3	492.0	491.7
22.5°	481.7	482.1	482.4	482.4	482.0	481.6	481.2	480.8
25°	464.6	464.7	464.8	464.7	464.4	464.1	463.8	463.5
27.5°	446.5	446.6	446.6	446.5	446.1	445.7	445.2	444.8
30°	433.8	433.8	433.8	433.4	432.7	432.0	431.3	430.5
32.5°	420.6	420.0	419.5	419.0	418.6	418.2	417.8	417.4
35°	399.2	398.6	397.9	397.4	396.9	396.3	395.8	395.3
37.5°	377.0	376.3	375.5	375.0	374.7	374.3	374.0	373.7
40°	362.5	361.7	360.8	360.2	359.8	359.4	359.0	358.6
42.5°	347.5	346.6	345.8	345.2	344.8	344.4	344.0	343.5
45°	325.0	323.8	322.4	321.6	321.0	320.5	320.0	319.5
47.5°	301.3	300.1	298.8	298.0	297.5	297.1	296.6	296.2
50°	285.7	284.5	283.4	282.5	281.9	281.2	280.6	279.9
52.5°	269.8	268.8	267.8	267.0	266.4	265.8	265.2	264.6
55°	245.7	244.5	243.4	242.6	242.1	241.5	241.0	240.4
57.5°	222.0	220.9	219.8	219.0	218.4	217.8	217.2	216.6
60°	205.2	204.2	203.3	202.6	202.0	201.5	201.0	200.5
62.5°	188.9	188.0	187.1	186.4	186.1	185.7	185.4	185.0
65°	164.9	164.1	163.2	162.7	162.4	162.0	161.7	161.4
67.5°	141.0	140.3	139.6	139.0	138.6	138.0	137.6	137.2
70°	125.6	124.8	124.1	123.5	123.0	122.5	121.9	121.4
72.5°	110.0	109.3	108.7	108.2	108.0	107.7	107.3	107.0
75°	87.5	86.8	86.3	85.9	85.6	85.3	85.0	84.7
77.5°	66.3	66.0	65.6	65.5	65.5	65.5	65.5	65.5
80°	52.9	52.8	52.7	52.7	52.7	52.7	52.7	52.7
82.5°	40.8	40.6	40.4	40.2	40.2	40.1	40.0	39.9
85°	23.1	22.9	22.7	22.6	22.6	22.6	22.6	22.6
87.5°	12.0	12.1	12.2	12.5	12.3	12.5	12.6	12.5
90°	19.7	20.5	21.3	22.9	22.1	22.9	23.7	22.9
92.5°	66.4	52.7	46.6	42.5	41.1	38.7	39.5	38.1
95°	284.3	192.7	150.8	122.4	107.3	100.3	94.7	91.6
97.5°	708.5	567.5	465.6	371.2	313.0	277.4	256.1	249.3
100°	930.9	866.9	774.6	662.4	582.7	525.0	494.2	495.0
102.5°	1004.7	1002.7	948.9	877.8	815.8	770.1	744.4	726.2
105°	1026.4	1105.3	1120.3	1099.8	1063.5	1033.5	1008.2	1004.3
107.5°	964.2	1092.4	1161.5	1189.6	1190.3	1180.2	1171.6	1164.4
110°	904.8	1050.1	1149.5	1204.9	1226.9	1233.2	1231.6	1230.1

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	846.1	994.5	1106.0	1177.0	1217.5	1237.1	1243.0	1243.3
115°	768.2	905.5	1021.7	1107.7	1166.9	1201.6	1217.5	1221.4
117.5°	711.9	830.4	934.6	1022.0	1083.7	1123.5	1146.2	1151.7
120°	682.2	788.7	883.5	963.2	1025.6	1069.9	1088.7	1093.5
122.5°	658.8	755.3	843.0	917.2	972.5	1012.3	1033.2	1039.2
125°	627.6	713.8	789.5	852.7	903.2	938.0	957.7	963.2
127.5°	600.6	677.2	745.7	803.1	848.1	877.8	895.6	900.7
130°	583.5	654.5	718.5	772.1	814.1	842.4	859.0	865.4
132.5°	567.6	633.1	692.6	743.8	783.0	811.5	826.2	830.6
135°	546.3	602.4	653.7	698.7	737.4	761.1	775.3	780.8
137.5°	526.9	572.9	617.1	656.1	688.6	712.7	724.7	728.3
140°	515.5	555.8	593.7	627.6	657.7	679.7	692.5	691.7
142.5°	504.8	539.4	572.3	601.8	627.3	646.9	658.3	657.5
145°	491.9	518.0	543.2	566.1	585.8	602.4	608.7	610.3
147.5°	481.3	502.0	522.4	538.7	553.6	564.8	570.9	571.5
150°	473.7	491.9	508.5	523.4	535.3	544.0	548.8	548.8
152.5°	466.8	482.4	497.1	509.6	518.9	526.9	529.8	529.8
155°	456.4	469.0	480.8	490.3	497.4	503.7	505.3	506.0
157.5°	445.2	455.9	465.0	472.4	478.6	483.3	484.6	484.4
160°	439.0	447.7	455.6	461.1	466.7	471.3	471.3	470.6
162.5°	431.4	438.8	446.1	451.0	454.6	458.7	458.7	458.0
165°	421.6	426.4	431.9	435.9	439.0	442.1	441.3	441.3
167.5°	413.0	416.7	419.9	422.7	424.1	426.4	425.6	425.6
170°	407.4	409.8	412.9	414.5	415.3	416.9	416.1	416.1
172.5°	402.3	404.0	406.6	407.6	407.7	409.3	407.9	407.3
175°	395.6	396.4	397.9	397.9	397.9	398.7	397.9	397.2
177.5°	391.3	391.9	392.5	392.5	391.9	392.5	391.3	391.3
180°	390.0	390.0	390.0	390.0	390.0	390.0	390.0	390.0

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