

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: P331692-927

Luminaire Tested: **SA2XXRDIP-C675D725U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331692-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: SA2XXRDIP-C675D725U927-4F0-1E-UDD-F4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

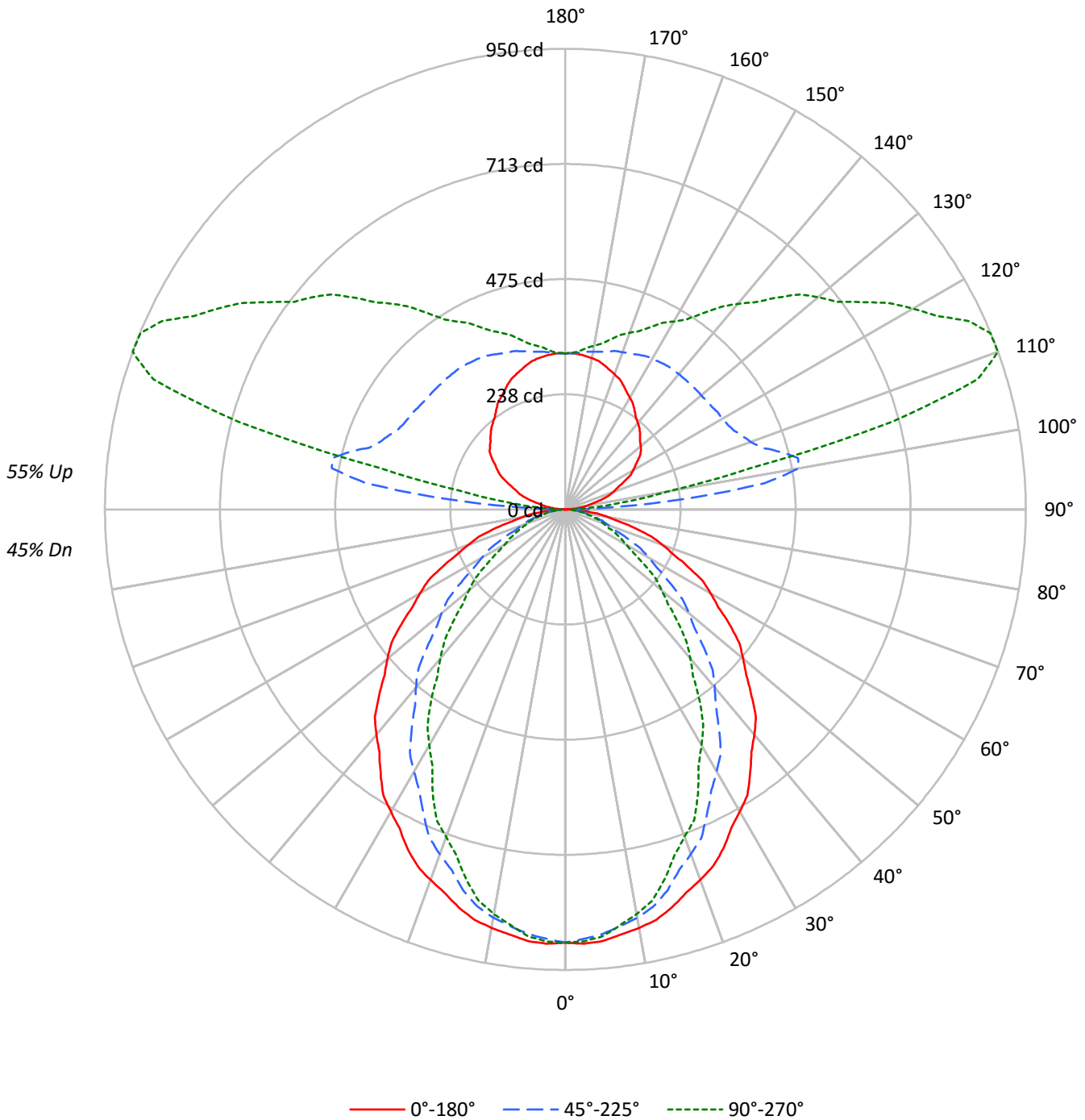
Lumens per Lamp: N/A
Luminaire Lumens: 4081.6 lumens
Efficiency: N/A
Efficacy: 88.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 45.9
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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45
1	97	93	89	86	89	85	82	79	71	69	67	58	57	55	46	45	44	39
2	89	82	76	71	81	75	70	66	63	59	56	52	49	47	41	40	38	33
3	81	72	65	60	74	67	60	56	56	51	48	46	43	40	37	35	33	29
4	75	64	57	51	68	59	53	47	50	45	41	41	38	35	33	31	29	25
5	69	57	49	44	63	53	46	41	45	40	36	37	33	30	30	27	25	22
6	63	52	44	38	58	48	41	36	41	35	31	34	30	27	28	25	22	20
7	59	47	39	34	54	43	36	32	37	32	28	31	27	24	25	22	20	17
8	54	42	35	30	50	39	33	28	34	28	25	28	24	21	23	20	18	16
9	51	39	32	27	47	36	30	25	31	26	22	26	22	19	22	19	16	14
10	47	36	29	24	44	33	27	23	29	24	20	24	20	18	20	17	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14428	14428	14428
5°	14483	14248	14326
10°	14372	14014	13895
15°	14206	13600	13207
20°	13979	13005	12352
25°	13744	12332	11526
30°	13420	11639	10465
35°	13102	10886	9532
40°	12783	10108	8454
45°	12408	9232	7478
50°	12024	8349	6521
55°	11634	7398	5599
60°	11176	6397	4647
65°	10659	5375	4233
70°	10041	4428	3895
75°	9283	4036	3631
80°	8201	3608	3310
85°	6447	2853	2853



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.6	2.0
10°-20°	229.7	5.6
20°-30°	322.5	7.9
30°-40°	351.7	8.6
40°-50°	323.4	7.9
50°-60°	254.0	6.2
60°-70°	165.6	4.1
70°-80°	85.4	2.1
80°-90°	25.1	0.6
90°-100°	128.7	3.2
100°-110°	436.9	10.7
110°-120°	464.2	11.4
120°-130°	382.1	9.4
130°-140°	306.8	7.5
140°-150°	231.9	5.7
150°-160°	163.0	4.0
160°-170°	95.9	2.4
170°-180°	31.2	0.8
0°-30°	635.8	15.6
0°-40°	987.5	24.2
0°-60°	1564.8	38.3
0°-90°	1840.9	45.1
90°-120°	1029.8	25.2
90°-150°	1950.7	47.8
90°-180°	2241.0	54.9
0°-180°	4081.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	894	894	894	894	894	
5°	894	889	879	886	884	85
15°	850	840	814	799	790	239
25°	772	744	692	660	647	355
35°	665	622	552	503	484	416
45°	543	488	404	349	328	419
55°	413	349	263	216	199	369
65°	279	213	141	115	111	277
75°	149	94	65	59	58	158
85°	35	19	15	15	15	41
90°	1	8	21	20	20	3
95°	22	53	243	92	71	23
105°	76	114	459	820	698	80
115°	133	168	384	792	918	132
125°	186	220	369	642	745	165
135°	218	260	365	539	617	168
145°	249	286	363	451	493	156
155°	283	306	352	398	414	130
165°	308	318	338	358	364	87
175°	321	322	324	328	328	31
180°	322	322	322	322	322	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	896.8	896.1	895.4	894.7	894.0	892.8	891.2	889.6	888.1	886.5	888.0
5°	893.6	892.7	891.8	890.9	890.0	888.4	886.1	883.8	881.4	879.1	880.7
7.5°	884.4	883.3	882.2	881.1	880.0	878.0	875.3	872.6	869.8	867.1	867.5
10°	876.6	875.4	874.1	872.8	871.6	869.2	865.5	862.0	858.4	854.8	854.3
12.5°	866.9	865.4	863.8	862.3	860.7	857.7	853.1	848.5	843.8	839.2	838.3
15°	849.9	848.0	846.0	844.0	842.0	838.0	831.9	825.8	819.7	813.6	810.2
17.5°	829.1	826.1	823.1	820.0	817.0	811.6	803.7	795.9	788.1	780.2	776.2
20°	813.6	809.9	806.4	802.8	799.2	792.9	783.9	774.9	766.0	756.9	752.4
22.5°	796.7	792.7	788.7	784.7	780.6	773.6	763.4	753.3	743.1	733.0	727.2
25°	771.5	765.7	760.0	754.2	748.5	739.7	727.9	716.0	704.1	692.2	684.8
27.5°	741.1	734.8	728.6	722.3	716.1	706.2	692.9	679.5	666.1	652.8	644.2
30°	719.8	712.9	706.1	699.3	692.4	681.8	667.4	653.1	638.7	624.3	615.1
32.5°	699.0	691.0	683.1	675.1	667.1	655.8	641.1	626.5	611.8	597.1	586.7
35°	664.7	655.6	646.4	637.2	628.1	615.6	599.8	584.0	568.2	552.3	541.0
37.5°	630.5	620.4	610.3	600.2	590.2	576.7	559.9	543.0	526.2	509.3	496.9
40°	606.5	595.7	584.9	574.2	563.4	549.3	531.9	514.4	497.0	479.6	466.8
42.5°	581.9	570.6	559.2	547.9	536.5	521.8	503.8	485.8	467.8	449.8	436.6
45°	543.4	531.4	519.4	507.3	495.3	479.8	461.0	442.1	423.2	404.3	391.6
47.5°	505.9	493.1	480.4	467.6	454.9	438.8	419.3	399.8	380.3	360.8	348.2
50°	478.7	466.0	453.2	440.5	427.7	411.5	391.7	371.9	352.1	332.4	320.0
52.5°	452.3	438.9	425.6	412.3	398.9	382.5	363.2	343.9	324.6	305.2	293.3
55°	413.3	399.3	385.2	371.2	357.2	340.5	321.1	301.7	282.3	262.8	252.1
57.5°	373.3	358.9	344.5	330.2	315.8	299.3	280.6	262.0	243.3	224.7	214.8
60°	346.1	331.8	317.3	303.0	288.6	272.2	253.7	235.1	216.7	198.1	188.9
62.5°	319.6	305.2	290.8	276.5	262.1	246.1	228.5	210.8	193.1	175.5	166.8
65°	279.0	264.4	249.9	235.4	220.8	205.4	189.3	173.1	156.9	140.7	134.6
67.5°	239.9	225.4	211.0	196.5	182.0	167.5	153.0	138.5	123.9	109.3	106.5
70°	212.7	198.7	184.7	170.6	156.6	143.4	131.0	118.6	106.2	93.8	92.0
72.5°	186.8	173.3	159.9	146.5	133.0	121.4	111.4	101.4	91.5	81.5	80.0
75°	148.8	136.3	123.7	111.1	98.5	89.1	83.0	76.9	70.8	64.7	63.5
77.5°	111.5	100.4	89.4	78.3	67.3	60.3	57.4	54.4	51.5	48.6	47.8
80°	88.2	79.0	69.8	60.7	51.5	46.0	44.2	42.4	40.6	38.8	38.1
82.5°	66.8	59.7	52.5	45.3	38.2	34.0	32.8	31.5	30.3	29.2	28.7
85°	34.8	31.0	27.3	23.4	19.6	17.5	17.0	16.5	15.9	15.4	15.4
87.5°	10.5	9.7	9.0	8.2	7.2	7.1	7.7	8.6	9.3	9.3	9.1
90°	0.6	2.5	5.0	6.2	7.4	9.3	12.4	16.7	20.4	21.1	20.4
92.5°	7.5	10.9	15.4	18.1	22.3	28.1	42.1	61.8	79.4	80.5	68.0
95°	21.7	24.2	30.3	35.9	45.8	60.7	89.2	143.1	214.9	242.7	212.4
97.5°	35.3	38.7	45.2	53.6	65.0	81.8	117.6	192.7	312.1	414.4	434.7
100°	47.7	49.5	55.1	65.0	77.4	94.7	127.5	203.1	336.8	489.2	578.4
102.5°	59.1	60.4	66.0	75.9	88.8	106.2	136.5	203.6	327.5	491.7	631.8
105°	75.6	78.0	82.4	91.7	105.3	122.6	151.7	206.8	309.0	458.8	623.6
107.5°	93.4	95.4	99.6	108.1	121.6	139.1	167.3	215.4	299.8	423.7	569.2
110°	105.3	107.7	111.5	119.5	132.5	150.5	177.7	222.3	297.9	406.9	535.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	116.1	118.7	122.9	130.4	142.9	161.4	187.7	229.7	298.3	395.9	511.3
115°	133.2	136.3	140.0	147.3	159.8	176.5	203.1	240.9	301.0	384.0	481.8
117.5°	150.8	153.2	156.9	163.5	175.4	192.7	217.4	252.8	305.4	378.1	463.2
120°	161.6	164.1	167.8	173.4	185.8	203.1	227.3	260.7	308.4	374.6	453.3
122.5°	172.1	174.0	177.7	183.8	196.1	214.0	236.7	267.7	311.9	372.6	444.9
125°	185.8	187.7	191.3	198.8	211.2	228.5	250.8	278.7	317.0	369.1	432.8
127.5°	196.7	199.2	204.4	212.5	224.4	242.2	264.0	288.9	322.4	366.9	421.7
130°	203.1	205.6	211.8	220.5	232.8	250.2	271.9	295.4	326.4	366.0	414.3
132.5°	209.1	212.1	218.7	227.9	240.7	258.1	278.8	301.8	330.3	365.5	408.4
135°	218.0	220.5	227.9	237.2	251.4	268.8	288.6	310.2	335.0	364.7	400.1
137.5°	226.4	229.3	236.8	246.7	260.9	276.9	296.5	316.7	339.2	364.6	394.2
140°	232.8	235.3	242.7	252.6	266.3	282.4	301.0	320.1	341.2	364.1	390.8
142.5°	239.2	241.3	248.2	258.1	271.2	286.4	304.4	323.1	342.7	364.1	387.3
145°	248.9	251.4	257.6	266.9	279.2	292.9	309.7	326.9	344.3	362.9	382.7
147.5°	259.4	261.2	267.1	275.7	286.0	298.1	313.9	329.1	344.8	360.7	378.0
150°	266.3	268.2	273.1	281.1	290.4	301.6	315.8	330.0	344.3	359.2	374.0
152.5°	273.2	274.1	279.0	286.1	294.9	305.1	317.8	330.6	343.3	356.7	370.6
155°	283.0	283.6	287.3	294.1	301.0	310.2	320.8	331.3	341.8	352.4	364.1
157.5°	291.2	291.8	294.8	300.7	306.2	313.9	322.9	331.3	339.0	347.9	358.1
160°	296.6	297.2	299.7	304.7	309.7	316.4	323.8	331.3	337.5	344.9	353.6
162.5°	302.1	301.7	304.2	308.2	312.6	317.9	324.4	330.8	336.0	342.5	349.6
165°	308.4	307.8	309.0	312.8	315.8	319.6	325.1	329.5	333.2	337.5	343.1
167.5°	313.6	312.8	313.9	316.3	318.5	320.9	325.0	328.6	330.3	333.2	336.6
170°	317.0	315.8	316.4	318.3	319.6	321.4	324.5	327.6	328.8	330.7	333.2
172.5°	319.0	318.3	317.9	319.8	320.5	321.9	324.0	326.1	326.9	327.7	329.7
175°	321.4	320.8	320.1	321.4	321.4	322.0	323.2	324.5	323.8	324.5	325.1
177.5°	322.5	321.5	321.0	322.0	322.0	322.0	322.5	323.5	322.5	322.0	322.5
180°	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	893.6	893.6	893.6	893.6	893.6	893.6	893.6	893.6
2.5°	889.4	890.8	892.2	892.8	892.6	892.2	892.0	891.7
5°	882.3	883.9	885.5	886.1	885.5	884.9	884.5	883.9
7.5°	868.0	868.5	868.9	868.7	867.8	866.9	865.9	865.0
10°	853.7	853.2	852.6	851.8	850.7	849.7	848.6	847.5
12.5°	837.3	836.4	835.4	834.0	832.2	830.4	828.6	826.8
15°	806.8	803.3	799.9	797.3	795.5	793.7	791.9	790.1
17.5°	772.1	768.0	764.0	760.4	757.3	754.2	751.1	748.1
20°	748.0	743.5	738.9	734.7	730.8	726.8	722.9	718.9
22.5°	721.4	715.7	709.9	705.5	702.5	699.6	696.6	693.7
25°	677.5	670.1	662.7	657.7	655.1	652.4	649.7	647.0
27.5°	635.6	627.0	618.5	612.0	607.7	603.4	599.1	594.8
30°	606.0	596.8	587.6	580.7	575.8	570.9	566.1	561.3
32.5°	576.2	565.8	555.3	547.8	543.2	538.7	534.1	529.6
35°	529.7	518.4	507.1	499.4	495.4	491.5	487.6	483.6
37.5°	484.3	471.9	459.5	450.9	446.4	441.9	437.4	432.8
40°	454.0	441.2	428.5	419.8	415.1	410.4	405.8	401.1
42.5°	423.4	410.2	397.0	388.2	383.7	379.1	374.6	370.0
45°	378.8	366.1	353.3	344.8	340.5	336.1	331.8	327.5
47.5°	335.5	322.8	310.1	301.8	297.9	294.0	290.0	286.1
50°	307.6	295.2	282.8	274.6	270.9	267.1	263.4	259.6
52.5°	281.3	269.3	257.3	249.6	246.1	242.6	239.2	235.7
55°	241.3	230.4	219.7	212.6	209.2	205.7	202.3	198.9
57.5°	204.9	195.0	185.1	178.7	175.9	173.0	170.1	167.2
60°	179.8	170.6	161.4	155.4	152.6	149.7	146.8	143.9
62.5°	158.0	149.2	140.5	135.3	133.6	131.9	130.2	128.4
65°	128.5	122.4	116.3	113.0	112.4	111.9	111.3	110.8
67.5°	103.7	100.9	98.2	96.4	95.9	95.3	94.7	94.1
70°	90.2	88.4	86.6	85.4	84.6	83.9	83.2	82.5
72.5°	78.5	77.0	75.5	74.5	74.1	73.7	73.2	72.8
75°	62.2	60.9	59.7	58.9	58.8	58.6	58.4	58.2
77.5°	47.1	46.3	45.6	45.2	44.8	44.6	44.3	44.0
80°	37.4	36.7	36.0	35.6	35.6	35.6	35.6	35.6
82.5°	28.3	27.8	27.4	27.2	27.2	27.2	27.2	27.2
85°	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
87.5°	8.9	8.5	8.6	8.6	8.6	8.6	8.6	8.6
90°	19.8	18.6	19.8	20.4	20.4	20.4	20.4	20.4
92.5°	54.0	46.3	41.1	37.3	36.8	34.8	35.3	34.3
95°	162.2	124.5	98.5	84.8	76.8	71.9	69.9	70.6
97.5°	378.6	309.7	242.7	198.0	168.4	153.2	144.2	138.9
100°	565.4	488.6	403.8	328.8	277.4	250.8	232.8	221.7
102.5°	687.8	670.4	608.3	528.9	473.1	427.6	405.2	390.1
105°	752.4	822.4	830.4	810.0	771.6	733.2	706.5	697.9
107.5°	705.8	811.2	875.6	905.6	910.5	908.3	903.0	891.4
110°	665.7	776.6	855.8	906.6	933.2	945.0	950.5	949.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	629.1	735.4	820.1	878.4	915.4	935.1	945.6	949.0
115°	583.9	679.3	760.4	824.2	868.2	896.7	912.8	918.4
117.5°	550.0	633.7	707.3	767.1	812.0	842.1	859.0	863.7
120°	533.1	610.0	675.6	732.0	775.3	804.4	822.4	828.5
122.5°	519.8	590.2	652.3	703.2	742.1	770.7	786.7	791.9
125°	500.3	564.1	618.6	665.0	701.0	724.5	740.0	745.0
127.5°	481.2	538.8	590.3	633.1	664.5	686.5	699.9	703.9
130°	468.7	522.0	570.9	611.8	642.1	663.2	675.6	680.6
132.5°	456.9	506.2	551.1	589.5	619.4	640.4	651.8	656.2
135°	440.3	481.2	522.0	556.7	583.4	603.8	614.9	617.4
137.5°	427.1	461.2	493.7	523.9	548.2	565.8	575.5	579.2
140°	418.6	448.4	476.8	504.1	523.9	540.0	549.3	553.0
142.5°	411.7	437.0	461.4	484.3	503.1	517.7	526.0	526.7
145°	401.9	422.3	441.6	459.5	474.4	484.9	491.1	492.9
147.5°	394.3	410.4	425.4	438.6	450.8	459.2	463.4	464.5
150°	388.9	402.5	415.5	426.7	435.9	443.4	447.1	447.7
152.5°	383.4	396.1	407.1	416.8	424.1	430.5	433.2	433.3
155°	375.9	385.8	395.1	401.9	408.7	413.0	415.5	414.3
157.5°	367.1	375.4	383.2	388.5	393.3	397.0	398.1	398.1
160°	361.6	368.4	375.3	379.6	384.0	387.1	387.6	387.6
162.5°	356.2	362.0	367.8	371.2	375.5	377.6	378.3	377.7
165°	348.0	352.4	356.7	359.2	361.6	364.1	364.1	363.5
167.5°	340.2	343.6	346.5	348.8	349.9	351.3	351.1	350.4
170°	336.3	338.1	340.6	341.8	342.5	344.3	343.6	342.5
172.5°	331.8	333.2	335.2	335.9	336.5	337.4	336.8	336.0
175°	326.9	327.6	328.2	328.8	328.8	329.5	328.8	327.6
177.5°	323.5	323.5	324.0	324.0	324.0	324.0	323.5	322.5
180°	322.0	322.0	322.0	322.0	322.0	322.0	322.0	322.0

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