

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: P331308-927

Luminaire Tested: **SA2XXDIP-C485D725U927-4F0-1E-UDD-D4**

Issue Date: 10/7/2019

Test Information

Test Method: LM-79-08
Report Number: P331308-927
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: SA2XXDIP-C485D725U927-4F0-1E-UDD-D4
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 725 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3801.1 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

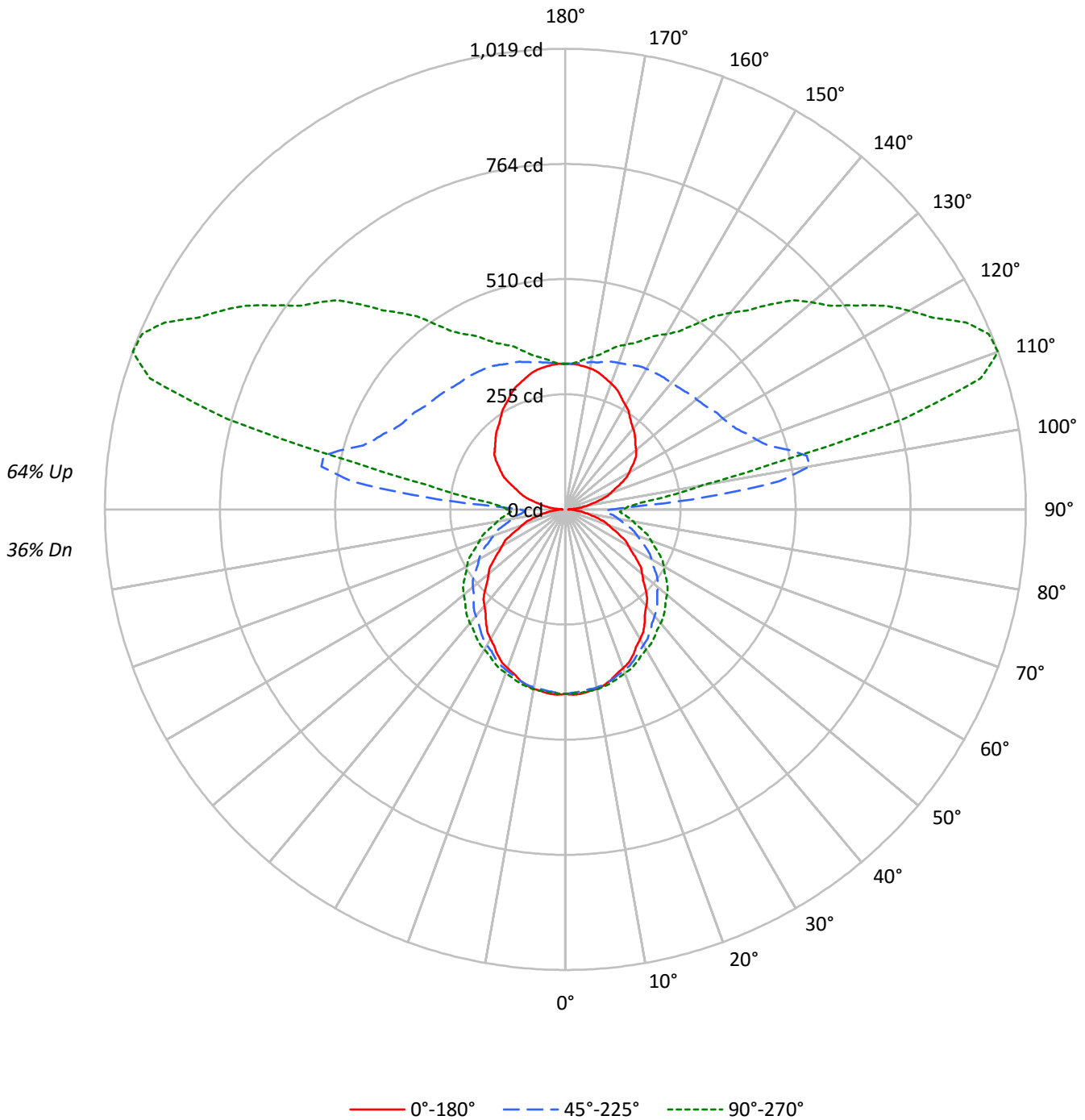
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	36				36
1	94	89	85	81	84	80	77	74	65	62	60	50	48	47	37	36	35				28	
2	85	77	71	65	76	70	64	59	56	52	49	43	41	38	32	30	28				23	
3	77	67	60	54	69	61	54	49	49	44	40	38	35	32	28	26	24				19	
4	70	59	51	45	63	54	47	41	43	38	34	34	30	27	25	22	20				16	
5	64	53	44	38	58	48	40	35	39	33	29	30	26	23	22	19	17				14	
6	59	47	39	33	53	43	35	30	35	29	25	27	23	20	20	17	15				12	
7	55	42	34	29	49	38	31	26	31	26	22	24	20	18	18	15	13				10	
8	50	38	30	25	45	35	28	23	28	23	19	22	18	15	17	14	12				9	
9	47	35	27	22	42	32	25	20	26	21	17	20	17	14	15	13	11				8	
10	44	32	24	20	39	29	23	18	24	19	15	19	15	12	14	11	10				7	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6591	6591	6591
5°	6623	6345	6320
10°	6581	6158	6088
15°	6491	5959	5843
20°	6376	5745	5607
25°	6263	5540	5394
30°	6103	5330	5178
35°	5943	5127	5028
40°	5773	4954	4876
45°	5612	4799	4746
50°	5439	4657	4618
55°	5257	4507	4488
60°	5033	4351	4351
65°	4802	4169	4189
70°	4546	3970	4013
75°	4214	3778	3850
80°	3692	3579	3685
85°	3187	3410	3559



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	38.7	1.0
10°-20°	110.9	2.9
20°-30°	168.1	4.4
30°-40°	204.7	5.4
40°-50°	220.3	5.8
50°-60°	213.9	5.6
60°-70°	186.8	4.9
70°-80°	143.8	3.8
80°-90°	99.4	2.6
90°-100°	195.2	5.1
100°-110°	485.5	12.8
110°-120°	496.2	13.1
120°-130°	400.0	10.5
130°-140°	314.4	8.3
140°-150°	233.2	6.1
150°-160°	163.0	4.3
160°-170°	95.9	2.5
170°-180°	31.2	0.8
0°-30°	317.7	8.4
0°-40°	522.4	13.7
0°-60°	956.6	25.2
0°-90°	1386.5	36.5
90°-120°	1176.9	31.0
90°-150°	2124.5	55.9
90°-180°	2415.0	63.5
0°-180°	3801.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	408	408	408	408	408	
5°	409	408	404	407	407	39
15°	390	392	392	397	396	110
25°	355	359	364	371	373	163
35°	306	316	327	340	344	191
45°	251	267	288	305	312	194
55°	192	214	244	265	273	172
65°	131	161	195	219	227	130
75°	73	106	144	168	177	77
85°	21	58	96	120	129	23
90°	7	49	99	121	129	5
95°	26	86	311	181	168	27
105°	78	135	510	891	776	84
115°	136	178	420	845	978	134
125°	187	222	389	677	786	166
135°	219	261	371	558	641	169
145°	249	286	363	454	499	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°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	410.6	410.3	410.0	409.6	409.3	408.8	408.1	407.3	406.6	405.8	406.4
5°	409.4	409.0	408.6	408.2	407.8	407.3	406.5	405.7	404.9	404.1	404.9
7.5°	405.8	405.4	405.2	405.0	404.7	404.3	403.6	403.1	402.4	401.8	402.7
10°	402.9	402.7	402.3	402.1	401.9	401.6	401.2	400.8	400.4	400.0	401.0
12.5°	398.2	398.2	398.3	398.3	398.4	398.2	398.0	397.7	397.4	397.1	398.2
15°	390.5	390.7	391.0	391.3	391.5	391.7	391.7	391.7	391.7	391.7	392.8
17.5°	380.6	381.1	381.7	382.2	382.8	383.3	383.7	384.0	384.5	384.9	386.1
20°	373.9	374.5	375.3	375.9	376.5	377.2	377.6	378.2	378.7	379.2	380.6
22.5°	366.8	367.6	368.4	369.1	369.9	370.6	371.4	372.1	372.8	373.6	375.0
25°	355.0	355.9	356.8	357.7	358.6	359.7	360.9	362.1	363.3	364.4	366.0
27.5°	340.8	342.3	343.8	345.3	346.7	348.2	349.6	351.0	352.4	353.8	355.8
30°	331.3	333.0	334.7	336.4	338.2	339.8	341.6	343.3	345.0	346.7	348.8
32.5°	320.9	322.8	324.7	326.7	328.6	330.6	332.6	334.6	336.6	338.7	341.0
35°	305.9	308.1	310.4	312.6	314.8	317.2	319.6	322.2	324.6	327.2	330.0
37.5°	289.5	292.2	294.7	297.3	299.8	302.8	306.0	309.2	312.4	315.7	318.9
40°	278.7	281.5	284.5	287.3	290.3	293.4	297.0	300.6	304.1	307.7	311.1
42.5°	268.2	271.2	274.0	276.9	279.8	283.3	287.4	291.4	295.6	299.6	303.3
45°	250.9	254.4	257.9	261.5	265.1	269.1	273.7	278.3	283.0	287.6	291.6
47.5°	233.7	237.6	241.5	245.3	249.1	253.8	259.2	264.6	270.0	275.4	279.6
50°	221.9	225.9	230.0	234.1	238.1	243.1	249.1	255.0	260.9	266.8	271.3
52.5°	210.5	214.8	219.0	223.4	227.7	232.9	239.2	245.3	251.6	257.9	262.4
55°	192.3	197.0	201.8	206.4	211.2	217.0	223.9	230.7	237.5	244.3	249.1
57.5°	174.3	179.7	185.0	190.3	195.7	201.8	208.7	215.7	222.7	229.7	234.8
60°	161.5	167.2	172.9	178.5	184.1	190.7	198.2	205.7	213.2	220.7	225.7
62.5°	150.1	156.0	161.9	167.8	173.6	180.3	187.7	195.3	202.8	210.2	215.6
65°	131.3	137.8	144.3	150.7	157.1	164.2	172.0	179.7	187.5	195.3	200.7
67.5°	114.1	120.8	127.5	134.3	141.0	148.3	156.3	164.2	172.1	180.1	185.5
70°	101.8	108.6	115.4	122.2	129.1	136.6	144.7	152.9	161.1	169.2	174.8
72.5°	90.4	97.4	104.5	111.5	118.6	126.3	134.5	142.8	151.0	159.2	164.9
75°	72.8	80.2	87.5	94.8	102.2	110.1	118.5	126.9	135.4	143.8	149.4
77.5°	55.8	63.5	71.1	78.8	86.6	94.7	103.2	111.8	120.3	128.9	134.5
80°	44.4	52.4	60.4	68.4	76.4	84.8	93.3	101.8	110.4	118.9	124.5
82.5°	34.9	42.9	50.7	58.6	66.5	74.9	83.5	92.1	100.8	109.5	114.9
85°	21.3	29.5	37.6	45.8	53.9	62.2	70.6	79.0	87.5	95.9	101.4
87.5°	11.7	20.0	28.3	36.4	44.4	52.9	61.9	71.2	80.4	89.0	94.2
90°	6.6	16.0	26.1	35.0	43.9	53.7	65.3	78.0	90.2	99.2	103.8
92.5°	13.0	23.4	35.0	44.8	56.2	69.6	91.7	119.5	145.1	154.3	146.9
95°	26.4	35.1	47.5	59.2	75.3	97.2	133.6	195.3	275.0	310.8	285.4
97.5°	39.5	48.2	60.4	74.2	91.2	114.5	157.9	240.5	367.5	477.4	502.6
100°	51.8	58.5	69.0	83.7	101.0	124.5	164.6	247.6	388.6	548.3	642.4
102.5°	62.7	68.5	78.6	92.9	110.3	133.4	170.9	245.2	376.1	547.6	692.5
105°	78.5	84.8	92.9	106.1	123.5	146.2	182.1	244.1	353.1	509.8	679.1
107.5°	96.3	101.2	108.5	120.1	136.7	158.9	193.7	248.3	339.3	469.7	619.6
110°	107.7	112.7	119.1	129.8	145.4	167.9	201.6	252.6	334.6	450.0	582.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	118.5	123.2	129.7	139.4	154.2	176.7	209.1	257.4	332.1	435.9	555.3
115°	135.5	140.1	145.2	154.1	167.9	188.3	220.9	264.6	330.5	419.5	521.3
117.5°	152.5	155.9	160.6	168.1	180.9	201.5	231.6	272.5	330.6	408.8	497.7
120°	163.4	166.4	170.6	176.7	189.6	209.8	239.3	278.0	330.9	402.4	484.8
122.5°	173.8	176.0	179.9	186.2	198.8	219.2	246.8	282.7	331.8	397.6	473.4
125°	187.0	188.8	192.5	199.9	212.4	231.8	258.3	290.3	333.0	389.2	456.5
127.5°	197.9	200.2	205.3	213.3	225.1	244.5	269.6	298.0	334.9	382.9	440.8
130°	204.3	206.7	212.7	221.3	233.5	252.2	276.6	302.9	336.6	379.0	430.5
132.5°	210.2	213.1	219.7	228.7	241.5	259.8	282.6	307.8	338.3	375.7	421.5
135°	218.6	221.0	228.5	237.7	252.0	270.0	291.1	314.1	340.2	371.2	409.3
137.5°	227.0	230.0	237.3	247.2	261.3	277.7	297.9	318.6	341.7	367.7	399.7
140°	233.5	235.8	243.0	252.9	266.3	282.5	301.3	320.8	342.1	365.3	394.0
142.5°	239.9	241.7	248.5	258.3	271.3	286.4	304.5	323.3	342.9	364.3	389.2
145°	248.9	251.4	257.6	266.9	279.2	292.9	309.7	326.9	344.3	362.9	383.5
147.5°	259.4	261.2	267.1	275.7	286.0	298.1	313.9	329.1	344.8	360.7	378.1
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°	408.2	408.2	408.2	408.2	408.2	408.2	408.2	408.2
2.5°	406.9	407.4	408.0	408.1	407.9	407.7	407.5	407.3
5°	405.7	406.5	407.3	407.6	407.4	407.3	407.2	407.0
7.5°	403.7	404.6	405.6	406.0	405.9	405.8	405.6	405.5
10°	402.0	403.1	404.2	404.6	404.5	404.3	404.3	404.1
12.5°	399.2	400.3	401.3	401.8	401.6	401.5	401.4	401.2
15°	394.0	395.2	396.4	396.9	396.8	396.6	396.5	396.4
17.5°	387.4	388.6	389.8	390.5	390.5	390.5	390.5	390.5
20°	382.1	383.6	385.0	385.7	385.7	385.7	385.7	385.7
22.5°	376.4	377.9	379.4	380.2	380.4	380.6	380.8	381.0
25°	367.6	369.2	370.7	371.8	372.2	372.6	373.0	373.4
27.5°	357.8	359.8	361.8	362.9	363.2	363.5	363.8	364.1
30°	350.9	353.0	355.1	356.3	356.7	357.1	357.5	357.9
32.5°	343.5	345.9	348.3	349.9	350.6	351.3	352.0	352.8
35°	333.0	335.9	338.7	340.6	341.6	342.5	343.4	344.4
37.5°	322.1	325.3	328.5	330.6	331.6	332.6	333.5	334.5
40°	314.5	317.9	321.3	323.6	324.8	326.0	327.2	328.4
42.5°	307.0	310.8	314.5	317.0	318.1	319.3	320.5	321.7
45°	295.7	299.8	303.8	306.5	307.8	309.2	310.5	311.8
47.5°	283.8	288.1	292.4	295.2	296.7	298.1	299.6	301.0
50°	275.8	280.2	284.7	287.6	289.1	290.6	292.0	293.4
52.5°	267.0	271.6	276.2	279.2	280.7	282.3	283.8	285.4
55°	253.8	258.6	263.2	266.5	268.2	269.9	271.6	273.3
57.5°	239.9	244.9	250.1	253.5	255.2	257.0	258.7	260.5
60°	230.7	235.7	240.7	244.1	245.9	247.8	249.6	251.4
62.5°	220.9	226.2	231.5	235.0	236.8	238.5	240.3	242.0
65°	206.0	211.4	216.8	220.4	222.0	223.8	225.5	227.2
67.5°	191.0	196.4	201.8	205.5	207.2	209.1	210.9	212.6
70°	180.5	186.2	191.8	195.4	197.0	198.6	200.2	201.8
72.5°	170.4	175.9	181.5	185.2	187.0	188.9	190.8	192.7
75°	155.1	160.7	166.4	170.1	171.7	173.5	175.2	176.9
77.5°	140.1	145.8	151.4	155.1	156.9	158.8	160.7	162.5
80°	130.0	135.5	141.0	144.7	146.6	148.4	150.2	152.0
82.5°	120.5	126.0	131.5	135.1	136.9	138.6	140.4	142.1
85°	106.9	112.4	118.0	121.6	123.4	125.3	127.1	129.0
87.5°	99.4	104.6	110.1	113.8	115.5	117.2	118.8	120.5
90°	108.4	112.4	119.0	122.9	124.5	126.1	127.7	129.3
92.5°	138.2	135.6	135.5	135.1	136.2	135.8	137.8	138.4
95°	240.3	207.5	186.5	176.2	169.7	166.3	166.0	168.2
97.5°	451.3	387.3	325.2	283.7	255.6	241.9	234.4	230.8
100°	634.3	562.4	482.4	410.6	360.7	335.5	318.9	309.3
102.5°	753.1	740.5	683.3	607.0	552.5	508.5	487.6	473.9
105°	812.5	887.1	899.7	882.3	845.3	808.4	783.2	776.0
107.5°	760.7	870.5	939.3	972.2	978.5	977.9	974.0	963.8
110°	717.3	832.3	915.8	969.4	997.5	1010.7	1017.7	1018.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	677.3	787.9	876.9	937.9	976.4	997.5	1009.5	1014.2
115°	627.3	726.7	811.7	878.2	923.6	953.5	971.1	978.1
117.5°	588.4	676.0	753.5	815.9	862.1	893.6	911.9	917.9
120°	568.3	648.8	718.1	777.1	821.8	852.4	871.8	879.4
122.5°	551.9	625.8	691.6	744.9	785.1	814.8	832.1	838.5
125°	527.6	594.9	652.9	701.8	738.9	763.6	780.2	786.4
127.5°	503.5	564.5	619.2	664.2	696.7	719.9	734.4	739.6
130°	488.1	544.5	596.6	639.5	671.0	693.1	706.5	712.5
132.5°	473.2	525.5	573.5	613.9	644.8	666.9	679.4	684.9
135°	452.3	496.0	539.6	576.2	603.9	625.3	637.5	641.0
137.5°	435.0	471.6	506.4	538.3	563.5	581.9	592.6	597.2
140°	424.0	455.8	486.4	515.1	535.8	552.6	562.7	567.2
142.5°	415.3	442.2	468.4	492.4	511.9	527.2	536.2	537.7
145°	403.5	424.7	444.7	463.3	478.9	490.0	496.9	499.4
147.5°	394.6	410.7	425.9	439.2	451.8	460.5	465.0	466.4
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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