

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: P331288-940

Luminaire Tested: **SA2XXDIP-C485D330U940-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331288-940  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C485D330U940-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 485 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 330 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

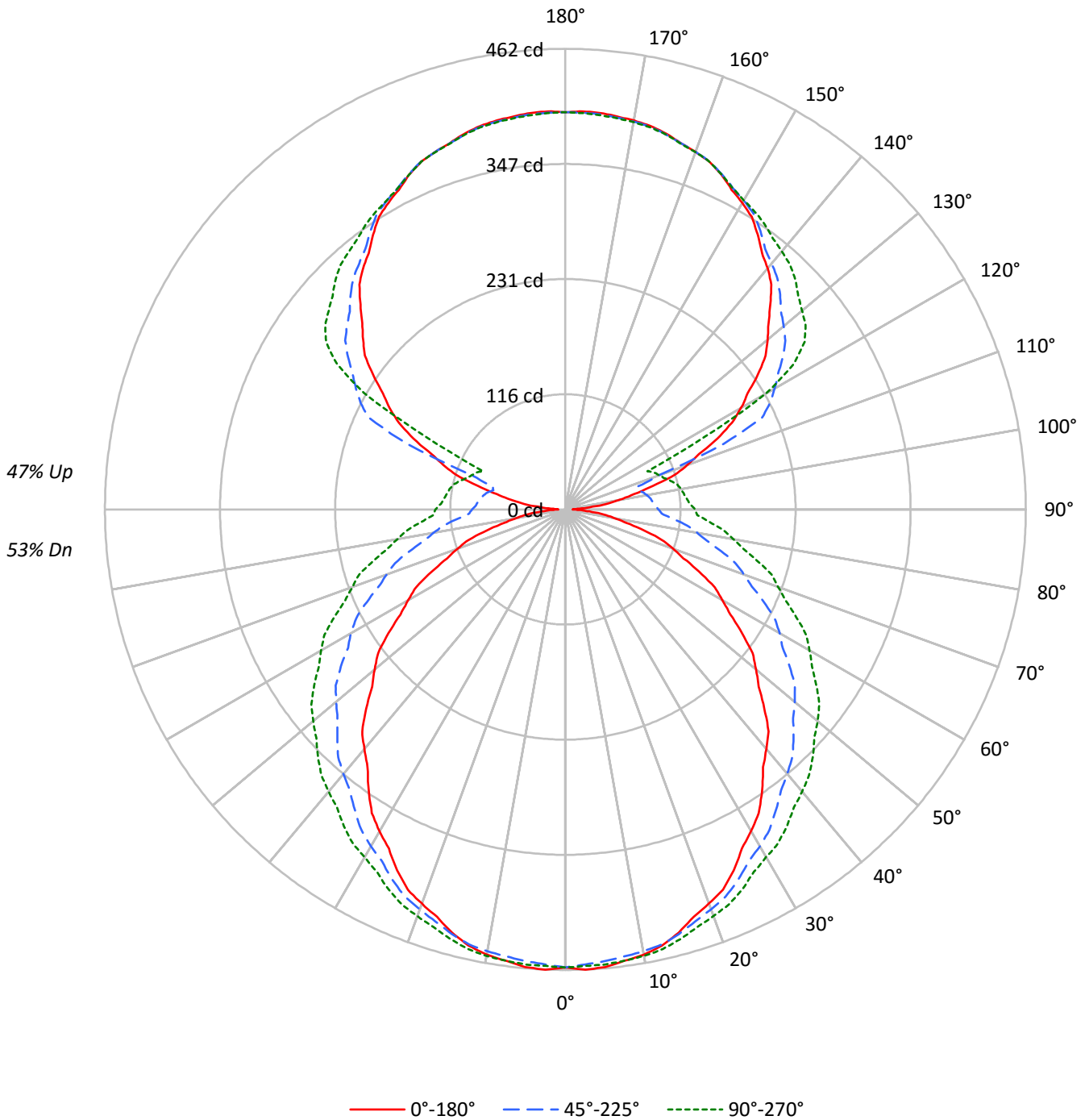
Lumens per Lamp: N/A  
Luminaire Lumens: 2921.8 lumens  
Efficiency: N/A  
Efficacy: 106.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 27.5  
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



TEST NUMBER: P331288-940  
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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	108	108	108	108	100	100	100	100	85	85	85	72	72	72	59	59	59	53				
1	97	92	87	83	89	85	81	78	72	69	67	61	58	56	50	48	47	42				
2	88	79	72	67	81	73	67	62	62	58	54	52	49	46	43	40	38	34				
3	80	69	61	55	73	64	57	51	55	49	45	46	42	38	37	34	32	28				
4	73	61	52	46	67	57	49	43	48	42	38	40	36	32	33	30	27	23				
5	66	54	45	39	61	50	42	37	43	37	32	36	31	28	30	26	23	20				
6	61	48	40	34	56	45	37	32	39	32	28	32	28	24	27	23	20	17				
7	56	44	35	29	52	41	33	28	35	29	24	29	25	21	24	21	18	15				
8	52	39	31	26	48	37	29	24	32	26	22	27	22	19	22	19	16	14				
9	49	36	28	23	45	34	27	22	29	23	19	25	20	17	21	17	14	12				
10	45	33	25	21	42	31	24	19	27	21	17	23	18	15	19	16	13	11				

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

	0°	45°	90°
0°	7419	7419	7419
5°	7455	7143	7115
10°	7408	6931	6854
15°	7306	6708	6577
20°	7177	6468	6312
25°	7050	6237	6072
30°	6870	5999	5829
35°	6689	5771	5659
40°	6498	5576	5488
45°	6317	5402	5343
50°	6123	5242	5199
55°	5916	5073	5052
60°	5666	4897	4897
65°	5405	4692	4714
70°	5117	4470	4516
75°	4741	4251	4334
80°	4149	4028	4148
85°	3591	3837	4006



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.5	1.5
10°-20°	124.9	4.3
20°-30°	189.2	6.5
30°-40°	230.5	7.9
40°-50°	247.9	8.5
50°-60°	240.8	8.2
60°-70°	210.2	7.2
70°-80°	161.8	5.5
80°-90°	109.6	3.8
90°-100°	88.1	3.0
100°-110°	103.4	3.5
110°-120°	166.4	5.7
120°-130°	235.2	8.1
130°-140°	237.2	8.1
140°-150°	214.1	7.3
150°-160°	170.9	5.8
160°-170°	110.1	3.8
170°-180°	37.9	1.3
0°-30°	357.6	12.2
0°-40°	588.1	20.1
0°-60°	1076.8	36.9
0°-90°	1558.4	53.3
90°-120°	357.9	12.2
90°-150°	1044.3	35.7
90°-180°	1363.0	46.7
0°-180°	2921.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	461	459	455	459	458	44
15°	440	441	441	446	446	124
25°	400	404	410	418	420	184
35°	344	356	368	382	388	215
45°	282	301	324	344	351	218
55°	216	241	275	298	308	193
65°	148	181	220	246	256	147
75°	82	119	162	189	199	87
85°	24	65	108	135	145	26
90°	7	49	94	121	130	5
95°	24	47	88	114	122	27
105°	91	115	75	100	110	97
115°	168	182	218	110	91	166
125°	236	241	266	286	293	210
135°	291	296	305	321	326	225
145°	336	336	341	347	349	211
155°	370	368	371	373	371	171
165°	390	389	390	391	390	110
175°	399	397	398	400	397	38
180°	398	398	398	398	398	



TEST NUMBER: P331288-940

CATALOG NUMBER: SA2XXDIP-C485D330U940-4F0-1E-UDD-D

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	462.2	461.8	461.5	461.1	460.7	460.1	459.3	458.5	457.7	456.8	457.4
5°	460.8	460.4	459.9	459.5	459.1	458.4	457.5	456.6	455.8	454.9	455.8
7.5°	456.7	456.4	456.1	455.8	455.6	455.0	454.3	453.7	453.0	452.3	453.3
10°	453.5	453.3	452.9	452.6	452.4	452.0	451.6	451.1	450.7	450.2	451.4
12.5°	448.2	448.3	448.4	448.4	448.4	448.3	448.0	447.6	447.3	447.0	448.2
15°	439.5	439.8	440.1	440.4	440.7	440.9	440.9	440.9	440.9	440.9	442.2
17.5°	428.4	429.0	429.6	430.3	430.9	431.4	431.9	432.3	432.8	433.3	434.6
20°	420.9	421.6	422.4	423.1	423.8	424.5	425.1	425.7	426.3	426.9	428.5
22.5°	412.9	413.8	414.6	415.4	416.3	417.1	418.0	418.8	419.6	420.5	422.1
25°	399.6	400.6	401.6	402.7	403.7	404.9	406.3	407.6	408.9	410.2	412.0
27.5°	383.6	385.3	387.0	388.7	390.3	392.0	393.5	395.1	396.6	398.2	400.5
30°	372.9	374.9	376.7	378.7	380.7	382.5	384.5	386.4	388.3	390.2	392.6
32.5°	361.2	363.4	365.5	367.7	369.9	372.1	374.3	376.7	378.9	381.2	383.9
35°	344.3	346.8	349.4	351.9	354.4	357.0	359.8	362.7	365.4	368.3	371.5
37.5°	325.9	328.9	331.7	334.7	337.5	340.8	344.5	348.0	351.7	355.3	359.0
40°	313.7	316.9	320.2	323.4	326.7	330.3	334.3	338.3	342.3	346.3	350.2
42.5°	301.9	305.2	308.4	311.7	315.0	318.9	323.5	328.1	332.7	337.2	341.4
45°	282.4	286.3	290.3	294.4	298.4	302.9	308.1	313.3	318.5	323.7	328.2
47.5°	263.1	267.4	271.8	276.1	280.4	285.7	291.8	297.8	303.9	310.0	314.8
50°	249.8	254.3	259.0	263.5	268.0	273.7	280.4	287.0	293.7	300.3	305.4
52.5°	236.9	241.7	246.6	251.5	256.3	262.2	269.2	276.2	283.2	290.3	295.3
55°	216.4	221.8	227.1	232.4	237.7	244.2	252.0	259.7	267.3	275.0	280.4
57.5°	196.2	202.2	208.2	214.2	220.3	227.1	235.0	242.8	250.7	258.5	264.3
60°	181.8	188.2	194.6	200.9	207.2	214.6	223.1	231.5	240.0	248.4	254.0
62.5°	169.0	175.6	182.3	188.9	195.5	203.0	211.3	219.8	228.3	236.7	242.6
65°	147.8	155.1	162.4	169.6	176.8	184.9	193.6	202.3	211.1	219.8	225.9
67.5°	128.4	136.0	143.6	151.1	158.7	166.9	175.9	184.9	193.8	202.7	208.8
70°	114.6	122.3	129.9	137.6	145.3	153.7	162.9	172.1	181.3	190.5	196.8
72.5°	101.7	109.7	117.6	125.6	133.5	142.1	151.4	160.7	170.0	179.2	185.6
75°	81.9	90.2	98.4	106.7	115.0	123.9	133.4	142.9	152.4	161.8	168.2
77.5°	62.8	71.4	80.1	88.7	97.5	106.6	116.2	125.8	135.5	145.1	151.4
80°	49.9	58.9	68.0	77.0	86.1	95.4	105.0	114.6	124.2	133.8	140.1
82.5°	39.3	48.2	57.1	66.0	74.9	84.3	94.0	103.7	113.4	123.2	129.4
85°	24.0	33.2	42.4	51.5	60.6	70.0	79.5	88.9	98.4	107.9	114.1
87.5°	13.1	22.1	31.0	40.0	49.0	58.2	67.8	77.4	86.9	96.5	102.6
90°	7.0	16.2	25.5	34.8	44.1	53.8	63.8	73.7	83.7	93.6	99.9
92.5°	11.9	19.9	27.8	35.8	43.7	52.3	61.7	71.1	80.4	89.8	95.8
95°	24.1	28.9	33.7	38.6	43.4	50.6	59.8	69.2	78.5	87.8	93.8
97.5°	41.8	42.1	42.3	42.5	42.8	47.6	57.2	66.8	76.3	85.9	91.7
100°	55.7	52.4	49.1	45.7	42.4	45.6	54.9	64.3	73.7	83.0	89.0
102.5°	70.4	73.6	76.7	79.8	82.9	84.0	82.9	81.9	80.8	79.7	85.8
105°	91.0	97.2	103.4	109.6	115.8	114.0	104.2	94.4	84.6	74.9	80.7
107.5°	115.2	120.2	125.2	130.2	135.2	130.9	117.3	103.6	90.1	76.4	80.7
110°	130.4	134.7	139.0	143.3	147.6	144.1	132.9	121.6	110.3	99.1	97.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	145.2	148.8	152.5	156.2	159.9	162.8	165.1	167.5	169.9	172.2	153.6
115°	168.4	171.1	173.9	176.6	179.3	184.8	193.1	201.3	209.6	217.8	192.6
117.5°	188.6	190.9	193.1	195.5	197.7	202.5	209.7	217.0	224.3	231.5	228.7
120°	203.8	205.4	207.0	208.5	210.0	214.4	221.4	228.5	235.6	242.6	247.5
122.5°	216.8	218.0	219.3	220.5	221.8	225.8	232.6	239.4	246.2	253.1	257.5
125°	235.8	236.6	237.4	238.3	239.1	242.5	248.4	254.4	260.3	266.3	270.7
127.5°	253.5	254.3	255.1	255.8	256.6	259.4	264.1	268.9	273.6	278.3	282.7
130°	264.8	265.7	266.6	267.5	268.4	270.7	274.6	278.3	282.1	286.0	290.3
132.5°	276.3	277.1	277.9	278.6	279.3	281.2	284.3	287.4	290.5	293.6	297.7
135°	290.7	291.8	292.7	293.8	294.8	296.3	298.4	300.5	302.6	304.6	308.4
137.5°	305.9	306.6	307.3	307.9	308.6	309.6	310.9	312.3	313.5	314.9	318.2
140°	315.8	316.2	316.6	316.9	317.3	317.9	319.0	319.9	320.9	321.9	324.9
142.5°	324.1	324.4	324.8	325.0	325.4	325.9	326.8	327.7	328.5	329.4	331.8
145°	336.4	336.4	336.4	336.3	336.2	336.7	337.8	338.9	340.0	341.1	342.4
147.5°	347.9	347.6	347.3	347.1	346.9	347.2	348.3	349.5	350.5	351.6	352.0
150°	355.2	354.7	354.3	353.8	353.4	353.7	354.7	355.8	356.8	357.8	358.2
152.5°	361.4	361.0	360.4	359.9	359.4	359.6	360.6	361.6	362.6	363.6	363.9
155°	370.5	369.9	369.3	368.7	368.2	368.3	369.1	369.8	370.6	371.3	371.8
157.5°	377.6	377.1	376.6	376.1	375.6	375.7	376.2	376.7	377.3	377.8	378.3
160°	381.7	381.4	380.9	380.6	380.2	380.2	380.6	380.9	381.4	381.7	382.1
162.5°	385.4	385.0	384.7	384.2	383.9	383.9	384.1	384.5	384.9	385.2	385.7
165°	390.4	390.0	389.6	389.2	388.9	388.8	389.0	389.1	389.3	389.5	389.9
167.5°	394.0	393.7	393.3	392.9	392.5	392.4	392.6	392.8	393.0	393.2	393.6
170°	396.2	395.7	395.4	395.0	394.6	394.5	394.6	394.8	394.8	395.0	395.5
172.5°	397.5	397.2	396.7	396.4	396.0	395.8	396.0	396.1	396.3	396.4	396.8
175°	399.3	398.9	398.4	398.0	397.5	397.3	397.5	397.6	397.8	397.9	398.3
177.5°	399.6	399.2	398.9	398.5	398.1	398.1	398.1	398.1	398.1	398.2	398.6
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	459.5	459.5	459.5	459.5	459.5	459.5	459.5	459.5
2.5°	458.1	458.6	459.2	459.4	459.1	459.0	458.7	458.4
5°	456.6	457.5	458.4	458.8	458.6	458.5	458.3	458.2
7.5°	454.4	455.5	456.6	457.0	456.9	456.7	456.6	456.5
10°	452.5	453.7	455.0	455.5	455.3	455.1	455.0	454.9
12.5°	449.3	450.6	451.7	452.3	452.1	451.9	451.8	451.7
15°	443.5	444.9	446.2	446.7	446.7	446.5	446.3	446.2
17.5°	436.0	437.5	438.8	439.5	439.5	439.5	439.5	439.5
20°	430.2	431.8	433.4	434.2	434.2	434.2	434.2	434.2
22.5°	423.7	425.3	427.0	427.9	428.2	428.4	428.6	428.9
25°	413.8	415.5	417.3	418.5	418.9	419.4	419.8	420.3
27.5°	402.8	405.0	407.2	408.5	408.8	409.2	409.5	409.8
30°	395.0	397.3	399.8	401.1	401.5	402.0	402.4	402.9
32.5°	386.6	389.3	392.1	393.9	394.7	395.5	396.3	397.1
35°	374.8	378.1	381.3	383.4	384.5	385.5	386.6	387.6
37.5°	362.6	366.2	369.8	372.1	373.3	374.3	375.4	376.6
40°	354.0	357.8	361.7	364.3	365.6	366.9	368.3	369.6
42.5°	345.6	349.8	354.0	356.9	358.1	359.4	360.8	362.1
45°	332.9	337.4	342.0	345.0	346.5	348.0	349.5	351.0
47.5°	319.5	324.3	329.1	332.3	333.9	335.6	337.2	338.9
50°	310.4	315.4	320.5	323.8	325.5	327.1	328.7	330.3
52.5°	300.5	305.7	310.9	314.2	316.0	317.8	319.5	321.3
55°	285.7	291.1	296.3	300.0	301.9	303.8	305.8	307.6
57.5°	270.0	275.7	281.5	285.3	287.3	289.3	291.2	293.2
60°	259.7	265.3	270.9	274.7	276.8	278.9	281.0	283.0
62.5°	248.6	254.6	260.6	264.6	266.5	268.5	270.5	272.4
65°	231.9	238.0	244.1	248.1	249.9	251.9	253.8	255.7
67.5°	215.0	221.1	227.2	231.3	233.3	235.3	237.4	239.3
70°	203.2	209.6	215.9	220.0	221.8	223.6	225.3	227.1
72.5°	191.8	198.0	204.3	208.5	210.5	212.7	214.8	217.0
75°	174.6	180.9	187.3	191.5	193.3	195.3	197.2	199.1
77.5°	157.7	164.1	170.4	174.6	176.6	178.7	180.8	182.9
80°	146.3	152.5	158.7	162.8	165.0	167.0	169.1	171.1
82.5°	135.6	141.9	148.0	152.1	154.1	156.0	158.0	160.0
85°	120.3	126.5	132.8	136.9	138.9	141.1	143.1	145.2
87.5°	108.7	114.9	120.9	124.9	126.9	128.8	130.7	132.6
90°	106.1	112.4	118.6	122.7	124.6	126.5	128.4	130.3
92.5°	101.7	107.7	113.7	117.6	119.4	121.3	123.1	125.0
95°	99.7	105.7	111.6	115.5	117.2	118.9	120.6	122.3
97.5°	97.4	103.1	108.9	112.6	114.4	116.3	118.1	119.9
100°	95.0	101.0	107.0	110.8	112.6	114.4	116.1	117.9
102.5°	91.8	97.8	103.9	107.8	109.6	111.4	113.2	115.0
105°	86.6	92.5	98.4	102.3	104.2	106.0	107.9	109.9
107.5°	85.0	89.2	93.5	96.5	98.4	100.3	102.2	104.1
110°	95.8	94.1	92.4	92.5	94.3	96.2	98.2	100.0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	134.9	116.3	97.6	89.2	91.0	92.8	94.7	96.6
115°	167.4	142.1	117.0	102.8	99.9	96.8	93.9	90.9
117.5°	226.0	223.1	220.3	212.1	198.5	184.9	171.2	157.6
120°	252.4	257.3	262.3	261.3	254.2	247.2	240.1	233.2
122.5°	262.0	266.5	271.0	273.1	272.8	272.5	272.2	272.0
125°	275.2	279.6	284.0	287.0	288.6	290.1	291.6	293.1
127.5°	287.0	291.3	295.6	298.5	299.8	301.1	302.5	303.8
130°	294.4	298.7	303.0	305.7	306.7	307.9	309.1	310.1
132.5°	301.7	305.7	309.8	312.3	313.4	314.6	315.7	316.8
135°	312.1	315.8	319.6	322.0	323.1	324.0	325.1	326.2
137.5°	321.6	324.9	328.2	330.3	331.1	331.9	332.7	333.5
140°	327.8	330.7	333.7	335.5	336.0	336.6	337.2	337.8
142.5°	334.2	336.7	339.1	340.5	341.0	341.4	341.9	342.3
145°	343.8	345.1	346.4	347.3	347.7	348.1	348.6	349.0
147.5°	352.5	352.9	353.4	353.7	353.7	353.8	353.9	354.0
150°	358.6	358.9	359.4	359.4	359.1	358.7	358.4	358.1
152.5°	364.4	364.7	365.1	365.1	364.6	364.3	363.8	363.4
155°	372.1	372.5	372.9	372.8	372.3	371.8	371.3	370.8
157.5°	378.7	379.2	379.5	379.5	379.0	378.5	378.0	377.6
160°	382.5	382.9	383.3	383.3	382.8	382.4	381.9	381.5
162.5°	386.0	386.5	386.9	386.9	386.3	385.8	385.2	384.7
165°	390.4	390.8	391.3	391.3	390.8	390.4	389.9	389.5
167.5°	394.0	394.5	394.9	394.8	394.3	393.7	393.2	392.5
170°	395.9	396.4	396.8	396.7	396.2	395.6	395.0	394.4
172.5°	397.3	397.7	398.1	398.1	397.5	397.0	396.4	395.8
175°	398.8	399.2	399.7	399.6	399.0	398.3	397.6	397.0
177.5°	399.0	399.3	399.7	399.6	399.1	398.7	398.2	397.8
180°	398.4	398.4	398.4	398.4	398.4	398.4	398.4	398.4

(END OF REPORT)