

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: P331932-927

Luminaire Tested: **S123DIP-S560D805U927-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331932-927
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-9,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S560D805U927-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 560 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 805 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4058.8 lumens
Efficiency: N/A
Efficacy: 105.7 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

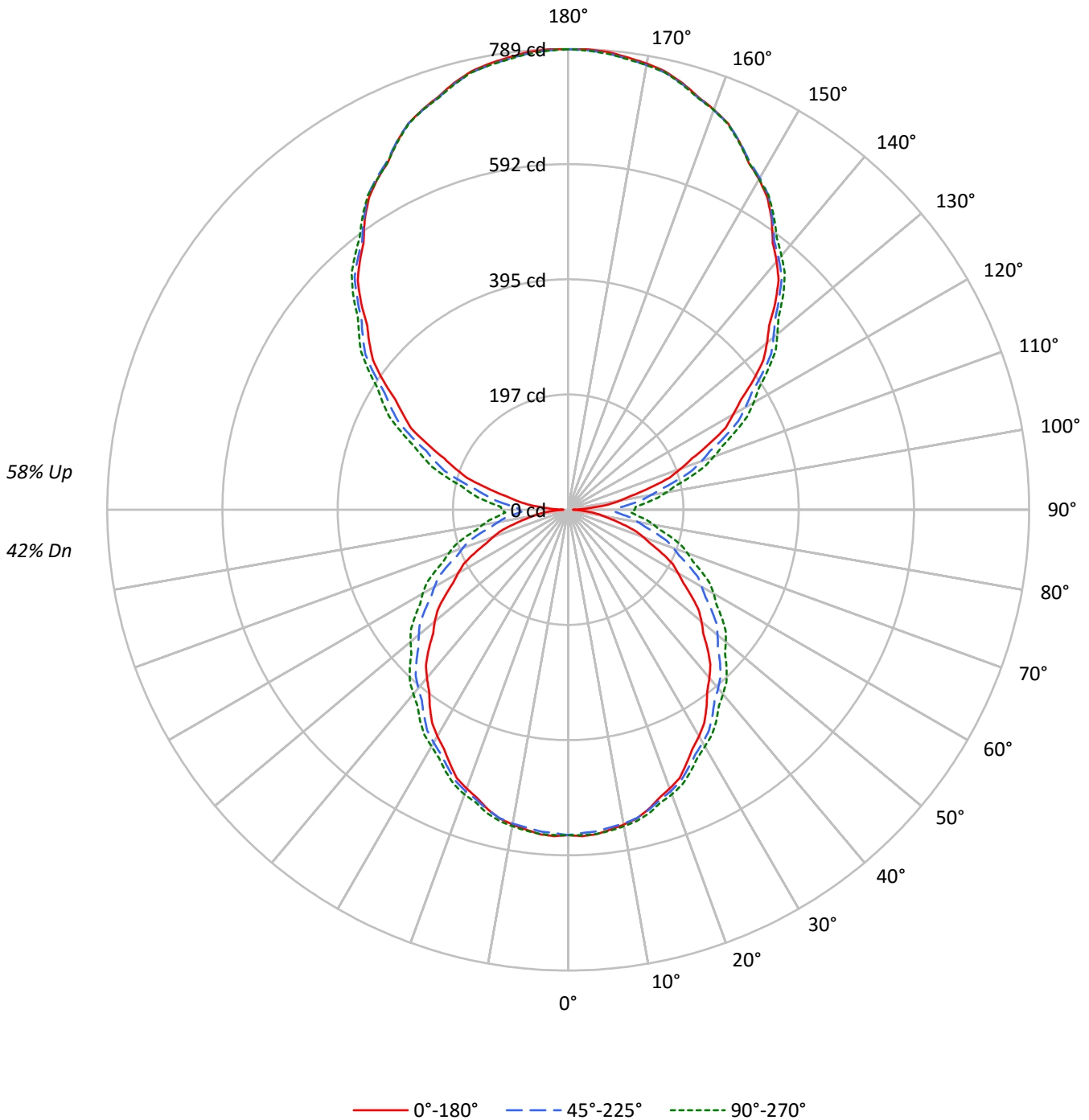
Input Watts (W): 38.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	105	105	105	96	96	96	96	79	79	79	63	63	63	49	49	49	42
1	95	90	86	83	87	83	79	76	68	65	63	54	53	51	42	41	40	34
2	86	78	72	67	78	72	66	61	59	55	51	47	44	42	36	34	33	28
3	78	69	61	55	71	63	56	51	52	47	43	41	38	35	32	29	27	23
4	72	61	52	46	65	55	48	43	46	40	36	37	33	30	28	26	23	19
5	66	54	46	39	60	49	42	37	41	35	31	33	29	26	25	23	20	17
6	60	48	40	34	55	44	37	32	37	31	27	30	25	22	23	20	18	15
7	56	43	35	30	51	40	33	28	33	28	24	27	23	20	21	18	16	13
8	52	39	31	26	47	36	29	24	30	25	21	25	20	17	19	16	14	11
9	48	36	28	23	44	33	26	22	28	22	19	22	18	16	18	15	13	10
10	45	33	25	21	41	30	24	19	25	20	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5997	5997	5997
5°	6015	5845	5849
10°	5961	5711	5682
15°	5884	5558	5501
20°	5774	5383	5300
25°	5639	5182	5090
30°	5500	5002	4877
35°	5344	4810	4707
40°	5195	4636	4524
45°	5031	4469	4378
50°	4868	4304	4219
55°	4689	4134	4074
60°	4513	3964	3925
65°	4335	3780	3750
70°	4066	3576	3568
75°	3724	3338	3386
80°	3326	3109	3176
85°	2963	2948	3053



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.8	1.3
10°-20°	150.5	3.7
20°-30°	225.2	5.5
30°-40°	268.9	6.6
40°-50°	281.3	6.9
50°-60°	264.0	6.5
60°-70°	220.5	5.4
70°-80°	157.8	3.9
80°-90°	96.4	2.4
90°-100°	110.4	2.7
100°-110°	197.1	4.9
110°-120°	290.4	7.2
120°-130°	360.5	8.9
130°-140°	394.0	9.7
140°-150°	381.6	9.4
150°-160°	319.9	7.9
160°-170°	212.9	5.2
170°-180°	74.6	1.8
0°-30°	428.5	10.6
0°-40°	697.4	17.2
0°-60°	1242.7	30.6
0°-90°	1717.4	42.3
90°-120°	598.0	14.7
90°-150°	1734.0	42.7
90°-180°	2341.0	57.7
0°-180°	4058.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	557	557	557	557	557	
5°	558	556	553	557	557	53
15°	531	533	532	538	538	149
25°	479	485	487	495	495	221
35°	413	422	430	439	442	258
45°	337	352	367	378	384	260
55°	257	277	299	315	320	230
65°	178	202	228	246	252	176
75°	96	125	155	175	183	103
85°	30	60	92	112	119	31
90°	8	45	83	106	114	8
95°	43	72	106	126	133	46
105°	144	161	192	208	215	154
115°	266	276	296	311	315	264
125°	387	390	405	415	417	345
135°	501	504	510	518	520	386
145°	607	608	609	613	614	379
155°	694	694	695	697	693	319
165°	756	754	754	758	754	213
175°	787	784	784	787	784	75
180°	788	788	788	788	788	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	559.5	559.2	558.9	558.5	558.2	557.6	556.7	555.9	555.0	554.1	555.0
5°	557.7	557.4	557.1	556.9	556.6	556.0	555.2	554.4	553.7	552.8	553.9
7.5°	552.2	552.2	552.3	552.4	552.5	552.1	551.3	550.5	549.7	548.9	550.2
10°	547.4	547.6	547.9	548.2	548.4	548.3	547.6	546.9	546.2	545.6	546.9
12.5°	541.5	541.9	542.3	542.6	543.0	543.0	542.6	542.1	541.6	541.1	542.4
15°	531.0	531.4	531.8	532.2	532.6	532.7	532.6	532.4	532.3	532.2	533.5
17.5°	517.6	518.4	519.3	520.1	520.9	521.3	521.2	521.1	521.1	521.0	522.2
20°	507.9	508.7	509.5	510.3	511.1	511.7	512.0	512.2	512.5	512.8	514.0
22.5°	497.7	498.5	499.3	500.2	501.0	501.5	501.9	502.3	502.7	503.0	504.6
25°	479.4	480.8	482.1	483.5	484.8	485.7	486.1	486.5	486.9	487.3	489.0
27.5°	461.0	462.5	464.1	465.6	467.1	468.3	469.1	470.0	470.9	471.7	473.2
30°	447.8	449.6	451.3	453.1	454.9	456.3	457.3	458.4	459.5	460.6	462.2
32.5°	433.2	435.2	437.2	439.2	441.2	442.8	444.3	445.6	447.0	448.5	450.2
35°	412.6	414.8	416.9	419.1	421.3	423.3	425.0	426.7	428.5	430.2	432.3
37.5°	390.8	393.2	395.6	398.1	400.5	402.8	405.0	407.1	409.2	411.5	413.8
40°	376.2	378.7	381.1	383.5	386.0	388.5	391.2	393.9	396.6	399.3	401.6
42.5°	360.2	363.2	366.1	369.1	372.1	374.9	377.8	380.6	383.4	386.2	388.7
45°	337.4	340.6	343.9	347.1	350.3	353.6	357.0	360.4	363.8	367.1	369.7
47.5°	313.5	317.2	320.8	324.5	328.1	331.9	335.8	339.6	343.5	347.4	350.2
50°	297.9	301.7	305.5	309.3	313.1	317.0	321.2	325.4	329.5	333.7	336.8
52.5°	281.5	285.4	289.5	293.4	297.4	301.7	306.3	310.9	315.5	320.2	323.4
55°	257.3	261.7	266.2	270.6	275.1	279.7	284.6	289.5	294.3	299.1	302.8
57.5°	233.8	238.4	243.0	247.6	252.3	257.3	262.6	267.9	273.2	278.5	282.2
60°	217.2	222.1	227.0	231.8	236.6	241.9	247.4	252.9	258.4	264.0	267.8
62.5°	201.7	206.7	211.7	216.6	221.6	227.0	232.8	238.7	244.5	250.4	254.1
65°	177.8	183.1	188.3	193.6	198.8	204.5	210.4	216.3	222.2	228.1	232.2
67.5°	153.5	159.1	164.7	170.2	175.9	181.6	187.7	193.8	199.8	205.8	210.2
70°	136.6	142.4	148.1	153.9	159.7	165.9	172.3	178.8	185.3	191.8	196.1
72.5°	121.0	126.8	132.6	138.4	144.2	150.4	157.1	163.8	170.5	177.2	181.6
75°	96.5	102.8	109.2	115.5	121.8	128.4	135.1	141.9	148.6	155.3	159.8
77.5°	75.1	81.5	87.9	94.3	100.7	107.3	114.1	120.9	127.7	134.5	139.2
80°	60.0	66.7	73.3	79.9	86.5	93.3	100.3	107.3	114.4	121.4	126.0
82.5°	47.0	53.7	60.4	67.1	73.8	80.7	87.9	95.0	102.1	109.2	113.8
85°	29.7	36.4	43.3	50.0	56.7	63.6	70.8	78.0	85.1	92.2	96.8
87.5°	16.2	23.3	30.3	37.2	44.2	51.3	58.5	65.8	73.0	80.2	85.0
90°	8.5	16.5	24.5	32.5	40.5	48.8	57.4	66.1	74.8	83.4	88.6
92.5°	22.4	29.3	36.2	43.1	50.0	57.4	65.1	72.9	80.6	88.5	93.4
95°	43.3	49.4	55.7	61.9	68.1	75.1	82.8	90.5	98.2	105.9	110.7
97.5°	70.8	76.3	81.8	87.2	92.7	99.0	106.1	113.2	120.3	127.5	132.1
100°	89.7	94.8	100.0	105.1	110.3	116.3	123.2	130.1	137.0	143.9	148.1
102.5°	111.5	115.9	120.3	124.6	129.0	134.8	141.7	148.7	155.7	162.7	166.9
105°	144.2	147.7	151.2	154.7	158.3	163.5	170.6	177.6	184.7	191.7	195.4
107.5°	181.6	184.6	187.4	190.4	193.3	197.7	203.7	209.8	215.7	221.7	225.8
110°	204.9	207.6	210.3	213.0	215.7	219.9	225.6	231.2	236.9	242.6	246.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	229.7	231.9	234.0	236.2	238.4	242.0	247.3	252.5	257.8	263.0	267.0
115°	266.3	268.3	270.3	272.4	274.4	277.7	282.3	286.8	291.4	296.0	299.4
117.5°	303.6	304.8	306.1	307.4	308.6	311.4	315.6	319.8	324.0	328.2	331.4
120°	326.4	327.9	329.4	330.8	332.3	335.0	338.7	342.5	346.3	350.1	353.0
122.5°	350.6	351.6	352.5	353.5	354.4	356.9	360.8	364.6	368.5	372.4	375.0
125°	387.1	387.5	387.9	388.3	388.7	390.7	394.3	398.0	401.6	405.3	407.6
127.5°	421.3	422.0	422.7	423.5	424.2	426.1	429.0	432.0	434.9	437.8	439.7
130°	444.0	445.0	446.0	446.9	447.9	449.6	451.8	454.1	456.4	458.7	460.7
132.5°	466.4	467.4	468.5	469.6	470.6	472.1	474.0	475.8	477.7	479.5	481.3
135°	501.1	501.8	502.4	503.1	503.8	504.9	506.2	507.6	508.8	510.2	512.1
137.5°	533.1	533.7	534.2	534.9	535.4	536.3	537.5	538.7	540.0	541.1	542.6
140°	554.9	555.6	556.3	557.0	557.7	558.3	558.9	559.4	559.9	560.5	562.4
142.5°	575.3	575.8	576.4	577.0	577.6	578.1	578.4	578.7	579.0	579.3	581.0
145°	607.0	607.1	607.2	607.4	607.5	607.8	608.2	608.6	609.0	609.4	610.4
147.5°	634.1	634.6	635.1	635.6	636.1	636.5	636.9	637.3	637.7	638.1	638.4
150°	653.4	653.7	653.9	654.3	654.5	654.8	655.1	655.4	655.6	655.9	655.9
152.5°	669.3	669.6	670.0	670.4	670.8	671.1	671.3	671.5	671.6	671.8	672.0
155°	694.3	694.3	694.3	694.3	694.3	694.3	694.5	694.7	694.8	694.9	695.5
157.5°	715.6	715.4	715.3	715.1	714.9	714.9	715.0	715.2	715.3	715.3	716.0
160°	729.0	728.7	728.4	728.2	727.9	727.8	727.8	727.8	727.8	727.8	728.4
162.5°	740.8	740.5	740.1	739.7	739.3	739.2	739.3	739.4	739.5	739.7	740.3
165°	756.2	755.8	755.4	755.0	754.6	754.4	754.4	754.4	754.4	754.4	755.2
167.5°	768.5	767.9	767.4	766.8	766.3	766.1	766.2	766.3	766.4	766.5	767.4
170°	775.5	774.9	774.4	773.8	773.2	772.9	772.9	772.9	772.9	772.9	774.0
172.5°	780.9	780.4	779.8	779.3	778.7	778.4	778.4	778.4	778.4	778.4	779.3
175°	786.6	786.0	785.5	785.0	784.4	784.1	784.1	784.1	784.1	784.1	785.0
177.5°	788.9	788.5	788.1	787.6	787.2	787.0	787.0	787.0	787.0	787.0	787.6
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	557.1	557.1	557.1	557.1	557.1	557.1	557.1	557.1
2.5°	555.9	556.7	557.6	558.0	557.9	557.8	557.7	557.5
5°	555.0	556.0	557.1	557.6	557.5	557.3	557.2	557.1
7.5°	551.6	552.9	554.4	554.9	554.8	554.6	554.4	554.3
10°	548.3	549.6	551.0	551.4	551.2	551.0	550.6	550.4
12.5°	543.7	544.9	546.1	546.6	546.4	546.1	545.8	545.6
15°	534.9	536.2	537.6	538.2	538.1	537.9	537.8	537.7
17.5°	523.5	524.7	525.9	526.4	526.2	526.0	525.9	525.6
20°	515.2	516.4	517.6	518.3	518.4	518.6	518.7	518.8
22.5°	506.1	507.7	509.2	509.9	509.8	509.8	509.7	509.6
25°	490.8	492.6	494.3	495.2	495.2	495.2	495.2	495.2
27.5°	474.8	476.3	477.8	478.6	478.7	478.8	479.0	479.0
30°	463.8	465.4	467.1	467.9	467.9	467.9	467.9	467.9
32.5°	451.9	453.6	455.3	456.4	456.7	457.0	457.3	457.6
35°	434.3	436.3	438.3	439.6	440.1	440.7	441.2	441.8
37.5°	416.0	418.3	420.6	422.0	422.4	422.8	423.3	423.7
40°	403.9	406.2	408.4	409.9	410.4	411.0	411.5	412.0
42.5°	391.2	393.7	396.2	397.8	398.6	399.3	400.1	400.8
45°	372.2	374.8	377.4	379.2	380.2	381.4	382.5	383.5
47.5°	353.2	356.0	358.9	360.8	361.6	362.4	363.3	364.1
50°	339.9	343.1	346.2	348.2	349.1	350.1	351.0	352.0
52.5°	326.6	329.8	333.0	335.2	336.4	337.5	338.7	339.8
55°	306.4	310.1	313.7	316.1	317.2	318.2	319.3	320.4
57.5°	285.9	289.5	293.2	295.6	296.9	298.2	299.4	300.7
60°	271.6	275.3	279.1	281.7	283.2	284.6	286.1	287.6
62.5°	257.9	261.7	265.5	268.1	269.4	270.8	272.2	273.5
65°	236.2	240.3	244.4	247.1	248.4	249.8	251.1	252.5
67.5°	214.7	219.1	223.6	226.3	227.4	228.5	229.7	230.8
70°	200.4	204.7	209.1	211.8	213.2	214.5	215.9	217.2
72.5°	186.0	190.4	194.9	197.8	199.2	200.5	201.8	203.2
75°	164.2	168.7	173.2	176.2	177.8	179.4	181.0	182.7
77.5°	143.9	148.5	153.2	156.2	157.5	158.7	159.9	161.2
80°	130.6	135.1	139.7	142.7	144.0	145.4	146.7	148.1
82.5°	118.4	122.9	127.5	130.6	131.9	133.2	134.6	135.9
85°	101.4	106.0	110.6	113.5	114.9	116.2	117.6	118.9
87.5°	89.7	94.3	99.1	102.1	103.5	104.9	106.3	107.7
90°	93.7	98.9	104.0	107.3	109.0	110.6	112.3	113.8
92.5°	98.3	103.2	108.1	111.1	112.3	113.3	114.4	115.4
95°	115.3	120.1	124.8	127.9	129.2	130.6	131.9	133.2
97.5°	136.7	141.4	146.0	149.0	150.3	151.6	152.9	154.2
100°	152.5	156.8	161.1	164.1	165.7	167.4	169.0	170.6
102.5°	171.2	175.4	179.6	182.4	183.6	184.9	186.2	187.5
105°	199.2	203.0	206.8	209.5	210.9	212.4	213.9	215.4
107.5°	229.9	233.9	238.0	240.5	241.5	242.6	243.6	244.6
110°	250.7	254.8	258.8	261.3	262.1	262.8	263.6	264.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	271.1	275.1	279.2	281.8	283.0	284.1	285.2	286.4
115°	302.8	306.1	309.5	311.6	312.6	313.5	314.5	315.4
117.5°	334.5	337.7	340.9	342.9	343.5	344.2	344.8	345.5
120°	355.9	358.9	361.9	363.7	364.4	365.0	365.7	366.4
122.5°	377.6	380.2	382.9	384.5	385.1	385.6	386.2	386.7
125°	409.9	412.1	414.4	415.7	416.1	416.5	416.9	417.3
127.5°	441.6	443.5	445.4	446.5	446.8	447.0	447.3	447.7
130°	462.7	464.7	466.8	467.6	467.5	467.3	467.1	467.0
132.5°	483.2	484.9	486.7	487.7	487.8	488.1	488.2	488.4
135°	514.0	515.9	517.7	518.9	519.3	519.7	520.1	520.5
137.5°	544.2	545.7	547.3	548.2	548.3	548.5	548.6	548.7
140°	564.3	566.1	568.0	568.8	568.5	568.2	567.9	567.7
142.5°	582.7	584.3	586.1	586.8	586.8	586.7	586.6	586.5
145°	611.3	612.3	613.2	613.7	613.7	613.6	613.6	613.6
147.5°	638.7	639.1	639.4	639.4	639.0	638.7	638.3	638.0
150°	655.9	655.9	655.9	655.6	655.1	654.5	653.9	653.4
152.5°	672.2	672.4	672.6	672.4	671.8	671.1	670.4	669.8
155°	696.0	696.6	697.1	696.9	695.9	695.0	694.0	693.1
157.5°	716.5	717.1	717.6	717.6	716.8	716.1	715.3	714.5
160°	729.1	729.8	730.5	730.6	730.0	729.4	728.9	728.3
162.5°	741.0	741.7	742.4	742.3	741.4	740.5	739.7	738.8
165°	756.1	756.9	757.7	757.6	756.7	755.7	754.7	753.8
167.5°	768.3	769.1	769.9	769.9	769.1	768.3	767.4	766.5
170°	774.9	775.9	776.8	776.8	775.9	774.9	774.0	772.9
172.5°	780.1	781.0	781.8	781.8	780.8	779.8	778.9	777.9
175°	785.8	786.6	787.4	787.3	786.4	785.4	784.4	783.5
177.5°	788.3	788.9	789.6	789.6	788.8	788.0	787.3	786.5
180°	788.5	788.5	788.5	788.5	788.5	788.5	788.5	788.5

(END OF REPORT)