

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: P331959-940

Luminaire Tested: **S123DIP-S775D365U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331959-940
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-S775D365U940-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3993.0 lumens
Efficiency: N/A
Efficacy: 114.1 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: Semi-Direct

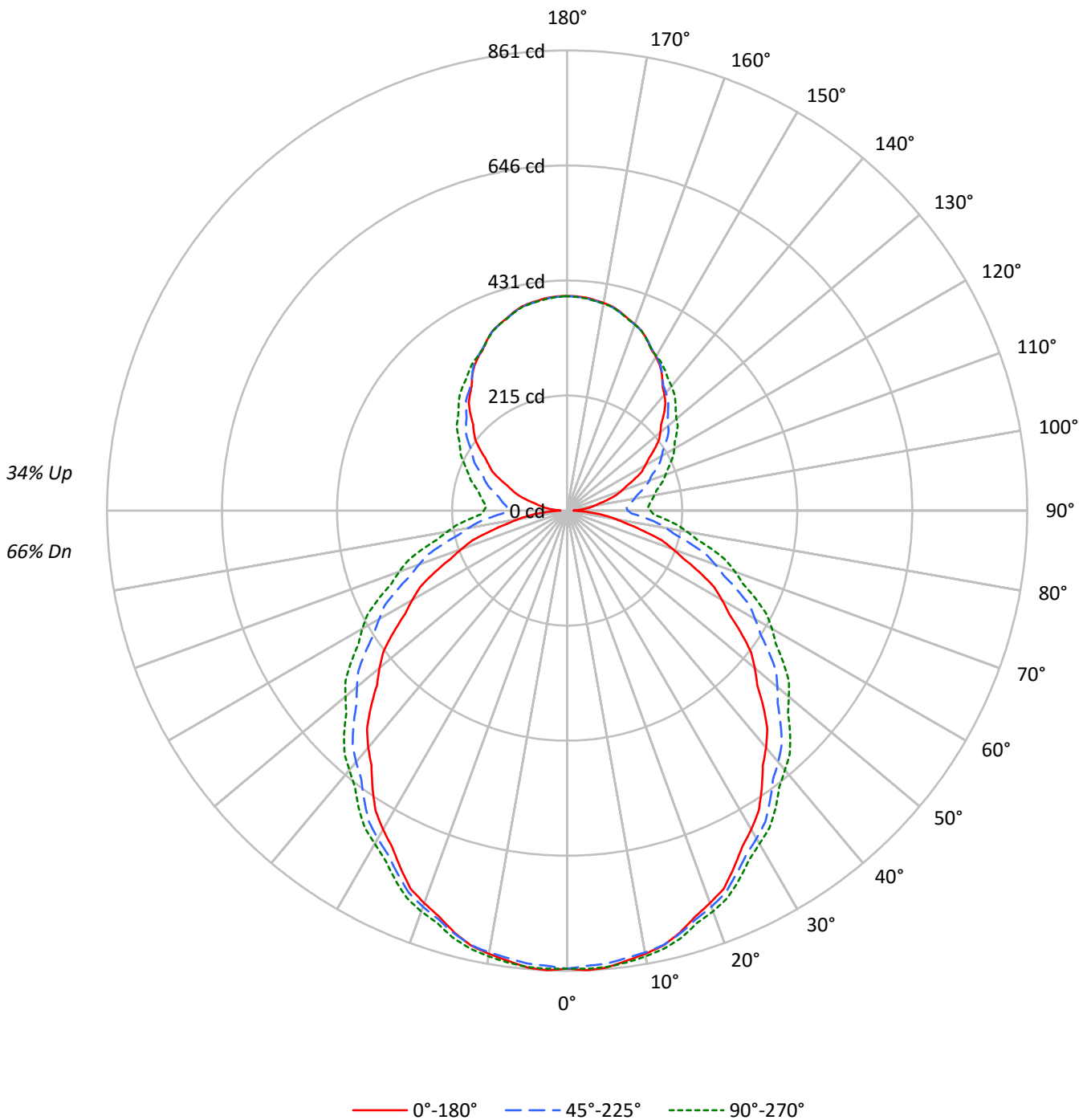
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20										
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	50	30	10	0														
RCR																																						
0	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66																				
1	100	95	90	86	94	89	85	82	79	76	73	69	67	65	61	59	57	53																				
2	91	82	75	69	85	77	71	66	68	64	59	60	56	53	52	50	47	43																				
3	82	72	64	57	77	68	60	55	60	54	49	53	48	44	46	43	39	36																				
4	75	63	55	48	70	60	52	46	53	47	42	47	42	38	41	37	34	30																				
5	69	56	48	41	64	53	45	39	47	41	36	42	37	32	37	33	29	26																				
6	63	51	42	36	59	48	40	34	43	36	31	38	32	28	33	29	26	23																				
7	59	46	37	31	55	43	35	30	39	32	27	34	29	25	30	26	23	20																				
8	55	41	33	28	51	39	32	27	35	29	24	31	26	22	28	23	20	18																				
9	51	38	30	25	48	36	29	24	32	26	22	29	24	20	26	21	18	16																				
10	47	35	27	22	45	33	26	21	30	24	20	27	22	18	24	20	17	15																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9226	9226	9226
5°	9255	8994	8999
10°	9172	8787	8743
15°	9054	8552	8462
20°	8884	8283	8155
25°	8676	7974	7832
30°	8462	7695	7504
35°	8223	7401	7242
40°	7995	7134	6961
45°	7742	6877	6737
50°	7490	6622	6490
55°	7215	6363	6268
60°	6946	6099	6041
65°	6670	5818	5769
70°	6254	5502	5492
75°	5730	5140	5210
80°	5128	4782	4885
85°	4559	4540	4699



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	2.0
10°-20°	231.6	5.8
20°-30°	346.4	8.7
30°-40°	413.7	10.4
40°-50°	432.9	10.8
50°-60°	406.2	10.2
60°-70°	339.3	8.5
70°-80°	242.7	6.1
80°-90°	145.9	3.7
90°-100°	117.0	2.9
100°-110°	145.0	3.6
110°-120°	177.6	4.4
120°-130°	200.5	5.0
130°-140°	208.1	5.2
140°-150°	195.8	4.9
150°-160°	162.8	4.1
160°-170°	108.3	2.7
170°-180°	37.9	1.0
0°-30°	659.3	16.5
0°-40°	1073.0	26.9
0°-60°	1912.1	47.9
0°-90°	2640.0	66.1
90°-120°	439.5	11.0
90°-150°	1043.9	26.1
90°-180°	1353.0	33.9
0°-180°	3993.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	857	857	857	857	857	
5°	858	856	851	858	857	81
15°	817	820	819	828	827	230
25°	738	747	750	761	762	340
35°	635	650	662	675	680	397
45°	519	542	565	582	590	400
55°	396	427	460	484	493	354
65°	274	310	351	378	388	270
75°	148	192	239	269	281	159
85°	46	93	142	172	183	48
90°	12	62	113	145	156	9
95°	29	68	116	145	155	29
105°	78	103	144	170	180	84
115°	139	152	184	206	214	137
125°	199	201	226	244	250	178
135°	256	258	267	282	287	197
145°	309	309	310	317	320	193
155°	353	353	354	355	353	163
165°	385	384	384	386	384	108
175°	400	399	399	401	399	38
180°	401	401	401	401	401	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	860.9	860.3	859.9	859.3	858.9	857.9	856.7	855.3	854.0	852.7	854.0
5°	858.1	857.6	857.2	856.8	856.4	855.6	854.3	853.1	851.9	850.6	852.3
7.5°	849.6	849.7	849.8	849.9	850.0	849.4	848.2	847.0	845.8	844.6	846.7
10°	842.2	842.6	843.0	843.5	843.8	843.6	842.5	841.5	840.4	839.4	841.5
12.5°	833.2	833.8	834.4	835.0	835.5	835.5	834.8	834.1	833.4	832.7	834.6
15°	817.0	817.6	818.2	818.9	819.5	819.7	819.5	819.3	819.0	818.9	820.9
17.5°	796.5	797.7	799.0	800.1	801.4	802.0	801.9	801.8	801.7	801.6	803.5
20°	781.5	782.7	784.0	785.2	786.5	787.3	787.7	788.2	788.5	789.0	790.9
22.5°	765.8	767.0	768.3	769.5	770.8	771.7	772.3	772.8	773.5	774.0	776.4
25°	737.6	739.7	741.7	743.9	745.9	747.3	747.9	748.5	749.1	749.8	752.4
27.5°	709.3	711.6	714.0	716.3	718.7	720.5	721.8	723.2	724.5	725.9	728.2
30°	689.0	691.8	694.5	697.1	699.8	702.0	703.6	705.3	707.0	708.6	711.1
32.5°	666.6	669.7	672.7	675.7	678.8	681.4	683.5	685.7	687.9	690.0	692.7
35°	634.9	638.2	641.6	644.9	648.2	651.2	653.9	656.6	659.3	662.0	665.1
37.5°	601.3	605.0	608.8	612.5	616.3	619.7	623.1	626.4	629.7	633.0	636.6
40°	578.9	582.6	586.4	590.1	593.8	597.8	601.9	606.1	610.2	614.4	617.9
42.5°	554.2	558.8	563.4	567.9	572.5	576.9	581.2	585.6	589.9	594.2	598.1
45°	519.2	524.1	529.1	534.0	539.0	544.1	549.3	554.5	559.7	564.9	568.8
47.5°	482.3	488.0	493.7	499.3	504.9	510.7	516.7	522.5	528.5	534.4	538.9
50°	458.4	464.2	470.0	475.9	481.7	487.8	494.3	500.7	507.1	513.5	518.3
52.5°	433.0	439.2	445.3	451.5	457.6	464.2	471.4	478.4	485.5	492.6	497.6
55°	395.9	402.7	409.6	416.4	423.3	430.4	437.9	445.4	452.8	460.3	465.9
57.5°	359.6	366.8	373.9	381.0	388.3	395.8	404.0	412.2	420.4	428.6	434.2
60°	334.3	341.7	349.2	356.7	364.2	372.1	380.7	389.1	397.6	406.2	412.0
62.5°	310.3	318.0	325.7	333.2	340.9	349.2	358.2	367.2	376.2	385.2	391.0
65°	273.6	281.7	289.7	297.8	305.9	314.5	323.7	332.8	342.0	351.1	357.3
67.5°	236.2	244.8	253.4	262.0	270.5	279.6	288.8	298.1	307.4	316.7	323.5
70°	210.1	219.0	227.9	236.8	245.8	255.2	265.2	275.1	285.1	295.1	301.7
72.5°	186.2	195.1	204.0	212.9	221.9	231.5	241.7	252.1	262.3	272.6	279.5
75°	148.5	158.2	168.0	177.7	187.4	197.5	207.9	218.3	228.6	239.1	245.8
77.5°	115.6	125.5	135.3	145.1	154.9	165.1	175.6	186.0	196.4	206.9	214.1
80°	92.5	102.6	112.8	123.0	133.1	143.6	154.4	165.1	175.9	186.7	193.8
82.5°	72.2	82.6	92.9	103.3	113.6	124.2	135.2	146.2	157.1	168.1	175.1
85°	45.7	56.1	66.5	76.9	87.2	97.9	109.0	119.9	130.9	142.0	149.0
87.5°	24.9	35.4	45.8	56.4	66.8	77.4	88.2	99.0	109.7	120.5	127.6
90°	12.5	23.4	34.2	45.0	55.9	67.1	78.6	90.1	101.6	113.1	120.4
92.5°	19.0	28.6	38.3	48.0	57.6	67.9	78.8	89.8	100.7	111.6	118.8
95°	28.9	37.5	46.0	54.6	63.2	72.9	83.6	94.3	105.0	115.7	122.4
97.5°	42.2	49.8	57.5	65.2	72.9	81.8	91.8	102.0	112.1	122.2	128.7
100°	51.3	58.3	65.4	72.4	79.5	88.0	97.9	107.8	117.6	127.5	133.8
102.5°	61.9	68.1	74.3	80.5	86.8	94.8	104.7	114.5	124.3	134.2	140.3
105°	78.4	83.5	88.6	93.7	98.9	106.2	115.7	125.3	134.8	144.4	150.2
107.5°	96.7	100.9	105.3	109.6	114.0	120.5	129.2	137.9	146.6	155.3	161.1
110°	108.0	111.9	115.7	119.7	123.5	129.7	138.1	146.5	155.0	163.5	169.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	120.6	123.8	126.9	130.1	133.2	138.8	146.8	154.8	162.8	170.8	176.4
115°	138.6	141.3	144.0	146.7	149.4	154.4	161.8	169.1	176.4	183.7	188.8
117.5°	157.5	159.1	160.8	162.5	164.2	168.4	175.2	182.1	188.9	195.7	200.6
120°	168.5	170.0	171.5	172.9	174.4	178.3	184.9	191.4	197.9	204.4	209.0
122.5°	180.9	181.7	182.6	183.4	184.3	187.9	194.2	200.5	206.9	213.2	217.7
125°	198.9	199.0	199.2	199.5	199.7	202.7	208.6	214.5	220.3	226.2	230.2
127.5°	216.2	216.4	216.7	217.0	217.1	219.7	224.5	229.3	234.2	239.0	242.7
130°	227.8	228.2	228.5	228.8	229.2	231.4	235.3	239.2	243.2	247.1	250.7
132.5°	238.6	239.2	239.7	240.2	240.8	242.5	245.8	248.9	252.1	255.2	258.7
135°	256.2	256.4	256.6	256.8	257.0	258.2	260.5	262.7	264.8	267.1	270.5
137.5°	272.3	272.6	272.8	273.0	273.1	273.9	275.4	276.9	278.3	279.8	282.8
140°	282.9	283.3	283.7	284.0	284.4	284.9	285.6	286.2	287.0	287.7	290.7
142.5°	293.3	293.5	293.6	293.8	294.0	294.3	294.5	294.8	295.0	295.2	298.0
145°	309.4	309.3	309.3	309.2	309.2	309.2	309.4	309.7	309.9	310.0	311.7
147.5°	322.6	322.9	323.2	323.4	323.6	323.9	324.0	324.2	324.4	324.7	325.1
150°	332.4	332.6	332.7	332.9	333.1	333.1	333.3	333.4	333.6	333.7	333.7
152.5°	340.5	340.7	340.9	341.1	341.3	341.4	341.5	341.6	341.7	341.8	341.9
155°	353.3	353.3	353.3	353.3	353.3	353.3	353.4	353.4	353.5	353.6	353.8
157.5°	364.1	364.0	363.9	363.8	363.7	363.7	363.8	363.8	363.9	364.0	364.3
160°	370.9	370.8	370.6	370.5	370.3	370.2	370.2	370.2	370.2	370.2	370.6
162.5°	376.9	376.7	376.6	376.4	376.1	376.1	376.1	376.2	376.3	376.3	376.7
165°	384.8	384.6	384.3	384.1	383.9	383.8	383.8	383.8	383.8	383.8	384.2
167.5°	391.0	390.7	390.5	390.1	389.9	389.8	389.9	389.9	389.9	390.0	390.4
170°	394.5	394.2	394.0	393.7	393.4	393.2	393.2	393.2	393.2	393.2	393.8
172.5°	397.3	397.0	396.7	396.5	396.2	396.0	396.0	396.0	396.0	396.0	396.5
175°	400.2	399.9	399.7	399.4	399.1	399.0	399.0	399.0	399.0	399.0	399.4
177.5°	401.4	401.2	400.9	400.7	400.5	400.4	400.4	400.4	400.4	400.4	400.7
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	857.1	857.1	857.1	857.1	857.1	857.1	857.1	857.1
2.5°	855.3	856.7	857.9	858.5	858.4	858.2	858.0	857.9
5°	853.9	855.6	857.2	857.9	857.7	857.6	857.4	857.1
7.5°	848.7	850.9	852.9	853.8	853.5	853.4	853.1	852.8
10°	843.6	845.6	847.7	848.6	848.1	847.7	847.3	846.9
12.5°	836.5	838.4	840.3	841.1	840.6	840.3	839.8	839.4
15°	823.0	825.1	827.2	828.0	827.9	827.7	827.4	827.2
17.5°	805.4	807.3	809.1	809.9	809.7	809.3	809.0	808.8
20°	792.7	794.6	796.5	797.5	797.7	797.9	798.1	798.3
22.5°	778.7	781.1	783.5	784.6	784.5	784.3	784.3	784.1
25°	755.2	757.9	760.5	761.9	761.9	761.9	761.9	761.9
27.5°	730.5	732.8	735.1	736.4	736.6	736.7	736.9	737.1
30°	713.6	716.1	718.6	719.9	719.9	719.9	719.9	719.9
32.5°	695.3	697.9	700.6	702.2	702.7	703.2	703.6	704.2
35°	668.2	671.4	674.4	676.5	677.3	678.1	678.9	679.8
37.5°	640.1	643.6	647.1	649.3	649.9	650.6	651.2	651.9
40°	621.4	624.9	628.5	630.6	631.5	632.3	633.1	634.0
42.5°	601.9	605.7	609.7	612.2	613.3	614.5	615.6	616.8
45°	572.7	576.7	580.7	583.4	585.1	586.7	588.4	590.1
47.5°	543.3	547.8	552.2	555.1	556.3	557.7	558.9	560.2
50°	523.1	527.8	532.6	535.7	537.2	538.6	540.1	541.5
52.5°	502.5	507.5	512.4	515.8	517.5	519.3	521.1	522.9
55°	471.5	477.2	482.7	486.3	488.0	489.6	491.3	493.0
57.5°	439.9	445.5	451.1	455.0	456.9	458.9	460.7	462.7
60°	417.8	423.6	429.4	433.5	435.7	438.0	440.3	442.6
62.5°	396.9	402.7	408.5	412.4	414.6	416.7	418.8	420.9
65°	363.6	369.7	375.9	380.1	382.2	384.2	386.4	388.4
67.5°	330.3	337.2	343.9	348.2	349.9	351.7	353.5	355.2
70°	308.4	315.0	321.6	325.9	328.1	330.1	332.2	334.3
72.5°	286.2	293.0	299.9	304.3	306.4	308.4	310.5	312.6
75°	252.7	259.6	266.4	271.1	273.6	276.1	278.6	281.1
77.5°	221.3	228.5	235.8	240.3	242.3	244.2	246.1	248.0
80°	200.8	207.9	215.0	219.5	221.6	223.6	225.8	227.8
82.5°	182.2	189.2	196.3	200.8	203.0	205.0	207.1	209.1
85°	156.0	163.1	170.1	174.7	176.7	178.9	180.9	183.0
87.5°	134.6	141.8	148.9	153.6	155.6	157.7	159.8	161.9
90°	127.8	135.1	142.4	147.2	149.4	151.6	153.8	156.0
92.5°	125.8	133.0	140.1	144.5	146.4	148.2	150.0	151.9
95°	129.2	135.9	142.6	147.0	149.1	151.1	153.2	155.3
97.5°	135.2	141.7	148.2	152.5	154.5	156.6	158.6	160.7
100°	140.0	146.2	152.5	156.7	158.9	161.1	163.4	165.5
102.5°	146.3	152.3	158.4	162.5	164.5	166.6	168.6	170.7
105°	156.0	161.8	167.6	171.6	173.5	175.6	177.5	179.6
107.5°	166.9	172.6	178.4	182.2	184.0	185.7	187.4	189.2
110°	174.8	180.5	186.1	189.8	191.3	192.8	194.3	195.8



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	181.9	187.5	193.1	196.7	198.5	200.4	202.2	203.9
115°	193.9	198.9	203.9	207.2	208.8	210.4	212.0	213.6
117.5°	205.5	210.5	215.4	218.6	220.0	221.4	222.8	224.3
120°	213.7	218.5	223.1	226.1	227.5	228.8	230.1	231.4
122.5°	222.0	226.5	230.9	233.7	235.0	236.3	237.6	238.8
125°	234.3	238.4	242.5	245.1	246.3	247.4	248.6	249.9
127.5°	246.5	250.1	253.9	256.3	257.3	258.4	259.6	260.6
130°	254.4	258.1	261.8	263.9	264.7	265.5	266.3	267.0
132.5°	262.1	265.6	269.0	271.3	272.2	273.3	274.3	275.4
135°	274.0	277.4	280.9	283.1	284.0	284.9	285.8	286.7
137.5°	285.8	288.7	291.8	293.6	294.4	295.2	296.0	296.7
140°	293.7	296.8	299.8	301.7	302.2	302.7	303.3	303.8
142.5°	300.7	303.4	306.1	307.8	308.4	309.1	309.8	310.4
145°	313.3	314.9	316.5	317.5	318.1	318.6	319.1	319.7
147.5°	325.7	326.1	326.6	327.1	327.3	327.7	328.1	328.3
150°	333.7	333.7	333.7	333.7	333.7	333.7	333.7	333.7
152.5°	342.0	342.1	342.2	342.1	341.9	341.6	341.3	341.0
155°	354.1	354.4	354.7	354.5	354.1	353.6	353.1	352.6
157.5°	364.5	364.9	365.2	365.1	364.7	364.4	363.9	363.6
160°	371.0	371.3	371.7	371.7	371.4	371.1	370.9	370.6
162.5°	377.0	377.4	377.7	377.6	377.2	376.7	376.3	375.9
165°	384.7	385.0	385.5	385.5	385.0	384.5	384.0	383.5
167.5°	390.8	391.3	391.7	391.7	391.3	390.8	390.4	390.0
170°	394.2	394.8	395.2	395.2	394.8	394.2	393.8	393.2
172.5°	396.9	397.3	397.8	397.8	397.3	396.8	396.3	395.8
175°	399.8	400.2	400.6	400.6	400.1	399.6	399.1	398.6
177.5°	401.1	401.4	401.7	401.7	401.4	400.9	400.6	400.1
180°	401.2	401.2	401.2	401.2	401.2	401.2	401.2	401.2

(END OF REPORT)