

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: P331959-830

Luminaire Tested: **S123DIP-S775D365U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331959-830
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-S775D365U830-4F0-1E-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: 4220.6 lumens
Efficiency: N/A
Efficacy: 120.6 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

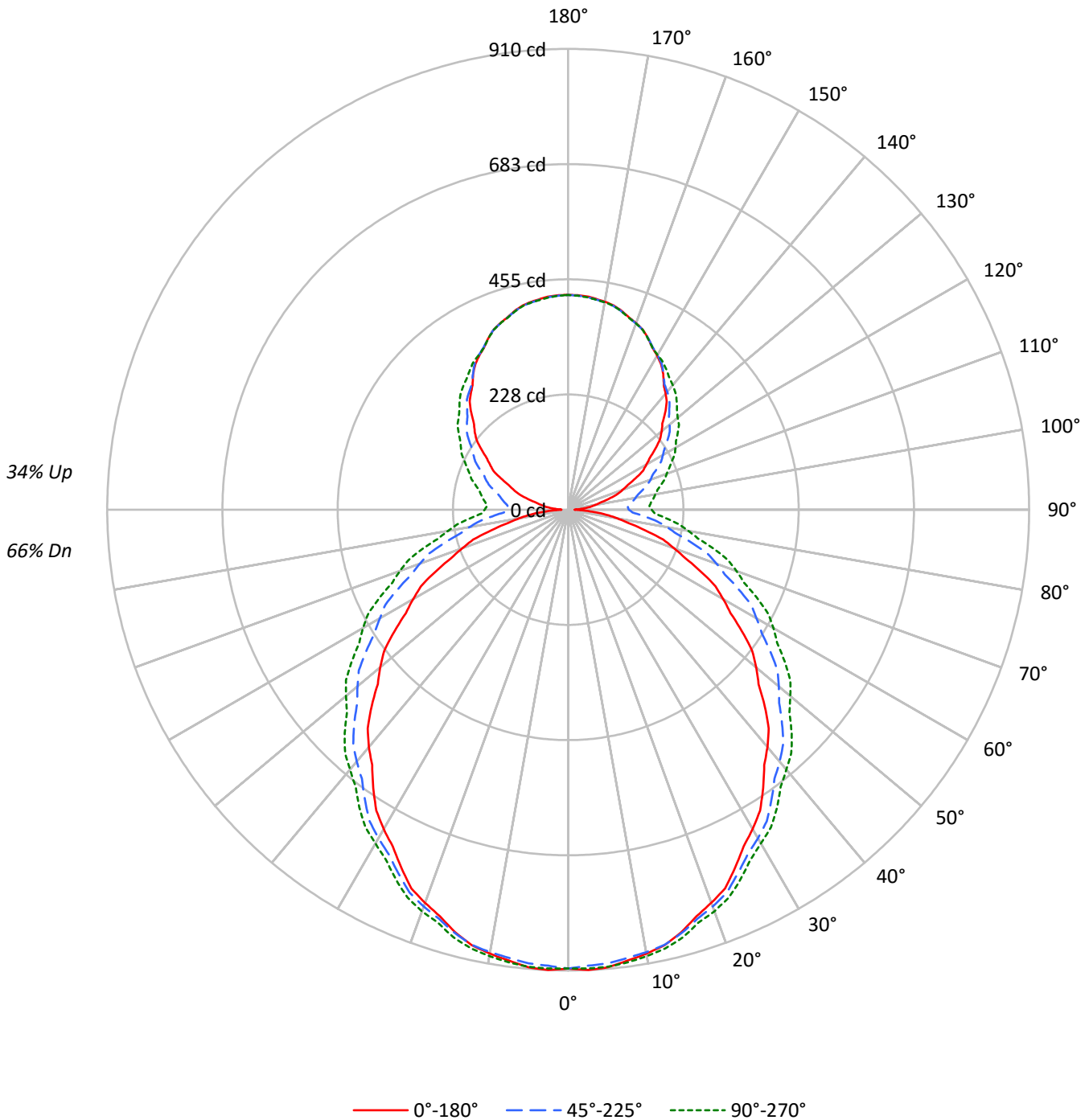
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	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°	9752	9752	9752
5°	9782	9507	9512
10°	9694	9287	9240
15°	9570	9038	8945
20°	9390	8755	8621
25°	9171	8428	8278
30°	8945	8133	7931
35°	8692	7823	7655
40°	8450	7540	7358
45°	8182	7269	7122
50°	7918	7000	6860
55°	7627	6725	6625
60°	7343	6446	6385
65°	7051	6149	6098
70°	6611	5815	5805
75°	6055	5432	5506
80°	5416	5056	5164
85°	4828	4799	4966



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.9	2.0
10°-20°	244.8	5.8
20°-30°	366.2	8.7
30°-40°	437.3	10.4
40°-50°	457.5	10.8
50°-60°	429.4	10.2
60°-70°	358.6	8.5
70°-80°	256.6	6.1
80°-90°	154.3	3.7
90°-100°	123.6	2.9
100°-110°	153.2	3.6
110°-120°	187.7	4.4
120°-130°	211.9	5.0
130°-140°	220.0	5.2
140°-150°	206.9	4.9
150°-160°	172.1	4.1
160°-170°	114.5	2.7
170°-180°	40.1	1.0
0°-30°	696.9	16.5
0°-40°	1134.2	26.9
0°-60°	2021.1	47.9
0°-90°	2790.5	66.1
90°-120°	464.6	11.0
90°-150°	1103.4	26.1
90°-180°	1430.0	33.9
0°-180°	4220.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	906	906	906	906	906	
5°	907	905	899	906	906	86
15°	864	866	866	875	874	243
25°	780	789	792	805	805	359
35°	671	687	700	714	718	420
45°	549	572	597	615	624	423
55°	418	451	486	512	521	375
65°	289	328	371	400	411	286
75°	157	203	253	284	297	168
85°	48	98	150	182	193	51
90°	13	65	120	153	165	10
95°	30	72	122	153	164	31
105°	83	108	153	179	190	88
115°	146	161	194	217	226	145
125°	210	213	239	258	264	188
135°	271	272	282	298	303	209
145°	327	327	328	335	338	204
155°	373	373	374	375	373	172
165°	407	406	406	408	405	115
175°	423	422	422	423	421	40
180°	424	424	424	424	424	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	909.9	909.4	908.9	908.3	907.9	906.8	905.5	904.1	902.7	901.3	902.7
5°	907.0	906.5	906.1	905.7	905.2	904.4	903.1	901.7	900.4	899.1	900.9
7.5°	898.1	898.1	898.2	898.3	898.4	897.9	896.5	895.3	894.0	892.8	894.9
10°	890.2	890.6	891.1	891.6	891.9	891.6	890.5	889.5	888.3	887.2	889.5
12.5°	880.7	881.4	881.9	882.6	883.2	883.2	882.4	881.7	880.9	880.1	882.1
15°	863.6	864.2	864.9	865.5	866.2	866.4	866.2	866.0	865.7	865.5	867.7
17.5°	841.9	843.2	844.5	845.7	847.1	847.7	847.6	847.5	847.4	847.3	849.3
20°	826.0	827.4	828.7	830.0	831.3	832.2	832.6	833.1	833.5	834.0	835.9
22.5°	809.5	810.8	812.1	813.4	814.7	815.7	816.3	816.9	817.6	818.1	820.7
25°	779.7	781.8	784.0	786.3	788.4	789.9	790.5	791.2	791.8	792.5	795.3
27.5°	749.7	752.1	754.7	757.1	759.7	761.6	763.0	764.4	765.8	767.2	769.7
30°	728.3	731.2	734.1	736.9	739.7	742.1	743.8	745.6	747.3	749.0	751.7
32.5°	704.6	707.8	711.1	714.3	717.5	720.2	722.5	724.8	727.1	729.3	732.2
35°	671.1	674.6	678.2	681.6	685.1	688.3	691.2	694.0	696.9	699.7	703.0
37.5°	635.6	639.5	643.5	647.4	651.4	655.1	658.6	662.1	665.6	669.1	672.9
40°	611.9	615.9	619.8	623.8	627.6	631.9	636.2	640.6	645.0	649.4	653.1
42.5°	585.8	590.7	595.5	600.3	605.1	609.8	614.3	619.0	623.5	628.1	632.2
45°	548.7	554.0	559.2	564.5	569.8	575.1	580.6	586.1	591.6	597.1	601.2
47.5°	509.8	515.9	521.8	527.7	533.7	539.8	546.1	552.3	558.6	564.9	569.6
50°	484.6	490.7	496.8	503.0	509.2	515.6	522.5	529.2	536.0	542.8	547.8
52.5°	457.7	464.2	470.7	477.2	483.7	490.7	498.2	505.7	513.2	520.7	525.9
55°	418.5	425.7	432.9	440.2	447.4	455.0	462.9	470.8	478.6	486.5	492.5
57.5°	380.1	387.7	395.2	402.7	410.4	418.4	427.1	435.7	444.3	453.0	458.9
60°	353.4	361.2	369.1	377.0	384.9	393.3	402.4	411.3	420.3	429.3	435.5
62.5°	328.0	336.1	344.2	352.2	360.3	369.1	378.6	388.1	397.7	407.2	413.3
65°	289.2	297.7	306.2	314.8	323.4	332.4	342.1	351.8	361.5	371.1	377.7
67.5°	249.7	258.7	267.9	276.9	286.0	295.5	305.3	315.1	324.9	334.8	342.0
70°	222.1	231.5	240.9	250.3	259.8	269.8	280.3	290.8	301.3	311.9	318.9
72.5°	196.8	206.2	215.7	225.1	234.5	244.7	255.5	266.5	277.3	288.1	295.4
75°	156.9	167.2	177.6	187.8	198.1	208.8	219.7	230.7	241.7	252.7	259.9
77.5°	122.2	132.6	143.0	153.4	163.7	174.5	185.6	196.6	207.6	218.7	226.3
80°	97.7	108.5	119.2	130.0	140.7	151.7	163.2	174.6	186.0	197.4	204.8
82.5°	76.3	87.3	98.2	109.1	120.1	131.3	142.9	154.5	166.1	177.7	185.1
85°	48.4	59.3	70.3	81.2	92.2	103.5	115.2	126.8	138.4	150.1	157.5
87.5°	26.3	37.4	48.4	59.6	70.6	81.8	93.2	104.6	115.9	127.3	134.9
90°	13.2	24.7	36.1	47.6	59.1	71.0	83.0	95.2	107.4	119.5	127.2
92.5°	20.1	30.3	40.5	50.7	60.9	71.7	83.3	94.9	106.4	118.0	125.5
95°	30.5	39.6	48.6	57.7	66.8	77.0	88.3	99.7	111.0	122.3	129.4
97.5°	44.6	52.7	60.8	68.9	77.0	86.4	97.1	107.8	118.5	129.1	136.0
100°	54.2	61.6	69.1	76.5	84.1	93.0	103.5	114.0	124.3	134.8	141.4
102.5°	65.4	72.0	78.5	85.1	91.7	100.2	110.7	121.0	131.4	141.9	148.3
105°	82.8	88.2	93.7	99.1	104.5	112.3	122.3	132.4	142.5	152.6	158.7
107.5°	102.2	106.7	111.3	115.8	120.5	127.3	136.6	145.7	155.0	164.2	170.3
110°	114.1	118.3	122.3	126.5	130.5	137.0	146.0	154.9	163.8	172.8	178.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	127.5	130.8	134.1	137.5	140.8	146.8	155.1	163.6	172.1	180.5	186.4
115°	146.5	149.4	152.2	155.0	157.9	163.2	171.0	178.7	186.4	194.2	199.5
117.5°	166.5	168.1	169.9	171.7	173.5	178.0	185.2	192.5	199.6	206.9	212.1
120°	178.1	179.6	181.3	182.8	184.4	188.5	195.4	202.3	209.2	216.0	220.9
122.5°	191.2	192.1	193.0	193.9	194.8	198.6	205.3	212.0	218.7	225.4	230.1
125°	210.2	210.4	210.6	210.8	211.0	214.2	220.5	226.7	232.9	239.1	243.4
127.5°	228.6	228.8	229.0	229.3	229.5	232.2	237.3	242.4	247.5	252.6	256.6
130°	240.8	241.2	241.6	241.9	242.2	244.6	248.7	252.9	257.0	261.2	265.0
132.5°	252.2	252.8	253.4	253.9	254.5	256.4	259.8	263.1	266.5	269.8	273.4
135°	270.8	271.0	271.3	271.5	271.6	273.0	275.3	277.7	279.9	282.3	286.0
137.5°	287.9	288.1	288.3	288.5	288.7	289.5	291.1	292.7	294.2	295.8	298.9
140°	299.1	299.4	299.8	300.2	300.6	301.1	301.9	302.6	303.3	304.1	307.3
142.5°	310.0	310.2	310.4	310.6	310.8	311.0	311.3	311.6	311.8	312.1	315.0
145°	327.1	327.0	327.0	326.9	326.8	326.9	327.1	327.3	327.5	327.7	329.4
147.5°	341.0	341.3	341.6	341.9	342.0	342.3	342.5	342.7	342.9	343.2	343.7
150°	351.4	351.6	351.7	351.9	352.0	352.1	352.3	352.4	352.6	352.7	352.7
152.5°	360.0	360.1	360.3	360.5	360.8	360.9	361.0	361.1	361.2	361.3	361.4
155°	373.4	373.4	373.4	373.4	373.4	373.4	373.5	373.5	373.6	373.7	374.0
157.5°	384.8	384.7	384.7	384.6	384.5	384.5	384.6	384.6	384.7	384.7	385.0
160°	392.0	391.9	391.7	391.6	391.4	391.3	391.3	391.3	391.3	391.3	391.7
162.5°	398.4	398.2	398.0	397.8	397.6	397.6	397.6	397.7	397.8	397.8	398.1
165°	406.7	406.5	406.2	406.0	405.8	405.7	405.7	405.7	405.7	405.7	406.1
167.5°	413.3	413.0	412.7	412.4	412.1	412.0	412.1	412.1	412.2	412.3	412.6
170°	417.0	416.7	416.4	416.1	415.8	415.7	415.7	415.7	415.7	415.7	416.2
172.5°	420.0	419.6	419.3	419.1	418.8	418.6	418.6	418.6	418.6	418.6	419.1
175°	423.0	422.7	422.4	422.2	421.9	421.7	421.7	421.7	421.7	421.7	422.2
177.5°	424.2	424.0	423.8	423.6	423.3	423.2	423.2	423.2	423.2	423.2	423.6
180°	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	906.0	906.0	906.0	906.0	906.0	906.0	906.0	906.0
2.5°	904.1	905.5	906.8	907.5	907.3	907.1	906.9	906.8
5°	902.6	904.4	906.1	906.8	906.6	906.4	906.3	906.0
7.5°	897.1	899.4	901.5	902.5	902.2	902.0	901.7	901.4
10°	891.6	893.8	896.0	896.9	896.5	896.0	895.6	895.1
12.5°	884.2	886.2	888.2	889.0	888.5	888.2	887.7	887.2
15°	869.9	872.1	874.3	875.2	875.1	874.9	874.6	874.4
17.5°	851.3	853.3	855.3	856.1	855.8	855.5	855.2	854.9
20°	837.9	839.9	841.9	842.9	843.2	843.4	843.6	843.9
22.5°	823.1	825.7	828.1	829.3	829.2	829.1	829.0	828.8
25°	798.2	801.1	803.9	805.3	805.3	805.3	805.3	805.3
27.5°	772.1	774.6	777.0	778.4	778.5	778.7	778.9	779.1
30°	754.3	757.0	759.6	760.9	760.9	760.9	760.9	760.9
32.5°	734.9	737.7	740.6	742.3	742.7	743.3	743.8	744.3
35°	706.3	709.6	712.8	715.0	715.9	716.7	717.6	718.5
37.5°	676.6	680.3	684.0	686.3	686.9	687.7	688.3	689.1
40°	656.9	660.5	664.3	666.6	667.5	668.4	669.2	670.1
42.5°	636.2	640.3	644.4	647.1	648.3	649.5	650.7	652.0
45°	605.4	609.5	613.8	616.7	618.5	620.2	622.0	623.8
47.5°	574.3	579.0	583.7	586.7	588.1	589.5	590.8	592.1
50°	552.9	557.9	563.0	566.3	567.8	569.3	570.9	572.4
52.5°	531.1	536.4	541.6	545.2	547.1	548.9	550.8	552.7
55°	498.4	504.4	510.2	514.1	515.9	517.6	519.3	521.1
57.5°	465.0	470.9	476.8	480.9	483.0	485.0	487.0	489.1
60°	441.6	447.7	453.8	458.2	460.5	463.0	465.4	467.8
62.5°	419.5	425.7	431.8	435.9	438.2	440.5	442.7	444.9
65°	384.3	390.8	397.4	401.8	404.0	406.1	408.4	410.6
67.5°	349.1	356.4	363.5	368.1	369.9	371.7	373.6	375.4
70°	325.9	332.9	340.0	344.5	346.8	348.9	351.1	353.4
72.5°	302.6	309.7	317.0	321.7	323.9	326.0	328.2	330.5
75°	267.1	274.4	281.6	286.5	289.2	291.8	294.5	297.1
77.5°	233.9	241.6	249.2	254.0	256.1	258.1	260.1	262.1
80°	212.3	219.7	227.2	232.1	234.2	236.4	238.7	240.8
82.5°	192.6	200.0	207.5	212.3	214.5	216.7	218.9	221.0
85°	164.9	172.4	179.8	184.6	186.8	189.1	191.2	193.4
87.5°	142.3	149.9	157.4	162.3	164.5	166.7	168.9	171.2
90°	135.1	142.8	150.5	155.6	157.9	160.2	162.6	164.9
92.5°	133.0	140.5	148.1	152.8	154.8	156.7	158.5	160.5
95°	136.6	143.6	150.7	155.3	157.6	159.8	161.9	164.2
97.5°	142.9	149.8	156.7	161.2	163.3	165.5	167.7	169.8
100°	148.0	154.6	161.2	165.6	168.0	170.3	172.7	174.9
102.5°	154.7	161.0	167.4	171.7	173.9	176.1	178.2	180.4
105°	164.9	171.1	177.2	181.3	183.4	185.6	187.7	189.8
107.5°	176.4	182.5	188.6	192.6	194.4	196.3	198.1	200.0
110°	184.7	190.8	196.7	200.6	202.2	203.8	205.4	207.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	192.3	198.2	204.1	207.9	209.8	211.8	213.7	215.6
115°	204.9	210.2	215.6	219.0	220.7	222.4	224.1	225.7
117.5°	217.3	222.5	227.7	231.0	232.5	234.0	235.5	237.0
120°	225.9	230.9	235.8	239.0	240.4	241.9	243.2	244.6
122.5°	234.7	239.4	244.0	247.0	248.4	249.8	251.1	252.4
125°	247.7	252.0	256.4	259.1	260.3	261.6	262.8	264.1
127.5°	260.5	264.4	268.3	270.9	272.0	273.1	274.4	275.5
130°	268.9	272.8	276.7	279.0	279.8	280.6	281.4	282.2
132.5°	277.0	280.7	284.4	286.7	287.8	288.9	289.9	291.1
135°	289.6	293.2	296.9	299.3	300.2	301.1	302.1	303.0
137.5°	302.1	305.2	308.4	310.4	311.1	312.0	312.8	313.6
140°	310.5	313.7	316.9	318.9	319.4	320.0	320.6	321.1
142.5°	317.8	320.7	323.6	325.4	326.0	326.7	327.4	328.1
145°	331.1	332.8	334.5	335.6	336.2	336.8	337.3	337.9
147.5°	344.2	344.7	345.3	345.7	346.0	346.4	346.8	347.0
150°	352.7	352.7	352.7	352.7	352.7	352.7	352.7	352.7
152.5°	361.5	361.7	361.7	361.7	361.4	361.1	360.7	360.4
155°	374.3	374.6	374.9	374.8	374.3	373.7	373.2	372.7
157.5°	385.3	385.7	386.0	385.9	385.5	385.1	384.7	384.3
160°	392.1	392.5	392.9	392.9	392.6	392.3	392.0	391.7
162.5°	398.5	398.9	399.3	399.2	398.7	398.2	397.8	397.3
165°	406.6	407.0	407.5	407.5	406.9	406.4	405.9	405.4
167.5°	413.1	413.6	414.1	414.1	413.6	413.1	412.6	412.3
170°	416.7	417.3	417.7	417.7	417.3	416.7	416.2	415.7
172.5°	419.5	420.0	420.5	420.5	419.9	419.4	418.9	418.4
175°	422.5	423.0	423.5	423.4	422.9	422.4	421.9	421.3
177.5°	424.0	424.2	424.6	424.6	424.2	423.8	423.4	422.9
180°	424.0	424.0	424.0	424.0	424.0	424.0	424.0	424.0

(END OF REPORT)