

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: P332165-940

Luminaire Tested: **S123DIW-S775D1030U940-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332165-940
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: S123DIW-S775D1030U940-4F0-1E-UDD-D1
Description: DEFINE 3 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1030 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6070.1 lumens
Efficiency: N/A
Efficacy: 115.4 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

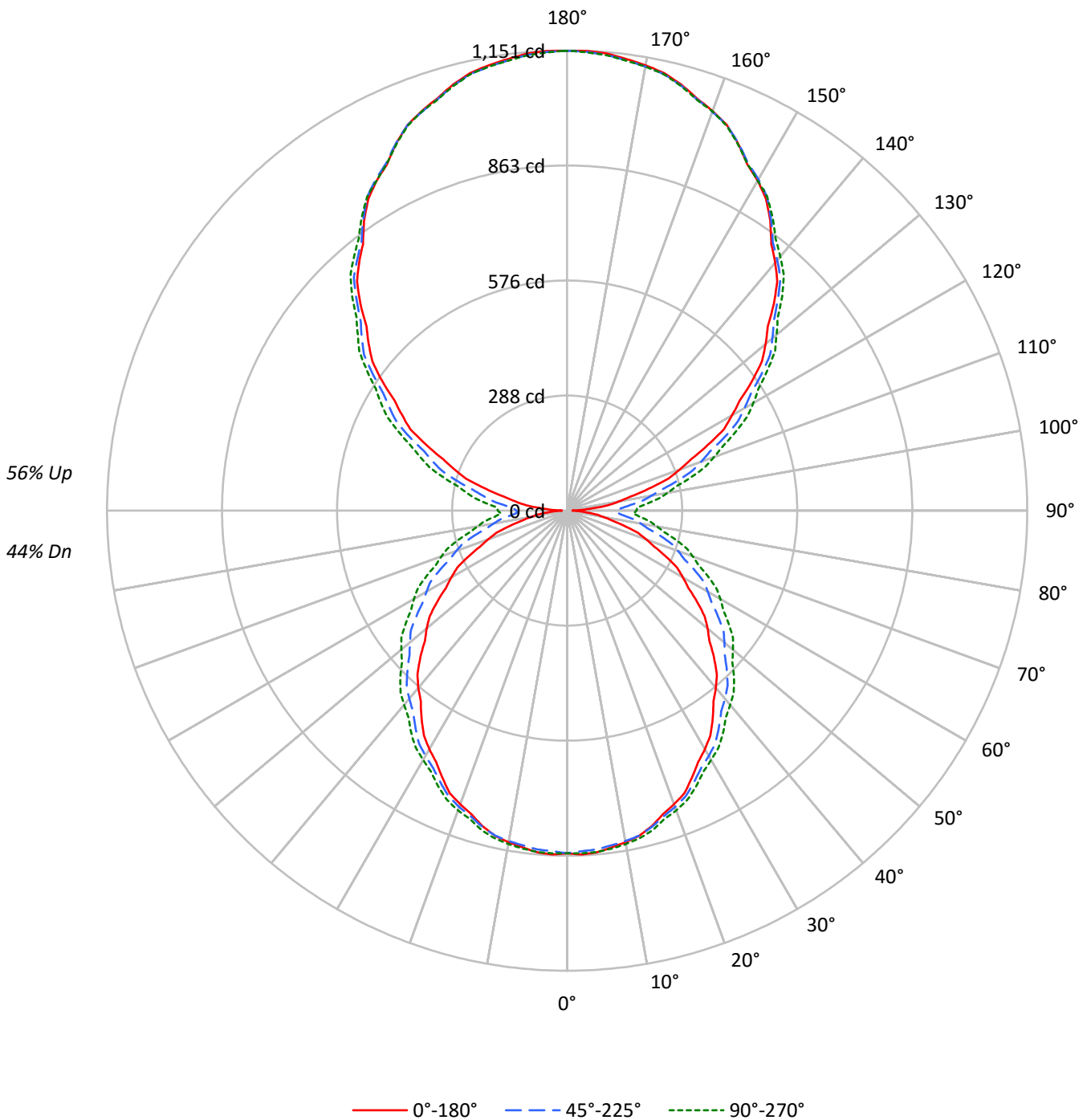
Input Watts (W): 52.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44
1	95	91	87	83	87	83	79	76	68	66	63	55	53	52	43	42	40	35
2	86	79	72	67	79	72	66	62	59	55	52	48	45	42	37	35	33	28
3	79	69	61	55	71	63	56	51	52	47	43	42	38	35	33	30	28	24
4	72	61	53	46	65	56	49	43	46	41	36	37	33	30	29	26	24	20
5	66	54	46	39	60	49	42	37	41	36	31	33	29	26	26	23	21	17
6	61	48	40	34	55	44	37	32	37	31	27	30	26	23	24	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	32	26	47	36	29	24	30	25	21	25	21	18	20	17	14	12
9	48	36	28	23	44	33	26	22	28	22	19	23	19	16	18	15	13	11
10	45	33	26	21	41	30	24	19	26	20	17	21	17	14	17	14	12	10

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	1.3
10°-20°	231.6	3.8
20°-30°	346.4	5.7
30°-40°	413.7	6.8
40°-50°	432.9	7.1
50°-60°	406.2	6.7
60°-70°	339.3	5.6
70°-80°	242.7	4.0
80°-90°	148.2	2.4
90°-100°	165.8	2.7
100°-110°	291.0	4.8
110°-120°	426.0	7.0
120°-130°	527.1	8.7
130°-140°	575.3	9.5
140°-150°	556.7	9.2
150°-160°	466.6	7.7
160°-170°	310.6	5.1
170°-180°	108.8	1.8
0°-30°	659.3	10.9
0°-40°	1073.0	17.7
0°-60°	1912.1	31.5
0°-90°	2642.2	43.5
90°-120°	882.7	14.5
90°-150°	2541.8	41.9
90°-180°	3428.0	56.5
0°-180°	6070.1	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°	13	68	127	161	174	12
95°	64	107	159	191	201	68
105°	211	236	283	308	320	225
115°	389	404	434	457	464	385
125°	565	569	593	608	612	504
135°	731	736	745	757	761	563
145°	885	886	889	895	896	553
155°	1013	1013	1014	1017	1011	466
165°	1103	1100	1100	1105	1100	311
175°	1147	1144	1144	1148	1143	109
180°	1150	1150	1150	1150	1150	



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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°	25.1	35.8	46.5	57.2	67.9	78.9	90.0	101.1	112.2	123.3	130.5
90°	13.0	25.2	37.4	49.6	61.7	74.5	87.7	100.8	114.0	127.2	135.0
92.5°	33.3	43.8	54.3	64.8	75.4	86.6	98.5	110.4	122.3	134.2	141.8
95°	63.6	73.0	82.6	92.0	101.6	112.2	123.9	135.7	147.5	159.3	166.5
97.5°	103.8	112.2	120.6	128.9	137.2	146.9	157.7	168.5	179.4	190.3	197.4
100°	131.3	139.1	147.0	154.8	162.6	171.8	182.4	193.0	203.5	214.0	220.6
102.5°	163.0	169.8	176.5	183.2	189.8	198.5	209.2	220.0	230.7	241.4	247.8
105°	210.7	216.2	221.5	226.9	232.3	240.3	251.0	261.8	272.5	283.2	289.0
107.5°	265.3	269.7	274.2	278.7	283.1	290.0	299.2	308.4	317.5	326.7	333.0
110°	299.2	303.4	307.5	311.7	315.8	322.2	330.9	339.6	348.3	357.0	363.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	335.4	338.7	342.0	345.3	348.6	354.3	362.3	370.3	378.4	386.5	392.6
115°	388.6	391.7	394.8	397.9	401.0	406.1	413.1	420.2	427.3	434.4	439.5
117.5°	443.0	445.0	446.8	448.8	450.8	455.0	461.5	468.0	474.4	480.9	485.8
120°	476.2	478.5	480.7	483.0	485.2	489.2	495.1	500.9	506.8	512.6	517.2
122.5°	511.7	513.1	514.5	515.9	517.3	521.0	527.0	533.0	539.0	545.0	549.1
125°	564.7	565.3	565.9	566.5	567.1	570.2	575.9	581.5	587.1	592.7	596.3
127.5°	614.6	615.6	616.7	617.8	618.9	621.7	626.2	630.8	635.3	639.9	642.8
130°	647.8	649.3	650.6	652.0	653.4	655.9	659.4	663.0	666.6	670.1	673.2
132.5°	680.4	681.9	683.5	685.0	686.6	688.8	691.7	694.6	697.4	700.3	703.1
135°	730.9	731.9	732.9	733.9	734.9	736.5	738.5	740.6	742.7	744.8	747.7
137.5°	777.8	778.6	779.4	780.2	781.0	782.4	784.2	786.0	787.8	789.6	792.0
140°	809.5	810.5	811.5	812.5	813.5	814.4	815.2	816.1	816.9	817.7	820.6
142.5°	839.1	840.0	840.8	841.6	842.5	843.1	843.6	844.1	844.6	845.1	847.7
145°	885.4	885.6	885.7	885.9	886.2	886.5	887.2	887.8	888.3	888.9	890.4
147.5°	924.9	925.6	926.3	927.1	927.8	928.4	929.0	929.6	930.1	930.7	931.2
150°	953.1	953.5	953.9	954.3	954.7	955.1	955.5	955.9	956.3	956.7	956.7
152.5°	976.2	976.8	977.3	977.9	978.5	978.8	979.1	979.4	979.6	979.8	980.2
155°	1012.7	1012.7	1012.7	1012.7	1012.7	1012.8	1013.0	1013.3	1013.4	1013.6	1014.4
157.5°	1043.8	1043.6	1043.3	1043.0	1042.9	1042.8	1042.9	1043.1	1043.3	1043.4	1044.3
160°	1063.3	1062.9	1062.5	1062.1	1061.7	1061.5	1061.5	1061.5	1061.5	1061.5	1062.5
162.5°	1080.7	1080.1	1079.5	1079.0	1078.4	1078.2	1078.3	1078.5	1078.7	1078.9	1079.9
165°	1103.0	1102.4	1101.9	1101.3	1100.6	1100.4	1100.4	1100.4	1100.4	1100.4	1101.5
167.5°	1121.0	1120.2	1119.4	1118.6	1117.8	1117.4	1117.6	1117.8	1117.9	1118.0	1119.3
170°	1131.0	1130.2	1129.4	1128.6	1127.8	1127.5	1127.5	1127.5	1127.5	1127.5	1128.8
172.5°	1139.0	1138.2	1137.4	1136.6	1135.8	1135.4	1135.4	1135.4	1135.4	1135.4	1136.7
175°	1147.4	1146.6	1145.8	1145.0	1144.2	1143.7	1143.7	1143.7	1143.7	1143.7	1145.0
177.5°	1150.8	1150.1	1149.5	1148.8	1148.2	1147.9	1147.9	1147.9	1147.9	1147.9	1148.8
180°	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0



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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°	137.7	144.9	152.1	156.9	159.0	161.1	163.3	165.4
90°	142.9	150.8	158.6	163.8	166.3	168.7	171.2	173.7
92.5°	149.3	156.9	164.3	169.0	170.6	172.3	174.0	175.6
95°	173.8	181.0	188.2	192.9	194.9	197.1	199.1	201.2
97.5°	204.6	211.6	218.7	223.3	225.3	227.3	229.3	231.3
100°	227.3	233.9	240.5	245.0	247.5	250.0	252.4	254.9
102.5°	254.2	260.7	267.2	271.3	273.4	275.4	277.4	279.4
105°	294.9	300.7	306.5	310.5	312.8	315.0	317.3	319.6
107.5°	339.1	345.4	351.5	355.4	357.0	358.6	360.2	361.8
110°	369.3	375.6	381.7	385.5	386.7	388.0	389.2	390.6



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	398.9	405.0	411.3	415.2	417.0	418.7	420.4	422.2
115°	444.7	449.9	455.0	458.3	459.9	461.3	462.8	464.2
117.5°	490.7	495.6	500.5	503.5	504.5	505.6	506.7	507.7
120°	521.7	526.3	530.9	533.7	534.8	535.8	536.8	537.9
122.5°	553.1	557.2	561.3	563.8	564.7	565.6	566.5	567.4
125°	599.8	603.3	606.9	609.0	609.7	610.3	611.0	611.6
127.5°	645.9	648.8	651.8	653.5	654.0	654.5	655.0	655.5
130°	676.4	679.5	682.6	684.1	683.9	683.9	683.7	683.5
132.5°	706.0	708.7	711.6	713.1	713.5	713.8	714.1	714.4
135°	750.6	753.6	756.5	758.3	758.9	759.6	760.2	760.8
137.5°	794.5	796.9	799.3	800.7	801.0	801.3	801.6	801.8
140°	823.5	826.4	829.4	830.6	830.3	829.9	829.6	829.1
142.5°	850.2	852.8	855.4	856.7	856.6	856.6	856.5	856.5
145°	891.9	893.3	894.8	895.5	895.5	895.5	895.6	895.6
147.5°	931.7	932.2	932.6	932.7	932.3	931.7	931.3	930.9
150°	956.7	956.7	956.7	956.3	955.6	954.8	954.0	953.1
152.5°	980.4	980.8	981.1	980.8	979.8	978.9	977.9	977.0
155°	1015.2	1016.0	1016.8	1016.6	1015.1	1013.7	1012.4	1010.9
157.5°	1045.1	1046.0	1046.8	1046.7	1045.5	1044.5	1043.3	1042.1
160°	1063.5	1064.5	1065.5	1065.6	1064.8	1064.0	1063.2	1062.4
162.5°	1080.8	1081.8	1082.9	1082.7	1081.5	1080.1	1078.9	1077.5
165°	1102.8	1103.9	1105.2	1105.1	1103.7	1102.2	1100.8	1099.5
167.5°	1120.5	1121.8	1123.0	1123.0	1121.8	1120.5	1119.3	1118.0
170°	1130.2	1131.7	1133.1	1133.1	1131.7	1130.2	1128.8	1127.5
172.5°	1137.9	1139.2	1140.4	1140.3	1138.9	1137.5	1136.0	1134.7
175°	1146.1	1147.4	1148.5	1148.4	1147.0	1145.6	1144.2	1142.8
177.5°	1149.8	1150.8	1151.7	1151.6	1150.5	1149.4	1148.3	1147.2
180°	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0	1150.0

(END OF REPORT)