

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: P331963-935

Luminaire Tested: **S123DIP-S775D365U935-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331963-935
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DIP-S775D365U935-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
UPLIGHT 365 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3860.3 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: Semi-Direct

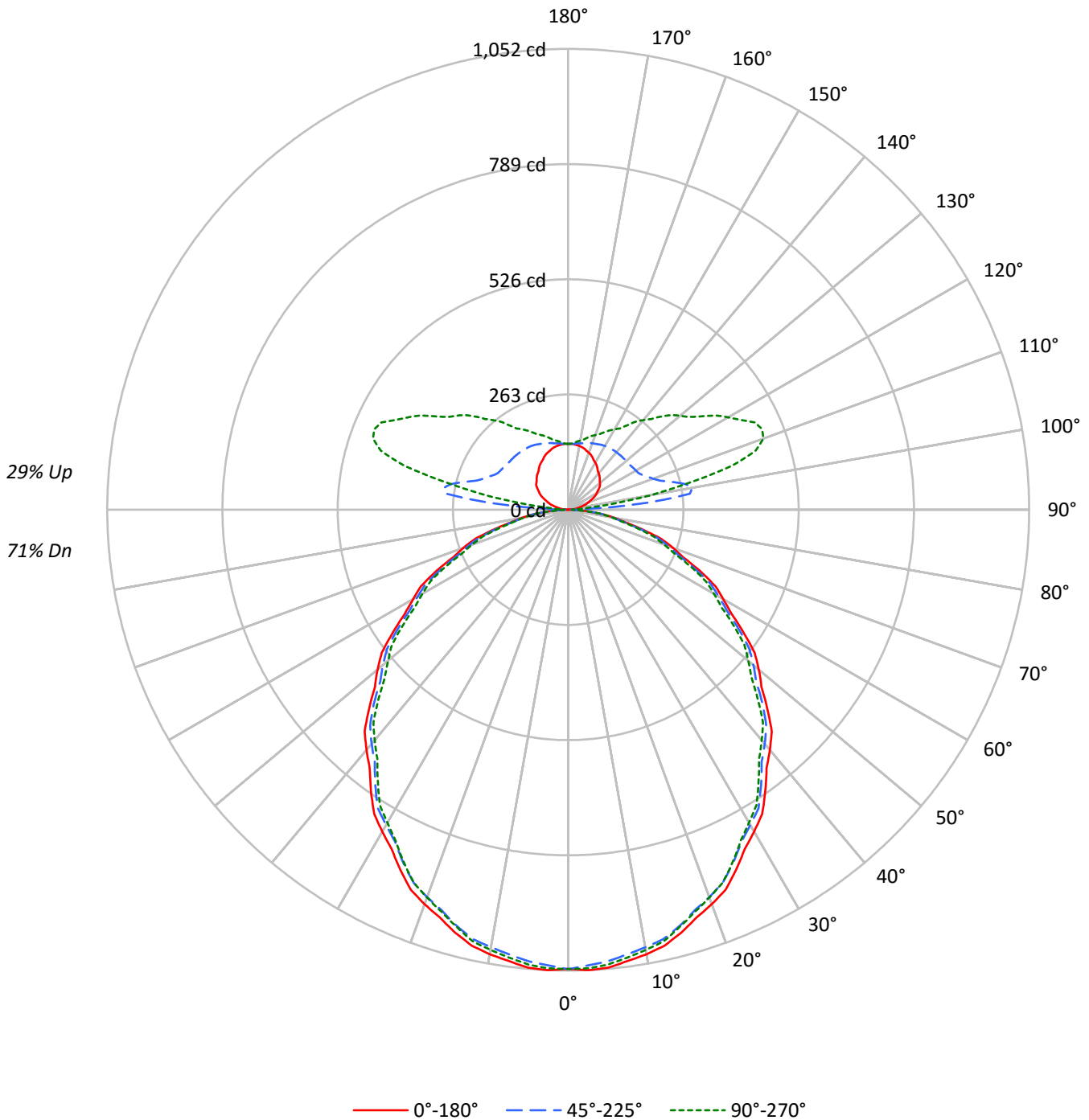
Input Watts (W): 35
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	102	98	94	90	97	93	89	86	83	80	78	74	72	70	66	65	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	62	59	58	56	53	50
3	85	75	67	61	80	71	64	59	64	59	54	58	53	50	52	48	45	42
4	78	67	58	52	73	63	56	50	57	51	46	51	47	43	46	42	39	36
5	72	59	51	45	67	57	49	43	51	45	40	46	41	37	42	37	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	37	32	38	33	30	27
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	34	30	27	24
8	57	44	36	30	54	42	35	29	38	32	28	35	30	26	32	27	24	22
9	53	40	33	27	50	39	31	26	35	29	25	32	27	23	29	25	22	20
10	50	37	30	25	47	36	29	24	33	27	22	30	25	21	27	23	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11286	11286	11286
5°	11339	11182	11261
10°	11262	11086	11154
15°	11131	10961	10981
20°	10977	10781	10791
25°	10772	10568	10546
30°	10544	10331	10253
35°	10307	10081	9950
40°	10058	9805	9653
45°	9785	9552	9319
50°	9512	9239	8982
55°	9154	8916	8646
60°	8792	8540	8269
65°	8474	8130	7875
70°	8003	7660	7320
75°	7311	7049	6750
80°	6595	6316	6261
85°	5780	5570	5348



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.8	2.6
10°-20°	278.9	7.2
20°-30°	411.9	10.7
30°-40°	481.2	12.5
40°-50°	483.8	12.5
50°-60°	425.0	11.0
60°-70°	316.6	8.2
70°-80°	180.4	4.7
80°-90°	52.9	1.4
90°-100°	83.7	2.2
100°-110°	236.9	6.1
110°-120°	233.0	6.0
120°-130°	185.8	4.8
130°-140°	146.5	3.8
140°-150°	109.4	2.8
150°-160°	76.2	2.0
160°-170°	44.8	1.2
170°-180°	14.6	0.4
0°-30°	789.6	20.5
0°-40°	1270.8	32.9
0°-60°	2179.5	56.5
0°-90°	2729.4	70.7
90°-120°	553.5	14.3
90°-150°	995.3	25.8
90°-180°	1131.0	29.3
0°-180°	3860.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1048	1048	1048	1048	1048	
5°	1049	1045	1035	1043	1042	99
15°	999	995	984	990	985	281
25°	907	901	890	890	888	418
35°	784	779	767	762	757	490
45°	643	639	628	617	612	496
55°	488	486	475	466	461	437
65°	333	328	319	312	309	328
75°	176	172	170	165	162	188
85°	47	45	45	43	43	51
90°	1	4	8	8	9	3
95°	10	34	180	53	35	11
105°	35	52	245	428	387	38
115°	62	78	187	410	471	62
125°	87	102	175	316	371	77
135°	102	121	172	261	301	79
145°	116	133	170	214	235	73
155°	132	142	165	187	195	61
165°	144	148	158	167	170	41
175°	150	150	151	153	153	14
180°	150	150	150	150	150	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1052.1	1051.5	1050.9	1050.2	1049.6	1048.4	1046.5	1044.8	1043.0	1041.3	1042.8
5°	1049.4	1048.4	1047.4	1046.4	1045.3	1043.8	1041.6	1039.4	1037.2	1034.9	1037.0
7.5°	1039.1	1038.1	1037.1	1036.1	1035.1	1033.5	1031.1	1028.9	1026.6	1024.3	1026.1
10°	1030.4	1029.4	1028.5	1027.4	1026.5	1024.7	1022.0	1019.4	1016.8	1014.3	1016.1
12.5°	1018.9	1018.0	1017.3	1016.4	1015.5	1013.9	1011.5	1009.0	1006.6	1004.1	1005.5
15°	998.9	998.1	997.3	996.5	995.7	994.0	991.4	988.8	986.2	983.6	985.2
17.5°	975.6	974.6	973.5	972.5	971.5	969.7	967.1	964.4	961.8	959.2	960.4
20°	958.3	957.1	956.0	954.8	953.6	951.6	949.0	946.4	943.8	941.2	942.0
22.5°	938.8	937.6	936.4	935.2	934.0	932.1	929.5	927.0	924.4	921.7	922.4
25°	907.0	905.8	904.6	903.4	902.2	900.3	897.6	895.0	892.4	889.8	890.0
27.5°	872.9	871.7	870.6	869.4	868.2	866.3	863.4	860.7	857.8	855.0	855.1
30°	848.3	847.3	846.4	845.3	844.3	842.4	839.6	836.8	834.1	831.2	831.2
32.5°	823.8	822.5	821.1	819.8	818.6	816.8	814.6	812.4	810.3	808.1	807.0
35°	784.4	783.2	782.0	780.8	779.5	777.7	775.0	772.4	769.8	767.2	766.0
37.5°	743.9	742.4	740.9	739.3	737.9	735.8	733.1	730.5	727.8	725.2	723.8
40°	715.8	714.6	713.4	712.2	711.0	709.0	706.2	703.4	700.6	697.8	696.2
42.5°	687.7	686.3	684.9	683.6	682.3	680.2	677.3	674.5	671.8	668.9	667.4
45°	642.8	642.0	641.2	640.4	639.6	637.9	635.2	632.7	630.1	627.5	625.1
47.5°	598.2	597.1	595.9	594.8	593.6	591.8	589.4	586.9	584.4	582.0	579.6
50°	568.0	567.0	565.9	565.0	564.0	562.1	559.6	557.0	554.3	551.7	549.6
52.5°	536.2	535.5	534.9	534.2	533.5	531.8	529.0	526.2	523.5	520.7	518.8
55°	487.8	487.5	487.3	487.2	486.9	485.5	482.9	480.4	477.7	475.1	472.9
57.5°	441.6	440.9	440.2	439.5	438.9	437.5	435.4	433.3	431.2	429.1	427.1
60°	408.4	408.2	408.0	407.8	407.6	406.3	403.9	401.5	399.1	396.7	394.9
62.5°	378.8	378.3	377.8	377.3	376.8	375.3	372.9	370.5	368.1	365.7	363.9
65°	332.7	331.7	330.6	329.7	328.6	327.2	325.1	323.1	321.2	319.2	317.5
67.5°	283.8	282.9	282.1	281.1	280.3	279.1	277.6	276.0	274.5	273.0	271.6
70°	254.3	253.0	251.8	250.6	249.4	248.2	247.0	245.8	244.6	243.4	242.0
72.5°	223.3	222.3	221.4	220.6	219.7	218.6	217.2	215.9	214.5	213.1	211.9
75°	175.8	175.0	174.2	173.4	172.6	171.9	171.3	170.7	170.0	169.5	168.5
77.5°	133.8	133.4	132.9	132.5	132.0	131.5	130.7	130.0	129.3	128.5	127.9
80°	106.4	105.8	105.2	104.6	104.0	103.5	103.1	102.7	102.3	101.9	101.7
82.5°	79.7	79.6	79.5	79.3	79.2	79.1	79.0	79.0	78.9	78.8	78.4
85°	46.8	46.5	46.1	45.7	45.3	45.1	45.1	45.1	45.1	45.1	44.7
87.5°	18.9	18.5	18.2	17.8	17.5	17.3	17.3	17.3	17.4	17.4	17.1
90°	0.6	1.2	1.8	2.8	3.4	4.0	4.9	5.8	6.7	7.6	7.3
92.5°	3.8	5.6	8.2	10.5	13.1	17.6	25.6	38.7	51.5	46.8	35.3
95°	10.3	11.3	14.6	19.8	27.7	39.5	65.4	110.7	160.7	180.5	146.4
97.5°	17.7	17.9	20.6	25.1	32.9	45.7	70.4	121.5	204.7	279.7	299.1
100°	22.6	22.8	25.0	29.2	36.5	48.4	69.7	114.7	194.8	288.2	348.1
102.5°	27.6	28.2	30.0	34.1	40.6	51.6	70.7	108.8	180.1	272.3	350.5
105°	35.3	36.2	38.1	41.7	47.4	56.9	73.4	104.7	162.2	244.6	331.9
107.5°	43.5	44.3	46.1	49.7	55.1	63.9	78.4	104.4	150.8	220.2	299.5
110°	49.2	50.2	51.7	55.1	60.3	68.8	82.5	105.6	146.4	206.3	279.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	54.7	55.5	57.1	60.4	65.6	73.9	86.6	108.1	143.9	197.0	261.2
115°	62.3	63.6	65.4	68.4	73.6	81.9	93.4	111.9	143.0	187.1	239.8
117.5°	70.1	71.5	73.0	75.9	81.6	89.2	100.7	117.2	143.5	181.2	226.8
120°	75.4	76.4	77.9	80.9	86.7	94.3	105.3	121.1	144.6	178.6	220.0
122.5°	80.1	81.0	82.5	85.8	91.4	99.4	110.1	124.8	146.2	176.9	214.4
125°	86.7	87.3	89.1	92.5	98.2	106.5	117.2	130.5	148.8	174.6	207.2
127.5°	91.8	92.6	95.0	98.3	104.7	113.0	123.2	135.3	151.7	173.6	200.9
130°	95.0	95.8	98.6	102.2	108.7	116.8	126.9	138.4	153.7	172.8	197.4
132.5°	97.4	98.5	101.5	105.9	112.3	120.3	130.0	141.4	155.2	172.5	194.3
135°	101.6	102.8	106.2	110.7	117.2	125.4	134.7	145.2	157.3	172.2	190.2
137.5°	105.6	106.9	110.2	115.0	121.4	129.0	138.1	147.9	158.8	171.5	186.6
140°	108.3	109.9	112.9	117.8	123.8	131.5	140.3	149.4	159.7	171.3	184.3
142.5°	111.2	112.5	115.8	120.2	126.3	133.4	142.0	150.8	160.5	170.8	182.4
145°	115.9	116.8	119.6	124.2	129.3	136.3	144.2	152.4	160.9	170.0	179.8
147.5°	120.7	121.2	123.9	127.9	132.9	138.8	146.0	153.4	160.9	168.9	177.3
150°	123.8	124.2	126.6	130.5	134.7	140.3	147.2	153.7	160.9	168.0	175.6
152.5°	127.0	127.1	129.5	132.9	136.7	142.0	148.0	154.1	160.2	166.8	173.6
155°	131.7	131.7	133.5	136.6	140.0	144.2	149.4	154.3	159.5	164.6	170.7
157.5°	135.5	135.8	137.2	139.9	142.8	146.0	150.2	154.5	158.4	162.7	167.4
160°	138.4	138.4	139.7	142.1	144.2	147.2	150.9	154.5	157.9	161.3	165.2
162.5°	140.6	140.6	141.6	143.5	145.4	148.0	151.2	154.3	157.0	159.8	163.0
165°	143.9	143.6	144.2	145.8	147.0	149.1	151.5	153.7	155.5	157.6	160.1
167.5°	146.4	146.0	146.4	147.5	148.4	149.7	151.4	153.2	154.0	155.4	157.2
170°	147.8	147.2	147.6	148.4	149.1	149.7	151.2	152.4	153.1	153.9	155.5
172.5°	148.9	148.4	148.5	149.2	149.6	149.9	151.2	152.2	152.3	152.7	153.8
175°	150.0	149.7	149.4	150.0	150.0	150.3	150.9	151.5	151.2	151.2	151.8
177.5°	150.6	150.3	150.1	150.3	150.3	150.3	150.6	151.0	150.6	150.3	150.6
180°	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5	1048.5
2.5°	1044.5	1046.1	1047.7	1048.4	1048.3	1048.1	1047.9	1047.8
5°	1039.0	1040.9	1043.0	1043.8	1043.4	1043.0	1042.6	1042.2
7.5°	1027.9	1029.8	1031.6	1032.3	1032.1	1031.8	1031.6	1031.4
10°	1017.9	1019.6	1021.4	1022.2	1021.7	1021.3	1021.0	1020.5
12.5°	1006.8	1008.1	1009.4	1010.0	1009.7	1009.4	1009.3	1009.0
15°	986.8	988.3	990.0	990.2	988.9	987.7	986.6	985.4
17.5°	961.5	962.6	963.7	964.1	963.6	963.2	962.8	962.3
20°	942.8	943.6	944.4	944.5	943.9	943.3	942.7	942.1
22.5°	923.0	923.7	924.3	924.2	923.5	922.7	922.0	921.2
25°	890.2	890.4	890.6	890.4	889.8	889.2	888.6	888.0
27.5°	855.3	855.5	855.7	855.3	854.6	853.9	853.1	852.3
30°	831.2	831.2	831.2	830.5	829.1	827.7	826.3	824.9
32.5°	805.9	804.8	803.7	802.7	801.9	801.2	800.4	799.7
35°	764.8	763.6	762.4	761.3	760.3	759.3	758.3	757.2
37.5°	722.3	720.8	719.5	718.4	717.7	717.1	716.4	715.8
40°	694.6	693.0	691.4	690.2	689.4	688.5	687.8	687.0
42.5°	665.7	664.1	662.5	661.3	660.6	659.7	658.9	658.1
45°	622.7	620.3	617.9	616.1	615.2	614.2	613.1	612.2
47.5°	577.3	575.0	572.6	570.9	570.1	569.2	568.3	567.4
50°	547.3	545.1	542.9	541.2	540.0	538.8	537.6	536.4
52.5°	516.9	515.1	513.2	511.7	510.5	509.3	508.1	506.9
55°	470.7	468.5	466.3	464.7	463.6	462.7	461.7	460.7
57.5°	425.2	423.3	421.3	419.7	418.5	417.4	416.2	415.1
60°	393.0	391.2	389.4	388.1	387.0	386.1	385.0	384.1
62.5°	362.1	360.2	358.4	357.2	356.5	355.9	355.2	354.5
65°	315.9	314.4	312.7	311.6	311.0	310.4	309.8	309.2
67.5°	270.2	268.8	267.3	266.2	265.4	264.6	263.7	262.9
70°	240.6	239.2	237.8	236.6	235.6	234.6	233.6	232.6
72.5°	210.6	209.4	208.2	207.2	206.7	206.2	205.7	205.2
75°	167.5	166.5	165.5	164.7	164.1	163.5	162.9	162.3
77.5°	127.2	126.5	125.8	125.5	125.5	125.5	125.5	125.5
80°	101.5	101.3	101.1	101.0	101.0	101.0	101.0	101.0
82.5°	78.1	77.7	77.3	77.1	77.0	76.8	76.6	76.5
85°	44.3	43.9	43.5	43.3	43.3	43.3	43.3	43.3
87.5°	17.0	17.0	16.9	16.9	16.9	16.9	17.0	16.9
90°	7.6	7.9	8.2	8.8	8.5	8.8	9.1	8.8
92.5°	25.7	20.3	17.9	16.4	15.8	14.9	15.2	14.6
95°	109.5	74.2	58.1	47.2	41.4	38.7	36.5	35.3
97.5°	273.0	218.7	179.4	143.1	120.6	106.9	98.7	96.1
100°	358.7	334.1	298.5	255.3	224.5	202.3	190.5	190.8
102.5°	387.2	386.4	365.7	338.3	314.4	296.8	286.9	279.8
105°	395.5	425.9	431.7	423.9	409.8	398.3	388.6	387.0
107.5°	371.5	420.9	447.6	458.5	458.7	454.8	451.5	448.8
110°	348.7	404.7	443.0	464.3	472.9	475.3	474.7	474.1



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	326.1	383.2	426.2	453.6	469.2	476.7	479.1	479.1
115°	296.0	349.0	393.7	426.9	449.7	463.0	469.2	470.7
117.5°	274.3	320.0	360.2	393.8	417.7	433.0	441.7	443.8
120°	262.9	303.9	340.4	371.2	395.2	412.2	419.6	421.4
122.5°	253.9	291.0	324.9	353.4	374.8	390.1	398.1	400.5
125°	241.9	275.1	304.3	328.6	348.1	361.4	369.1	371.2
127.5°	231.4	261.0	287.3	309.5	326.8	338.3	345.2	347.1
130°	224.8	252.3	276.9	297.6	313.7	324.7	331.1	333.5
132.5°	218.8	243.9	266.9	286.6	301.8	312.7	318.4	320.1
135°	210.5	232.1	251.9	269.2	284.2	293.3	298.8	300.9
137.5°	203.0	220.8	237.8	252.9	265.4	274.7	279.2	280.7
140°	198.7	214.2	228.8	241.9	253.5	262.0	266.8	266.6
142.5°	194.6	207.8	220.5	231.9	241.8	249.3	253.7	253.4
145°	189.6	199.6	209.3	218.2	225.8	232.1	234.6	235.2
147.5°	185.5	193.5	201.3	207.6	213.4	217.7	220.0	220.2
150°	182.5	189.6	196.0	201.7	206.3	209.7	211.5	211.5
152.5°	179.9	185.9	191.6	196.4	199.9	203.0	204.1	204.1
155°	175.9	180.7	185.3	188.9	191.7	194.2	194.8	195.0
157.5°	171.6	175.6	179.2	182.1	184.4	186.2	186.8	186.7
160°	169.2	172.5	175.6	177.7	179.8	181.7	181.7	181.3
162.5°	166.3	169.1	171.9	173.8	175.2	176.8	176.8	176.5
165°	162.5	164.3	166.4	168.0	169.2	170.4	170.0	170.0
167.5°	159.2	160.6	161.8	162.9	163.4	164.3	164.0	164.0
170°	157.0	157.9	159.1	159.7	160.1	160.7	160.3	160.3
172.5°	155.1	155.8	156.7	157.0	157.1	157.7	157.2	157.0
175°	152.4	152.7	153.3	153.3	153.3	153.7	153.3	153.1
177.5°	150.8	151.0	151.3	151.3	151.0	151.3	150.8	150.8
180°	150.3	150.3	150.3	150.3	150.3	150.3	150.3	150.3

(END OF REPORT)