

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: P331958-927

Luminaire Tested: **S123DIP-S775D365U927-4F0-1E-UDD-D**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P331958-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-5,  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S775D365U927-4F0-1E-UDD-D  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 775 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 365 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3708.9 lumens  
Efficiency: N/A  
Efficacy: 106.0 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

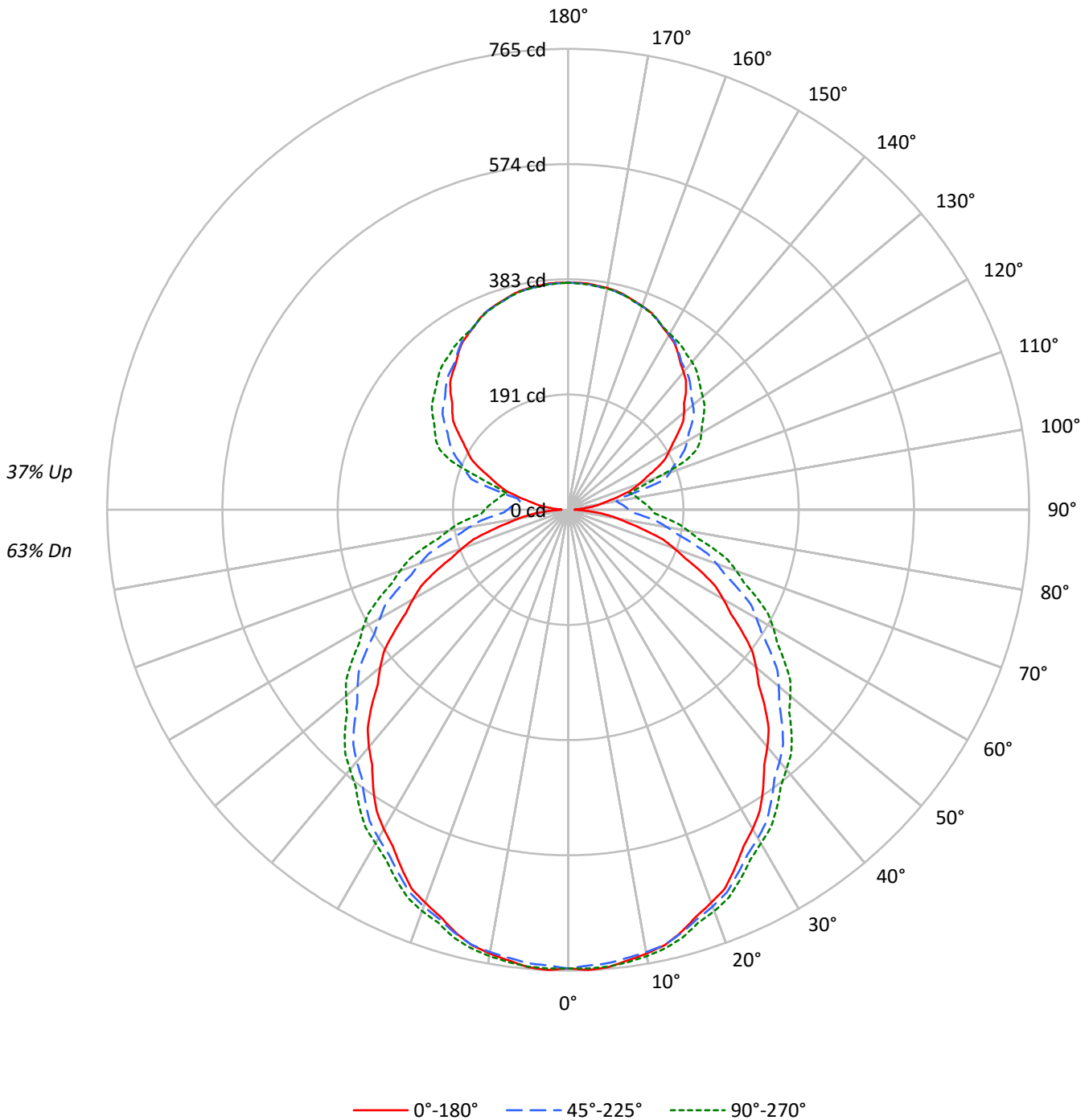
Input Watts (W): 35  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





TEST NUMBER: P331958-927

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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	110	110	110	110	103	103	103	103	91	91	91	79	79	79	68	68	68	63
1	99	94	90	86	93	89	85	81	78	75	72	68	65	63	58	57	55	50
2	90	82	75	69	84	77	71	65	67	63	58	59	55	52	51	48	45	41
3	82	71	63	57	76	67	60	54	59	53	49	51	47	43	44	41	38	34
4	75	63	54	48	70	59	52	46	52	46	41	46	41	37	39	36	32	29
5	69	56	47	41	64	53	45	39	47	40	35	41	36	32	35	31	28	25
6	63	50	42	35	59	47	40	34	42	35	31	37	32	28	32	28	25	22
7	58	45	37	31	54	43	35	30	38	32	27	33	28	24	29	25	22	19
8	54	41	33	27	51	39	31	26	35	28	24	31	25	22	27	23	19	17
9	50	38	30	24	47	36	28	23	32	26	21	28	23	19	25	21	18	15
10	47	35	27	22	44	33	26	21	29	23	19	26	21	18	23	19	16	14

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8196	8196	8196
5°	8222	7990	7994
10°	8148	7806	7766
15°	8043	7597	7518
20°	7893	7358	7245
25°	7708	7084	6957
30°	7517	6836	6666
35°	7305	6575	6434
40°	7102	6337	6184
45°	6877	6109	5986
50°	6655	5883	5766
55°	6409	5652	5569
60°	6171	5417	5366
65°	5924	5168	5126
70°	5555	4887	4879
75°	5090	4566	4628
80°	4551	4249	4341
85°	4050	4032	4175



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.2	1.9
10°-20°	205.8	5.5
20°-30°	307.8	8.3
30°-40°	367.5	9.9
40°-50°	384.5	10.4
50°-60°	360.9	9.7
60°-70°	301.4	8.1
70°-80°	215.6	5.8
80°-90°	129.6	3.5
90°-100°	94.4	2.5
100°-110°	124.6	3.4
110°-120°	196.4	5.3
120°-130°	222.3	6.0
130°-140°	223.5	6.0
140°-150°	201.7	5.4
150°-160°	161.0	4.3
160°-170°	103.9	2.8
170°-180°	35.8	1.0
0°-30°	585.7	15.8
0°-40°	953.3	25.7
0°-60°	1698.6	45.8
0°-90°	2345.3	63.2
90°-120°	415.4	11.2
90°-150°	1062.9	28.7
90°-180°	1364.0	36.8
0°-180°	3708.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	762	760	756	762	761	72
15°	726	728	728	735	735	204
25°	655	663	666	676	677	302
35°	564	577	588	600	604	353
45°	461	481	502	517	524	356
55°	352	379	409	430	438	315
65°	243	276	312	336	345	240
75°	132	171	212	239	250	141
85°	41	82	126	153	163	43
90°	11	55	100	129	139	8
95°	26	48	91	117	127	28
105°	90	112	124	99	105	95
115°	161	173	205	226	235	159
125°	223	227	250	268	275	199
135°	276	278	287	302	306	213
145°	318	319	319	326	330	199
155°	349	349	349	350	348	161
165°	368	367	367	369	367	104
175°	377	376	376	377	375	36
180°	377	377	377	377	377	



TEST NUMBER: P331958-927

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	764.8	764.3	763.9	763.4	763.0	762.2	761.0	759.9	758.7	757.5	758.7
5°	762.3	761.9	761.5	761.2	760.8	760.1	759.0	757.9	756.8	755.7	757.2
7.5°	754.8	754.9	754.9	755.0	755.1	754.6	753.5	752.5	751.4	750.4	752.2
10°	748.2	748.5	748.9	749.3	749.6	749.4	748.5	747.6	746.6	745.7	747.6
12.5°	740.2	740.8	741.2	741.8	742.3	742.3	741.6	741.0	740.4	739.7	741.4
15°	725.8	726.4	726.9	727.5	728.0	728.2	728.0	727.9	727.6	727.5	729.3
17.5°	707.6	708.7	709.8	710.8	711.9	712.5	712.4	712.3	712.3	712.2	713.8
20°	694.3	695.4	696.5	697.6	698.7	699.4	699.8	700.2	700.5	700.9	702.6
22.5°	680.3	681.4	682.5	683.7	684.8	685.6	686.1	686.6	687.1	687.6	689.8
25°	655.3	657.1	658.9	660.8	662.7	663.8	664.4	665.0	665.5	666.1	668.4
27.5°	630.1	632.2	634.3	636.4	638.5	640.1	641.3	642.5	643.6	644.8	646.9
30°	612.1	614.6	617.0	619.3	621.7	623.7	625.1	626.6	628.1	629.5	631.8
32.5°	592.2	594.9	597.6	600.3	603.0	605.3	607.2	609.2	611.1	613.0	615.4
35°	564.0	567.0	570.0	572.9	575.8	578.5	580.9	583.3	585.7	588.1	590.9
37.5°	534.2	537.5	540.8	544.2	547.5	550.6	553.6	556.5	559.4	562.4	565.5
40°	514.3	517.6	520.9	524.3	527.5	531.1	534.7	538.4	542.1	545.8	548.9
42.5°	492.3	496.5	500.5	504.5	508.6	512.5	516.3	520.2	524.0	527.9	531.3
45°	461.2	465.6	470.0	474.4	478.9	483.4	488.0	492.6	497.3	501.8	505.3
47.5°	428.5	433.6	438.6	443.5	448.5	453.7	459.0	464.2	469.5	474.8	478.7
50°	407.3	412.4	417.6	422.8	427.9	433.3	439.1	444.8	450.5	456.2	460.4
52.5°	384.7	390.1	395.6	401.1	406.5	412.4	418.7	425.0	431.3	437.6	442.0
55°	351.7	357.7	363.8	369.9	376.0	382.4	389.0	395.7	402.3	408.9	413.9
57.5°	319.5	325.8	332.2	338.5	344.9	351.6	358.9	366.2	373.4	380.7	385.7
60°	297.0	303.6	310.2	316.9	323.5	330.6	338.2	345.7	353.2	360.8	366.0
62.5°	275.7	282.5	289.3	296.0	302.9	310.2	318.2	326.2	334.2	342.2	347.4
65°	243.0	250.3	257.4	264.6	271.8	279.4	287.6	295.6	303.8	311.9	317.4
67.5°	209.8	217.5	225.1	232.7	240.3	248.3	256.6	264.8	273.1	281.4	287.4
70°	186.6	194.6	202.5	210.4	218.3	226.7	235.6	244.4	253.3	262.1	268.0
72.5°	165.4	173.3	181.3	189.2	197.1	205.7	214.8	223.9	233.1	242.2	248.3
75°	131.9	140.5	149.2	157.9	166.5	175.5	184.7	193.9	203.1	212.4	218.4
77.5°	102.7	111.5	120.2	128.9	137.6	146.6	156.0	165.2	174.5	183.8	190.2
80°	82.1	91.2	100.2	109.2	118.3	127.5	137.1	146.7	156.3	165.9	172.1
82.5°	64.2	73.4	82.5	91.7	100.9	110.4	120.1	129.8	139.6	149.3	155.6
85°	40.6	49.8	59.1	68.3	77.5	87.0	96.8	106.5	116.3	126.1	132.4
87.5°	22.1	31.4	40.7	50.1	59.3	68.8	78.3	87.9	97.4	107.0	113.4
90°	11.1	20.8	30.3	40.0	49.7	59.6	69.8	80.0	90.2	100.4	106.9
92.5°	15.3	23.3	31.3	39.2	47.2	56.2	66.0	75.9	85.7	95.6	102.1
95°	26.2	30.8	35.5	40.1	44.8	52.0	61.6	71.4	81.1	90.8	97.0
97.5°	42.5	47.8	53.2	58.5	63.8	68.6	72.7	76.8	81.0	85.2	91.2
100°	54.7	61.9	69.1	76.2	83.3	86.3	85.1	83.9	82.6	81.4	87.2
102.5°	68.9	75.1	81.3	87.5	93.7	95.7	93.4	91.1	88.9	86.6	90.2
105°	90.1	95.1	100.3	105.4	110.5	114.2	116.5	118.8	121.2	123.5	117.6
107.5°	111.5	115.9	120.2	124.5	128.8	135.1	143.5	151.9	160.3	168.7	165.6
110°	125.9	129.8	133.6	137.4	141.2	147.1	155.2	163.2	171.3	179.4	182.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	140.2	143.4	146.6	149.8	153.0	158.4	166.2	174.0	181.7	189.5	194.2
115°	160.7	163.2	165.8	168.4	171.0	175.9	183.1	190.3	197.4	204.6	209.7
117.5°	181.0	182.8	184.7	186.5	188.3	192.5	199.0	205.5	212.1	218.6	223.4
120°	193.1	194.6	196.1	197.6	199.1	202.9	209.2	215.5	221.7	228.0	232.7
122.5°	206.1	207.1	207.9	208.9	209.8	213.3	219.4	225.4	231.4	237.4	241.9
125°	223.1	223.6	224.1	224.6	225.1	228.1	233.7	239.3	244.9	250.5	254.4
127.5°	240.3	240.7	241.0	241.3	241.5	244.1	248.8	253.5	258.3	263.0	266.8
130°	251.0	251.4	251.7	252.0	252.3	254.4	258.4	262.3	266.3	270.2	273.9
132.5°	260.7	261.2	261.7	262.1	262.5	264.4	267.5	270.7	273.8	276.9	280.6
135°	276.2	276.5	276.6	276.9	277.0	278.3	280.5	282.8	285.1	287.4	290.9
137.5°	289.5	289.9	290.2	290.5	290.8	291.7	292.9	294.2	295.5	296.8	300.0
140°	297.9	298.2	298.6	299.0	299.4	299.9	300.6	301.3	302.1	302.9	305.9
142.5°	306.1	306.3	306.6	306.8	307.0	307.3	307.6	307.9	308.2	308.5	311.2
145°	317.7	318.0	318.2	318.5	318.7	318.9	319.0	319.2	319.2	319.4	321.0
147.5°	327.8	328.1	328.4	328.7	328.9	329.2	329.3	329.4	329.5	329.6	330.2
150°	334.5	334.7	334.9	335.1	335.3	335.4	335.6	335.6	335.8	335.9	336.0
152.5°	340.6	340.6	340.7	340.8	340.9	341.0	341.0	341.1	341.2	341.3	341.5
155°	349.1	349.0	348.8	348.7	348.6	348.6	348.6	348.6	348.7	348.8	349.1
157.5°	355.7	355.7	355.7	355.6	355.6	355.6	355.5	355.5	355.4	355.4	355.7
160°	359.7	359.7	359.6	359.5	359.5	359.4	359.3	359.3	359.3	359.2	359.5
162.5°	363.5	363.4	363.2	363.1	362.9	362.7	362.7	362.7	362.6	362.5	362.9
165°	368.1	367.9	367.7	367.6	367.3	367.3	367.2	367.1	367.0	367.0	367.5
167.5°	371.7	371.5	371.2	371.0	370.7	370.6	370.6	370.6	370.6	370.6	371.1
170°	373.7	373.4	373.2	373.0	372.7	372.6	372.6	372.6	372.6	372.6	373.1
172.5°	375.0	374.8	374.5	374.1	373.8	373.8	373.8	373.8	373.9	373.9	374.5
175°	376.8	376.4	376.1	375.9	375.6	375.4	375.5	375.6	375.6	375.7	376.1
177.5°	377.2	377.0	376.8	376.5	376.2	376.1	376.2	376.2	376.3	376.4	376.8
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	761.4	761.4	761.4	761.4	761.4	761.4	761.4	761.4
2.5°	759.9	761.0	762.2	762.7	762.6	762.4	762.2	762.2
5°	758.6	760.1	761.5	762.2	762.0	761.8	761.7	761.4
7.5°	754.0	755.9	757.7	758.5	758.3	758.1	757.9	757.6
10°	749.4	751.2	753.0	753.8	753.4	753.0	752.7	752.3
12.5°	743.1	744.8	746.5	747.2	746.8	746.5	746.1	745.7
15°	731.1	733.0	734.8	735.6	735.5	735.3	735.1	734.9
17.5°	715.5	717.2	718.8	719.5	719.3	719.0	718.7	718.5
20°	704.3	705.9	707.6	708.4	708.7	708.8	709.0	709.2
22.5°	691.8	694.0	696.0	697.0	697.0	696.8	696.7	696.6
25°	670.9	673.3	675.7	676.8	676.8	676.8	676.8	676.8
27.5°	649.0	651.0	653.1	654.2	654.3	654.5	654.7	654.8
30°	634.0	636.2	638.4	639.5	639.5	639.5	639.5	639.5
32.5°	617.7	620.0	622.4	623.8	624.2	624.7	625.1	625.6
35°	593.7	596.4	599.1	600.9	601.7	602.4	603.1	603.9
37.5°	568.6	571.8	574.9	576.8	577.3	578.0	578.5	579.2
40°	552.1	555.2	558.3	560.2	561.0	561.7	562.4	563.2
42.5°	534.7	538.1	541.6	543.8	544.9	545.9	546.9	548.0
45°	508.8	512.3	515.9	518.3	519.8	521.3	522.8	524.3
47.5°	482.7	486.6	490.6	493.1	494.2	495.4	496.5	497.6
50°	464.7	468.9	473.2	475.9	477.2	478.5	479.8	481.1
52.5°	446.4	450.8	455.2	458.2	459.8	461.4	463.0	464.5
55°	418.9	423.9	428.8	432.1	433.6	435.0	436.5	438.0
57.5°	390.8	395.8	400.8	404.2	405.9	407.7	409.3	411.1
60°	371.1	376.3	381.4	385.1	387.1	389.1	391.2	393.2
62.5°	352.6	357.7	362.9	366.4	368.3	370.2	372.1	373.9
65°	323.0	328.4	334.0	337.7	339.5	341.4	343.3	345.1
67.5°	293.4	299.5	305.5	309.3	310.9	312.4	314.0	315.5
70°	273.9	279.8	285.7	289.5	291.4	293.3	295.1	297.0
72.5°	254.3	260.3	266.4	270.4	272.2	274.0	275.8	277.7
75°	224.5	230.6	236.7	240.8	243.0	245.3	247.5	249.7
77.5°	196.6	203.0	209.5	213.5	215.2	216.9	218.6	220.3
80°	178.4	184.7	191.0	195.0	196.9	198.7	200.6	202.4
82.5°	161.8	168.1	174.4	178.4	180.3	182.1	183.9	185.8
85°	138.6	144.9	151.1	155.2	157.0	158.9	160.7	162.6
87.5°	119.6	126.0	132.3	136.4	138.2	140.1	142.0	143.9
90°	113.5	120.0	126.5	130.8	132.7	134.7	136.7	138.6
92.5°	108.6	115.1	121.7	125.8	127.5	129.4	131.1	132.8
95°	103.1	109.2	115.4	119.4	121.2	123.1	124.9	126.7
97.5°	97.1	103.1	109.1	113.0	114.9	116.8	118.7	120.7
100°	93.1	98.9	104.8	108.7	110.6	112.5	114.4	116.3
102.5°	94.0	97.6	101.2	104.0	106.0	108.0	109.9	111.9
105°	111.9	106.0	100.1	98.1	99.9	101.6	103.5	105.2
107.5°	162.5	159.4	156.2	151.3	144.7	138.0	131.3	124.6
110°	184.8	187.6	190.3	188.0	180.5	173.1	165.7	158.3





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	198.8	203.5	208.2	210.4	210.2	209.9	209.6	209.4
115°	214.8	219.8	224.8	228.2	230.0	231.6	233.4	235.1
117.5°	228.3	233.2	238.1	241.3	242.7	244.2	245.7	247.2
120°	237.5	242.2	246.9	249.9	251.3	252.5	253.8	255.1
122.5°	246.3	250.7	255.2	258.1	259.4	260.8	262.1	263.5
125°	258.5	262.4	266.5	269.2	270.6	272.0	273.4	274.8
127.5°	270.7	274.5	278.4	280.8	282.0	283.1	284.2	285.3
130°	277.7	281.5	285.2	287.6	288.5	289.5	290.5	291.5
132.5°	284.2	287.7	291.4	293.7	294.8	295.9	296.9	298.0
135°	294.4	297.9	301.3	303.5	304.3	305.0	305.7	306.4
137.5°	303.2	306.4	309.6	311.6	312.4	313.2	314.0	314.8
140°	308.9	311.9	314.9	316.8	317.6	318.4	319.2	320.0
142.5°	313.8	316.5	319.2	320.8	321.6	322.3	323.1	323.8
145°	322.6	324.2	325.8	326.9	327.7	328.4	329.2	329.9
147.5°	330.8	331.4	331.9	332.4	332.8	333.1	333.5	333.9
150°	336.2	336.3	336.4	336.6	336.8	336.9	337.2	337.3
152.5°	341.7	342.0	342.2	342.2	342.0	341.7	341.6	341.4
155°	349.4	349.7	350.1	350.0	349.7	349.3	348.9	348.5
157.5°	356.1	356.5	356.9	356.8	356.3	355.8	355.3	354.8
160°	359.9	360.3	360.7	360.6	360.2	359.7	359.3	358.9
162.5°	363.4	363.8	364.2	364.2	363.8	363.5	363.1	362.7
165°	368.0	368.5	369.0	369.0	368.6	368.1	367.7	367.3
167.5°	371.5	372.1	372.6	372.6	372.1	371.5	371.1	370.6
170°	373.6	374.1	374.5	374.5	374.1	373.6	373.1	372.6
172.5°	374.9	375.4	375.9	375.9	375.3	374.8	374.2	373.7
175°	376.5	377.0	377.4	377.4	376.9	376.4	375.9	375.4
177.5°	377.2	377.6	378.0	377.9	377.4	376.9	376.4	375.9
180°	376.8	376.8	376.8	376.8	376.8	376.8	376.8	376.8

(END OF REPORT)