

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: P331365-927

Luminaire Tested: **SA2XXDIP-C675D925U927-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331365-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-16,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C675D925U927-4F0-1E-UDD-F4  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 675 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
UPLIGHT 925 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5004.3 lumens  
Efficiency: N/A  
Efficacy: 96.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.3  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: General Diffuse

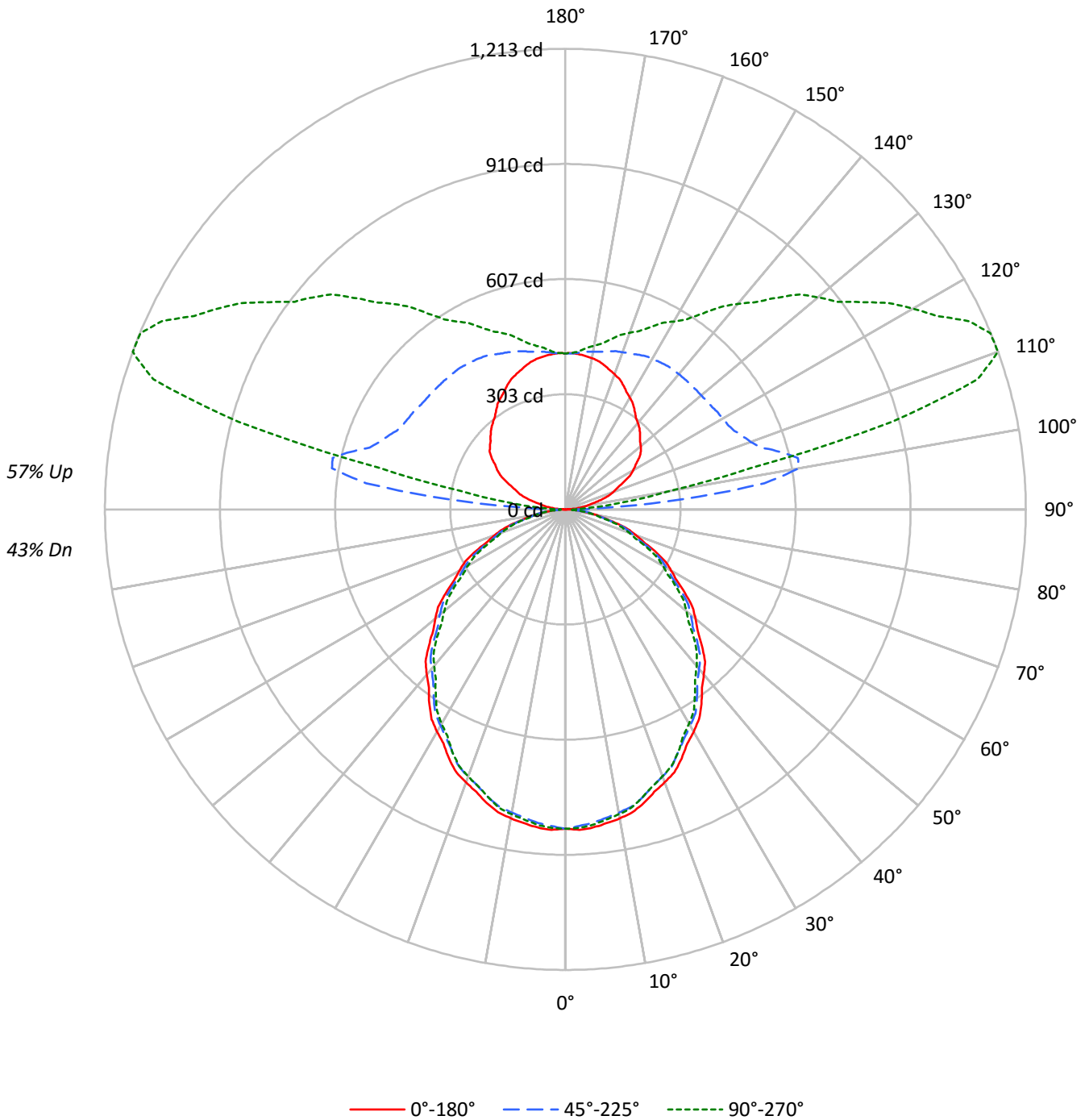
Input Watts (W): 52  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0																	
RCR																																						
0	105	105	105	105	96	96	96	96	79	79	79	64	64	64	50	50	50	43																				
1	96	92	88	85	88	84	81	78	69	67	65	56	55	53	44	43	42	36																				
2	88	80	74	69	80	73	68	64	61	57	54	49	47	44	38	37	35	30																				
3	80	70	63	57	73	65	58	53	54	49	45	44	40	37	34	32	30	26																				
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	30	28	26	22																				
5	67	55	47	42	61	51	44	39	43	37	33	35	31	28	27	25	22	19																				
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17																				
7	57	45	37	31	52	41	34	29	35	29	25	29	24	21	23	20	18	15																				
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13																				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12																				
10	46	34	27	22	42	31	25	21	27	22	18	22	18	15	18	15	13	11																				

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

	0°	45°	90°
0°	13580	13580	13580
5°	13632	13434	13514
10°	13550	13298	13365
15°	13382	13125	13112
20°	13144	12866	12854
25°	12909	12549	12549
30°	12603	12258	12152
35°	12321	11907	11732
40°	11965	11556	11335
45°	11615	11209	10930
50°	11233	10846	10462
55°	10835	10427	10038
60°	10395	9923	9558
65°	9918	9425	8993
70°	9314	8818	8398
75°	8478	8122	7923
80°	7522	7290	6918
85°	6150	5835	5243



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.1	1.6
10°-20°	222.5	4.4
20°-30°	327.1	6.5
30°-40°	379.9	7.6
40°-50°	379.5	7.6
50°-60°	331.0	6.6
60°-70°	244.7	4.9
70°-80°	138.6	2.8
80°-90°	41.0	0.8
90°-100°	164.4	3.3
100°-110°	557.8	11.1
110°-120°	592.6	11.8
120°-130°	487.8	9.7
130°-140°	391.8	7.8
140°-150°	296.0	5.9
150°-160°	208.1	4.2
160°-170°	122.5	2.4
170°-180°	39.9	0.8
0°-30°	628.7	12.6
0°-40°	1008.6	20.2
0°-60°	1719.1	34.4
0°-90°	2143.5	42.8
90°-120°	1314.8	26.3
90°-150°	2490.5	49.8
90°-180°	2861.0	57.2
0°-180°	5004.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	841	838	829	835	834	80
15°	801	795	785	788	784	225
25°	725	718	704	706	704	333
35°	625	617	604	599	595	390
45°	509	503	491	482	479	392
55°	385	380	370	361	357	344
65°	260	254	247	240	235	257
75°	136	134	130	126	127	145
85°	33	32	32	29	28	38
90°	1	11	27	26	26	3
95°	28	68	310	117	90	29
105°	96	145	586	1047	891	102
115°	170	215	490	1012	1172	169
125°	237	281	471	819	951	211
135°	278	332	466	689	788	215
145°	318	365	463	575	629	199
155°	361	390	450	509	529	166
165°	394	406	431	457	464	111
175°	410	411	414	420	418	39
180°	411	411	411	411	411	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	844.9	844.2	843.5	842.8	842.1	840.9	839.3	837.7	836.1	834.6	836.0
5°	841.1	840.3	839.6	838.9	838.2	836.9	834.9	832.9	830.9	828.9	830.4
7.5°	833.6	832.5	831.4	830.3	829.2	827.6	825.6	823.6	821.6	819.5	820.9
10°	826.5	825.2	823.9	822.7	821.5	819.8	817.6	815.5	813.3	811.1	812.5
12.5°	816.8	815.7	814.5	813.4	812.3	810.7	808.5	806.4	804.2	802.1	803.1
15°	800.6	799.5	798.4	797.4	796.3	794.6	792.3	789.9	787.6	785.2	786.0
17.5°	779.9	778.8	777.8	776.7	775.6	773.9	771.5	769.1	766.8	764.4	765.2
20°	765.0	764.0	762.9	761.8	760.7	758.9	756.4	753.9	751.4	748.8	749.4
22.5°	750.1	748.6	747.1	745.6	744.1	742.2	739.8	737.4	735.1	732.7	732.8
25°	724.6	723.2	721.8	720.3	718.8	716.6	713.5	710.5	707.4	704.4	704.7
27.5°	695.5	694.2	692.9	691.6	690.3	688.5	686.0	683.7	681.2	678.8	678.3
30°	676.0	674.6	673.2	671.8	670.3	668.3	665.6	662.9	660.2	657.5	657.0
32.5°	655.4	654.2	653.1	651.9	650.8	648.8	645.9	643.1	640.2	637.4	636.4
35°	625.1	623.4	621.5	619.7	617.9	615.6	612.8	609.8	607.0	604.1	603.0
37.5°	591.0	589.4	587.8	586.2	584.7	582.4	579.6	576.7	573.9	570.9	569.6
40°	567.7	566.3	564.8	563.4	562.0	559.8	556.9	554.1	551.2	548.3	546.7
42.5°	545.1	543.6	542.2	540.7	539.3	537.2	534.2	531.4	528.5	525.7	523.9
45°	508.7	507.4	506.1	504.9	503.7	501.7	499.0	496.3	493.6	490.9	488.9
47.5°	472.5	471.3	470.1	468.9	467.7	465.7	462.9	460.1	457.3	454.5	452.4
50°	447.2	446.3	445.4	444.5	443.6	441.9	439.4	436.9	434.4	431.8	429.4
52.5°	422.6	421.4	420.3	419.1	417.9	416.1	413.8	411.4	409.0	406.6	404.6
55°	384.9	383.9	382.8	381.7	380.6	379.0	376.8	374.7	372.6	370.4	368.2
57.5°	347.1	346.3	345.4	344.5	343.6	342.1	339.7	337.3	334.9	332.6	330.4
60°	321.9	321.2	320.4	319.7	319.0	317.3	314.9	312.4	309.8	307.3	305.3
62.5°	297.3	296.1	295.0	293.8	292.7	291.1	289.2	287.2	285.3	283.4	281.5
65°	259.6	258.5	257.5	256.4	255.2	253.8	252.1	250.3	248.4	246.7	245.0
67.5°	221.3	220.4	219.5	218.6	217.8	216.6	214.9	213.3	211.8	210.1	208.8
70°	197.3	196.6	195.9	195.2	194.5	193.3	191.6	190.0	188.5	186.8	185.5
72.5°	172.8	172.0	171.3	170.6	169.8	169.0	167.9	166.9	165.9	164.8	163.6
75°	135.9	135.5	135.1	134.8	134.4	133.8	132.9	132.0	131.1	130.2	129.1
77.5°	102.9	102.3	101.6	101.0	100.4	100.0	99.6	99.2	98.9	98.5	98.0
80°	80.9	80.7	80.5	80.3	80.2	79.9	79.5	79.1	78.8	78.4	77.9
82.5°	60.2	60.1	60.1	60.0	60.0	59.9	59.7	59.5	59.3	59.0	58.4
85°	33.2	33.0	32.8	32.6	32.4	32.2	32.1	31.9	31.7	31.5	31.0
87.5°	11.8	12.0	12.4	12.4	12.4	12.6	13.1	13.9	14.6	14.4	13.9
90°	0.8	3.2	6.3	7.9	9.5	11.9	15.8	21.3	26.1	26.9	26.1
92.5°	9.7	13.9	19.6	23.1	28.4	35.9	53.8	78.9	101.3	102.7	86.8
95°	27.6	30.8	38.7	45.9	58.5	77.5	113.8	182.6	274.3	309.9	271.2
97.5°	45.1	49.4	57.8	68.4	83.0	104.5	150.2	246.1	398.5	529.1	555.0
100°	60.8	63.2	70.3	83.0	98.9	121.0	162.9	259.4	430.1	624.6	738.5
102.5°	75.4	77.2	84.3	97.0	113.4	135.5	174.3	260.0	418.1	627.7	806.8
105°	96.5	99.7	105.1	117.0	134.4	156.5	193.7	264.0	394.5	585.8	796.1
107.5°	119.2	121.8	127.1	138.1	155.3	177.6	213.7	275.0	382.8	541.0	726.7
110°	134.4	137.6	142.3	152.6	169.2	192.1	226.9	283.8	380.3	519.4	683.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	148.3	151.5	156.9	166.5	182.4	206.0	239.6	293.3	380.9	505.5	652.8
115°	170.0	174.0	178.7	188.1	204.0	225.3	259.4	307.5	384.2	490.2	615.1
117.5°	192.4	195.6	200.3	208.7	223.9	246.1	277.5	322.7	389.9	482.8	591.4
120°	206.4	209.5	214.3	221.3	237.2	259.4	290.2	332.9	393.7	478.3	578.8
122.5°	219.7	222.1	226.9	234.6	250.5	273.2	302.1	341.7	398.2	475.8	568.0
125°	237.2	239.6	244.3	253.8	269.6	291.8	320.2	355.8	404.8	471.2	552.6
127.5°	251.1	254.3	260.9	271.3	286.5	309.3	337.0	368.9	411.6	468.5	538.4
130°	259.4	262.4	270.4	281.5	297.3	319.4	347.1	377.2	416.7	467.2	528.9
132.5°	266.9	270.7	279.2	291.0	307.4	329.5	355.9	385.3	421.7	466.6	521.3
135°	278.3	281.5	291.0	302.8	321.0	343.1	368.4	396.1	427.7	465.6	510.7
137.5°	289.1	292.9	302.3	315.0	333.0	353.6	378.6	404.3	433.1	465.5	503.3
140°	297.3	300.5	309.9	322.6	340.0	360.5	384.2	408.8	435.6	464.9	498.9
142.5°	305.5	308.0	316.9	329.5	346.3	365.6	388.6	412.6	437.5	464.9	494.5
145°	317.8	321.0	328.9	340.8	356.6	374.0	395.3	417.5	439.6	463.3	488.6
147.5°	331.1	333.5	341.0	352.0	365.1	380.6	400.7	420.2	440.2	460.5	482.6
150°	340.0	342.3	348.6	358.9	370.8	385.0	403.2	421.4	439.6	458.6	477.5
152.5°	348.8	349.9	356.2	365.3	376.5	389.4	405.8	422.0	438.3	455.4	473.1
155°	361.3	362.1	366.9	375.6	384.2	396.1	409.6	422.9	436.4	449.9	464.9
157.5°	371.8	372.6	376.4	383.9	390.9	400.8	412.3	422.9	432.8	444.2	457.2
160°	378.7	379.5	382.6	389.0	395.3	404.0	413.5	422.9	430.9	440.4	451.5
162.5°	385.6	385.2	388.3	393.4	399.1	405.9	414.2	422.3	429.0	437.2	446.4
165°	393.7	392.9	394.5	399.3	403.2	408.0	415.1	420.6	425.3	430.9	438.0
167.5°	400.4	399.4	400.8	403.9	406.7	409.7	414.9	419.5	421.7	425.3	429.8
170°	404.8	403.2	404.0	406.4	408.0	410.4	414.3	418.3	419.9	422.2	425.3
172.5°	407.3	406.4	405.9	408.3	409.2	411.0	413.7	416.4	417.3	418.4	421.0
175°	410.4	409.6	408.8	410.4	410.4	411.1	412.7	414.3	413.5	414.3	415.1
177.5°	411.8	410.5	409.9	411.1	411.1	411.1	411.8	413.0	411.8	411.1	411.8
180°	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	841.1	841.1	841.1	841.1	841.1	841.1	841.1	841.1
2.5°	837.4	838.9	840.3	840.9	840.6	840.3	840.0	839.8
5°	831.8	833.2	834.6	835.2	834.9	834.5	834.2	833.8
7.5°	822.4	823.9	825.3	825.8	825.4	825.1	824.7	824.3
10°	814.0	815.5	816.9	817.3	816.8	816.3	815.7	815.2
12.5°	804.1	805.1	806.1	806.4	806.0	805.6	805.3	804.9
15°	786.7	787.4	788.1	788.1	787.1	786.2	785.4	784.4
17.5°	766.0	766.8	767.7	767.7	766.8	766.0	765.1	764.2
20°	750.0	750.5	751.0	750.9	750.2	749.5	748.8	748.1
22.5°	732.9	733.0	733.1	732.9	732.5	732.1	731.7	731.3
25°	705.1	705.4	705.8	705.8	705.4	705.1	704.7	704.4
27.5°	677.7	677.2	676.7	676.0	675.1	674.2	673.4	672.5
30°	656.4	655.8	655.3	654.7	653.9	653.2	652.5	651.8
32.5°	635.5	634.5	633.5	632.7	632.0	631.3	630.5	629.8
35°	602.0	600.9	599.8	598.8	597.9	597.0	596.1	595.2
37.5°	568.3	567.0	565.6	564.5	563.6	562.8	562.0	561.1
40°	545.1	543.4	541.9	540.7	540.0	539.2	538.5	537.8
42.5°	522.1	520.4	518.6	517.2	516.2	515.2	514.2	513.2
45°	487.0	485.0	483.0	481.6	480.9	480.2	479.5	478.7
47.5°	450.4	448.2	446.2	444.6	443.5	442.5	441.5	440.5
50°	426.8	424.3	421.8	420.1	419.1	418.3	417.4	416.5
52.5°	402.4	400.4	398.3	396.6	395.5	394.3	393.1	391.9
55°	366.1	363.9	361.8	360.2	359.3	358.5	357.5	356.6
57.5°	328.3	326.1	324.1	322.7	321.9	321.3	320.6	319.9
60°	303.3	301.3	299.4	298.2	297.6	297.1	296.5	296.0
62.5°	279.7	277.9	276.1	274.8	274.1	273.4	272.7	272.0
65°	243.4	241.8	240.2	238.9	238.1	237.1	236.2	235.4
67.5°	207.6	206.4	205.1	204.1	203.4	202.6	201.9	201.2
70°	184.3	183.1	181.8	180.8	180.1	179.4	178.6	177.9
72.5°	162.3	161.1	159.8	158.8	158.3	157.7	157.2	156.5
75°	128.0	127.0	125.9	125.6	125.9	126.3	126.6	127.0
77.5°	97.4	96.9	96.3	95.9	95.3	94.8	94.3	93.8
80°	77.4	76.8	76.3	75.8	75.5	75.1	74.8	74.4
82.5°	57.7	57.0	56.3	55.9	55.8	55.8	55.7	55.6
85°	30.5	29.9	29.4	29.0	28.8	28.7	28.5	28.3
87.5°	13.2	12.5	12.4	12.3	12.1	12.0	11.8	11.7
90°	25.3	23.7	25.3	26.1	26.1	26.1	26.1	26.1
92.5°	68.9	59.2	52.5	47.6	47.0	44.4	45.1	43.8
95°	207.2	158.9	125.7	108.3	98.1	91.7	89.4	90.2
97.5°	483.4	395.5	309.9	252.9	215.1	195.6	184.0	177.4
100°	721.8	623.8	515.5	419.9	354.2	320.2	297.3	283.0
102.5°	878.1	856.0	776.7	675.3	604.0	546.0	517.4	498.1
105°	960.6	1050.0	1060.3	1034.1	985.1	936.1	902.1	891.0
107.5°	901.2	1035.7	1117.9	1156.2	1162.4	1159.7	1152.9	1138.2
110°	849.9	991.4	1092.7	1157.5	1191.4	1206.5	1213.6	1212.8





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	803.1	939.0	1047.1	1121.4	1168.7	1193.8	1207.3	1211.6
115°	745.5	867.3	970.9	1052.3	1108.4	1144.8	1165.4	1172.5
117.5°	702.2	809.1	903.0	979.5	1036.6	1075.1	1096.8	1102.7
120°	680.7	778.8	862.5	934.5	989.8	1027.0	1050.0	1057.9
122.5°	663.6	753.4	832.8	897.9	947.5	984.0	1004.4	1011.1
125°	638.8	720.3	789.8	849.1	895.0	925.0	944.8	951.1
127.5°	614.3	688.0	753.6	808.3	848.3	876.5	893.6	898.7
130°	598.5	666.5	729.0	781.2	819.9	846.8	862.5	868.9
132.5°	583.3	646.3	703.6	752.7	790.8	817.7	832.2	837.9
135°	562.1	614.3	666.5	710.7	744.7	770.9	785.1	788.2
137.5°	545.2	588.8	630.3	668.8	699.9	722.3	734.8	739.6
140°	534.5	572.4	608.8	643.6	668.8	689.4	701.3	706.0
142.5°	525.6	557.9	589.1	618.3	642.3	661.0	671.5	672.5
145°	513.1	539.2	563.7	586.6	605.6	619.1	626.9	629.3
147.5°	503.4	524.0	543.1	559.9	575.6	586.3	591.7	593.1
150°	496.5	513.9	530.5	544.7	556.6	566.1	570.8	571.6
152.5°	489.6	505.6	519.8	532.1	541.4	549.6	553.1	553.3
155°	479.9	492.6	504.4	513.1	521.8	527.4	530.5	528.9
157.5°	468.7	479.3	489.3	496.1	502.2	506.8	508.2	508.2
160°	461.7	470.4	479.1	484.7	490.2	494.2	495.0	495.0
162.5°	454.8	462.2	469.6	473.9	479.4	482.1	482.9	482.3
165°	444.3	449.9	455.4	458.6	461.7	464.9	464.9	464.1
167.5°	434.4	438.6	442.4	445.3	446.7	448.5	448.3	447.3
170°	429.3	431.7	434.8	436.4	437.2	439.6	438.8	437.2
172.5°	423.6	425.3	427.9	428.8	429.6	430.7	429.9	429.0
175°	417.5	418.3	419.1	419.9	419.9	420.6	419.9	418.3
177.5°	413.0	413.0	413.7	413.7	413.7	413.7	413.0	411.8
180°	411.1	411.1	411.1	411.1	411.1	411.1	411.1	411.1

(END OF REPORT)