

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: P331441-927

Luminaire Tested: **SA2XXDIP-C1005D725U927-4F0-1E-UDD-D**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P331441-927  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-C1005D725U927-4F0-1E-UDD-D  
Description: DEFINE 2 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1005 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER  
UPLIGHT 725 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

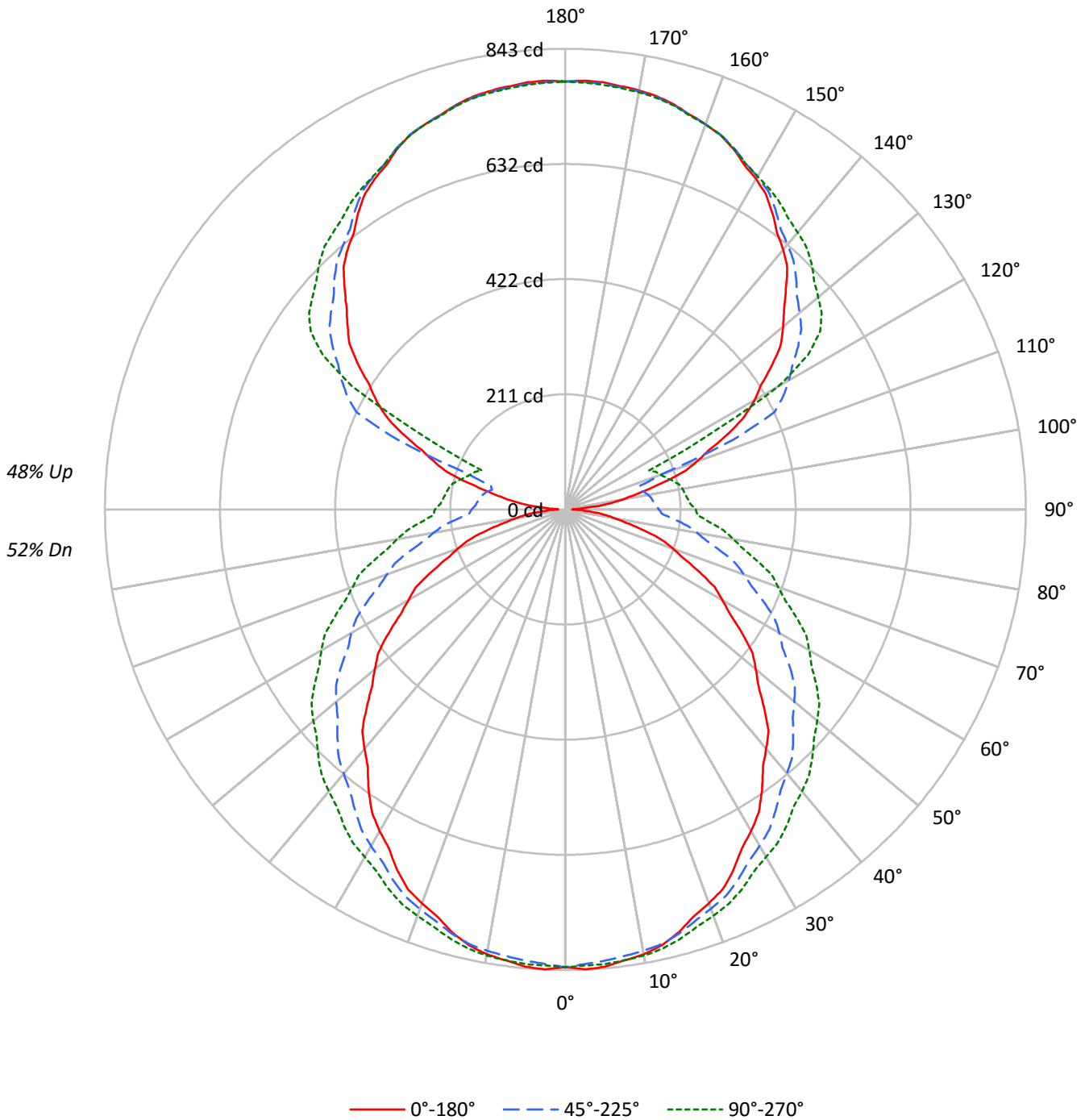
Lumens per Lamp: N/A  
Luminaire Lumens: 5492.8 lumens  
Efficiency: N/A  
Efficacy: 90.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')  
CIE Type: General Diffuse

Input Watts (W): 60.7  
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



TEST NUMBER: P331441-927  
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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	50	30	10	0	
RCR																						
0	108	108	108	108	99	99	99	99	84	84	84	70	70	70	58	58	58	52				
1	97	92	87	83	89	85	81	77	72	69	66	60	57	56	49	47	46	40				
2	87	79	72	67	80	73	67	62	62	57	53	51	48	45	42	39	37	33				
3	79	69	61	55	73	64	57	51	54	49	44	45	41	37	37	34	31	27				
4	72	61	52	46	66	56	49	43	48	42	37	40	35	32	32	29	26	23				
5	66	54	45	39	61	50	42	37	42	36	32	35	31	27	29	25	23	19				
6	61	48	40	34	56	45	37	32	38	32	28	32	27	24	26	23	20	17				
7	56	43	35	29	52	40	33	28	34	28	24	29	24	21	24	20	17	15				
8	52	39	31	26	48	37	29	24	31	26	21	26	22	18	22	18	16	13				
9	49	36	28	23	45	33	26	22	29	23	19	24	20	16	20	17	14	12				
10	45	33	25	20	42	31	24	19	26	21	17	22	18	15	19	15	13	11				

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

	0°	45°	90°
0°	13525	13525	13525
5°	13591	13020	12971
10°	13506	12635	12493
15°	13320	12228	11990
20°	13085	11791	11506
25°	12852	11370	11066
30°	12525	10939	10626
35°	12192	10521	10314
40°	11845	10165	10004
45°	11515	9846	9739
50°	11159	9559	9477
55°	10787	9249	9211
60°	10329	8927	8928
65°	9856	8551	8595
70°	9323	8147	8233
75°	8642	7750	7901
80°	7567	7345	7563
85°	6539	6995	7303



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.4	1.4
10°-20°	227.6	4.1
20°-30°	344.9	6.3
30°-40°	420.1	7.6
40°-50°	452.0	8.2
50°-60°	438.9	8.0
60°-70°	383.2	7.0
70°-80°	295.0	5.4
80°-90°	199.9	3.6
90°-100°	162.5	3.0
100°-110°	195.4	3.6
110°-120°	321.9	5.9
120°-130°	459.4	8.4
130°-140°	465.0	8.5
140°-150°	420.5	7.7
150°-160°	335.9	6.1
160°-170°	216.5	3.9
170°-180°	74.5	1.4
0°-30°	651.9	11.9
0°-40°	1072.0	19.5
0°-60°	1962.9	35.7
0°-90°	2841.1	51.7
90°-120°	679.8	12.4
90°-150°	2024.7	36.9
90°-180°	2652.0	48.3
0°-180°	5492.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	838	838	838	838	838	
5°	840	836	829	836	835	80
15°	801	804	804	814	813	226
25°	728	737	748	762	766	335
35°	628	648	671	697	706	392
45°	515	548	590	626	640	397
55°	395	439	501	544	561	353
65°	270	330	401	449	466	268
75°	149	218	295	345	363	158
85°	44	119	197	246	265	47
90°	13	90	172	221	239	10
95°	47	87	162	209	225	53
105°	178	223	139	186	203	191
115°	331	356	422	208	169	325
125°	463	473	520	556	570	413
135°	571	581	598	628	637	441
145°	661	661	670	681	685	414
155°	728	724	730	733	729	335
165°	767	764	766	769	766	217
175°	785	781	782	785	780	75
180°	783	783	783	783	783	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	842.6	841.9	841.2	840.6	840.0	838.8	837.3	835.8	834.3	832.8	833.9
5°	840.1	839.3	838.5	837.7	836.9	835.7	834.1	832.4	830.8	829.2	830.8
7.5°	832.6	832.0	831.5	831.0	830.4	829.6	828.3	827.0	825.9	824.6	826.5
10°	826.8	826.2	825.7	825.1	824.6	823.9	823.2	822.3	821.5	820.7	822.8
12.5°	817.1	817.1	817.3	817.4	817.5	817.2	816.7	816.0	815.5	814.8	817.1
15°	801.3	801.8	802.3	802.9	803.4	803.7	803.7	803.7	803.7	803.7	806.1
17.5°	780.9	782.0	783.2	784.3	785.4	786.4	787.3	788.1	789.0	789.9	792.4
20°	767.3	768.7	770.0	771.3	772.7	773.9	775.0	776.0	777.1	778.2	781.2
22.5°	752.7	754.2	755.8	757.4	759.0	760.5	762.0	763.5	765.0	766.5	769.5
25°	728.4	730.3	732.2	734.1	736.0	738.2	740.5	743.0	745.4	747.8	751.1
27.5°	699.3	702.3	705.4	708.5	711.6	714.5	717.4	720.3	723.1	726.0	730.1
30°	679.9	683.3	686.9	690.4	693.9	697.4	700.9	704.4	707.9	711.5	715.7
32.5°	658.5	662.4	666.4	670.3	674.2	678.3	682.5	686.6	690.8	694.9	699.9
35°	627.6	632.2	636.8	641.4	646.0	650.9	656.0	661.1	666.2	671.4	677.3
37.5°	594.1	599.4	604.8	610.0	615.3	621.2	627.9	634.5	641.2	647.8	654.4
40°	571.8	577.7	583.7	589.6	595.6	602.1	609.4	616.7	624.0	631.3	638.3
42.5°	550.5	556.3	562.3	568.2	574.2	581.3	589.7	598.1	606.4	614.8	622.4
45°	514.8	522.0	529.3	536.6	543.9	552.2	561.7	571.2	580.6	590.0	598.4
47.5°	479.6	487.5	495.4	503.4	511.3	520.8	531.9	542.9	554.0	565.0	573.8
50°	455.3	463.7	472.0	480.4	488.7	499.0	511.1	523.2	535.4	547.6	556.7
52.5°	432.0	440.8	449.6	458.4	467.1	477.9	490.7	503.5	516.3	529.1	538.4
55°	394.6	404.3	414.0	423.7	433.4	445.3	459.3	473.3	487.4	501.4	511.1
57.5°	357.7	368.6	379.5	390.5	401.5	414.1	428.4	442.7	457.0	471.3	481.7
60°	331.4	343.0	354.7	366.2	377.9	391.3	406.7	422.1	437.4	452.8	463.1
62.5°	308.2	320.1	332.2	344.2	356.2	369.9	385.3	400.7	416.1	431.5	442.4
65°	269.5	282.7	296.0	309.2	322.4	337.0	352.9	368.8	384.7	400.6	411.7
67.5°	234.1	247.9	261.7	275.5	289.3	304.4	320.7	337.0	353.2	369.6	380.7
70°	208.8	222.8	236.9	250.9	264.9	280.3	297.1	313.8	330.5	347.2	358.8
72.5°	185.5	199.9	214.4	228.9	243.4	259.0	276.0	292.9	309.9	326.9	338.2
75°	149.3	164.5	179.5	194.6	209.8	225.9	243.2	260.5	277.7	295.0	306.6
77.5°	114.4	130.2	146.0	161.8	177.6	194.2	211.8	229.3	246.8	264.4	276.0
80°	91.0	107.5	124.0	140.5	156.9	173.9	191.4	209.0	226.5	244.0	255.3
82.5°	71.6	87.9	104.1	120.3	136.6	153.6	171.3	189.1	206.8	224.6	235.9
85°	43.7	60.4	77.2	93.9	110.6	127.6	144.9	162.2	179.4	196.7	208.0
87.5°	23.9	40.2	56.6	73.0	89.4	106.2	123.7	141.2	158.7	176.1	187.3
90°	12.7	29.7	46.7	63.8	80.8	98.5	116.8	135.1	153.3	171.6	183.0
92.5°	22.6	37.1	51.5	65.9	80.4	96.2	113.3	130.4	147.5	164.7	175.5
95°	46.6	55.1	63.6	72.1	80.6	93.5	110.5	127.5	144.7	161.7	172.6
97.5°	81.6	81.2	80.7	80.3	79.9	88.4	106.0	123.6	141.2	158.8	169.2
100°	108.8	101.6	94.3	87.0	79.7	84.7	102.0	119.2	136.5	153.7	164.7
102.5°	137.8	143.2	148.7	154.2	159.6	160.7	157.5	154.2	151.1	147.8	158.9
105°	178.3	190.0	201.5	213.2	224.7	220.4	200.0	179.7	159.3	138.9	149.8
107.5°	226.0	235.4	244.6	254.0	263.2	254.1	226.2	198.4	170.6	142.8	150.5
110°	255.9	264.0	272.0	280.0	288.0	280.5	257.3	234.2	211.0	187.8	183.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	284.9	291.8	298.7	305.5	312.4	317.7	321.2	324.8	328.4	331.9	294.6
115°	330.7	335.8	340.9	346.0	351.1	361.3	376.6	391.9	407.2	422.5	372.2
117.5°	370.4	374.7	379.1	383.4	387.8	396.6	410.0	423.3	436.7	450.1	444.0
120°	400.3	403.3	406.2	409.2	412.2	420.2	433.2	446.3	459.4	472.5	481.5
122.5°	425.7	428.1	430.6	432.9	435.4	442.9	455.5	468.1	480.8	493.4	501.6
125°	463.1	464.8	466.4	468.0	469.7	476.0	487.0	498.0	509.1	520.1	528.3
127.5°	498.1	499.7	501.2	502.8	504.3	509.5	518.2	527.0	535.8	544.5	552.5
130°	520.4	522.1	523.9	525.6	527.4	531.7	538.8	545.8	552.9	559.9	567.8
132.5°	543.0	544.5	545.9	547.4	548.8	552.4	558.2	564.0	569.7	575.4	582.9
135°	571.3	573.3	575.3	577.3	579.3	582.3	586.1	589.9	593.7	597.6	604.5
137.5°	601.1	602.5	603.8	605.1	606.5	608.5	610.9	613.4	615.8	618.3	624.6
140°	620.6	621.3	622.1	622.8	623.5	624.9	626.8	628.8	630.7	632.6	638.0
142.5°	636.9	637.5	638.2	638.8	639.4	640.6	642.3	644.0	645.7	647.4	651.9
145°	661.3	661.2	661.1	660.9	660.8	661.8	663.9	666.1	668.2	670.3	672.9
147.5°	683.7	683.2	682.7	682.2	681.8	682.5	684.7	686.7	688.9	691.0	691.9
150°	698.2	697.3	696.4	695.5	694.6	695.2	697.2	699.2	701.2	703.2	704.0
152.5°	710.3	709.4	708.4	707.4	706.5	706.9	708.8	710.7	712.6	714.5	715.3
155°	728.2	727.1	725.9	724.8	723.7	723.8	725.3	726.8	728.3	729.8	730.6
157.5°	742.1	741.2	740.2	739.3	738.3	738.3	739.4	740.5	741.5	742.6	743.5
160°	750.3	749.5	748.8	748.0	747.3	747.3	748.0	748.8	749.5	750.3	751.1
162.5°	757.6	756.8	756.1	755.3	754.5	754.5	755.1	755.7	756.5	757.1	758.0
165°	767.3	766.5	765.8	765.0	764.2	764.1	764.5	764.9	765.2	765.6	766.4
167.5°	774.5	773.8	773.0	772.3	771.5	771.3	771.7	772.0	772.4	772.7	773.6
170°	778.6	777.8	777.1	776.3	775.6	775.3	775.6	775.9	776.1	776.3	777.2
172.5°	781.3	780.5	779.8	779.0	778.3	778.1	778.3	778.6	778.8	779.0	780.0
175°	784.8	783.9	783.1	782.2	781.3	781.0	781.3	781.5	781.7	782.0	782.9
177.5°	785.4	784.7	784.0	783.3	782.6	782.3	782.4	782.5	782.6	782.7	783.4
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	837.7	837.7	837.7	837.7	837.7	837.7	837.7	837.7
2.5°	835.0	836.1	837.2	837.5	837.0	836.6	836.1	835.8
5°	832.4	834.1	835.7	836.3	836.1	835.8	835.5	835.3
7.5°	828.5	830.4	832.3	833.2	832.9	832.7	832.3	832.1
10°	825.0	827.2	829.3	830.3	830.0	829.7	829.5	829.2
12.5°	819.2	821.3	823.5	824.4	824.2	823.9	823.6	823.4
15°	808.6	811.0	813.4	814.5	814.2	814.0	813.7	813.4
17.5°	795.0	797.5	800.0	801.3	801.3	801.3	801.3	801.3
20°	784.1	787.1	790.0	791.5	791.5	791.5	791.5	791.5
22.5°	772.5	775.5	778.4	780.1	780.5	781.0	781.4	781.9
25°	754.3	757.6	760.8	762.8	763.7	764.5	765.2	766.0
27.5°	734.2	738.3	742.4	744.7	745.4	745.9	746.6	747.1
30°	720.1	724.4	728.7	731.3	732.1	732.8	733.7	734.5
32.5°	704.9	709.8	714.8	718.0	719.5	720.9	722.4	723.8
35°	683.3	689.2	695.1	699.0	700.9	702.8	704.7	706.5
37.5°	661.0	667.6	674.1	678.4	680.4	682.5	684.4	686.4
40°	645.3	652.4	659.3	664.1	666.5	668.9	671.4	673.8
42.5°	630.1	637.8	645.5	650.5	652.9	655.4	657.7	660.2
45°	606.7	615.1	623.4	629.0	631.7	634.4	637.1	639.8
47.5°	582.5	591.2	600.0	605.9	608.8	611.8	614.7	617.7
50°	565.9	575.0	584.2	590.3	593.3	596.2	599.2	602.1
52.5°	547.9	557.2	566.6	572.9	576.1	579.3	582.5	585.7
55°	520.9	530.5	540.3	546.8	550.3	553.9	557.4	560.9
57.5°	492.3	502.7	513.2	520.1	523.7	527.3	530.8	534.4
60°	473.3	483.6	493.8	500.9	504.6	508.4	512.2	515.9
62.5°	453.3	464.1	475.1	482.3	485.8	489.4	493.0	496.5
65°	422.8	433.8	444.9	452.2	455.7	459.1	462.7	466.2
67.5°	391.9	403.1	414.2	421.7	425.3	429.0	432.7	436.3
70°	370.4	382.0	393.6	401.0	404.3	407.5	410.7	414.0
72.5°	349.6	361.0	372.3	380.0	383.9	387.8	391.7	395.5
75°	318.2	329.8	341.4	349.0	352.4	356.0	359.5	363.0
77.5°	287.5	299.0	310.6	318.3	322.0	325.8	329.6	333.4
80°	266.6	278.1	289.4	296.9	300.7	304.4	308.2	312.0
82.5°	247.2	258.6	269.9	277.3	280.9	284.5	288.0	291.6
85°	219.4	230.7	242.0	249.5	253.3	257.1	260.9	264.7
87.5°	198.4	209.5	220.6	228.0	231.5	235.0	238.4	242.0
90°	194.4	205.9	217.3	224.7	228.2	231.7	235.2	238.7
92.5°	186.5	197.3	208.3	215.4	218.8	222.2	225.6	228.9
95°	183.5	194.3	205.3	212.2	215.3	218.5	221.6	224.7
97.5°	179.7	190.2	200.7	207.6	211.0	214.3	217.6	220.9
100°	175.7	186.6	197.6	204.8	207.9	211.2	214.4	217.6
102.5°	170.0	181.0	192.1	199.3	202.6	206.0	209.3	212.6
105°	160.7	171.4	182.3	189.4	192.9	196.4	199.9	203.4
107.5°	158.1	165.8	173.5	179.0	182.5	186.0	189.4	192.9
110°	179.9	175.9	172.0	171.7	175.2	178.6	182.1	185.6





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	257.4	220.1	182.8	165.8	169.1	172.5	175.9	179.3
115°	322.0	271.9	221.7	193.5	187.4	181.3	175.2	169.1
117.5°	437.9	431.8	425.7	409.1	382.1	355.0	328.0	301.0
120°	490.6	499.6	508.7	506.2	492.2	478.2	464.1	450.1
122.5°	509.8	518.1	526.3	530.0	529.3	528.5	527.8	527.0
125°	536.5	544.6	552.8	558.3	561.1	563.9	566.6	569.5
127.5°	560.4	568.4	576.4	581.6	584.0	586.5	588.9	591.4
130°	575.7	583.5	591.4	596.4	598.3	600.4	602.5	604.4
132.5°	590.3	597.8	605.2	609.9	612.0	614.0	616.0	618.1
135°	611.4	618.4	625.3	629.7	631.6	633.5	635.4	637.3
137.5°	630.7	636.9	643.1	646.9	648.3	649.7	651.2	652.5
140°	643.5	649.0	654.3	657.6	658.5	659.6	660.5	661.6
142.5°	656.4	660.8	665.4	668.0	668.8	669.6	670.3	671.1
145°	675.4	677.9	680.4	682.0	682.7	683.4	684.1	684.8
147.5°	692.8	693.6	694.5	695.0	695.1	695.2	695.3	695.5
150°	704.7	705.5	706.2	706.3	705.7	705.0	704.4	703.8
152.5°	716.1	716.8	717.6	717.6	716.8	715.9	715.1	714.2
155°	731.4	732.1	732.9	732.8	731.7	730.8	729.8	728.7
157.5°	744.3	745.1	746.0	745.9	745.0	743.9	743.0	742.0
160°	751.8	752.6	753.3	753.2	752.3	751.5	750.6	749.7
162.5°	758.8	759.6	760.5	760.4	759.3	758.2	757.2	756.1
165°	767.3	768.3	769.1	769.1	768.3	767.3	766.4	765.6
167.5°	774.5	775.4	776.3	776.1	775.0	773.9	772.7	771.6
170°	778.1	779.0	779.9	779.7	778.6	777.4	776.3	775.2
172.5°	780.9	781.7	782.6	782.4	781.3	780.2	779.0	777.9
175°	783.8	784.7	785.5	785.4	784.1	782.8	781.6	780.3
177.5°	784.1	784.8	785.5	785.4	784.5	783.6	782.7	781.8
180°	783.2	783.2	783.2	783.2	783.2	783.2	783.2	783.2

(END OF REPORT)