

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: P331563-940

Luminaire Tested: **S122DIW-S865D710U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331563-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S865D710U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 865 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 710 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

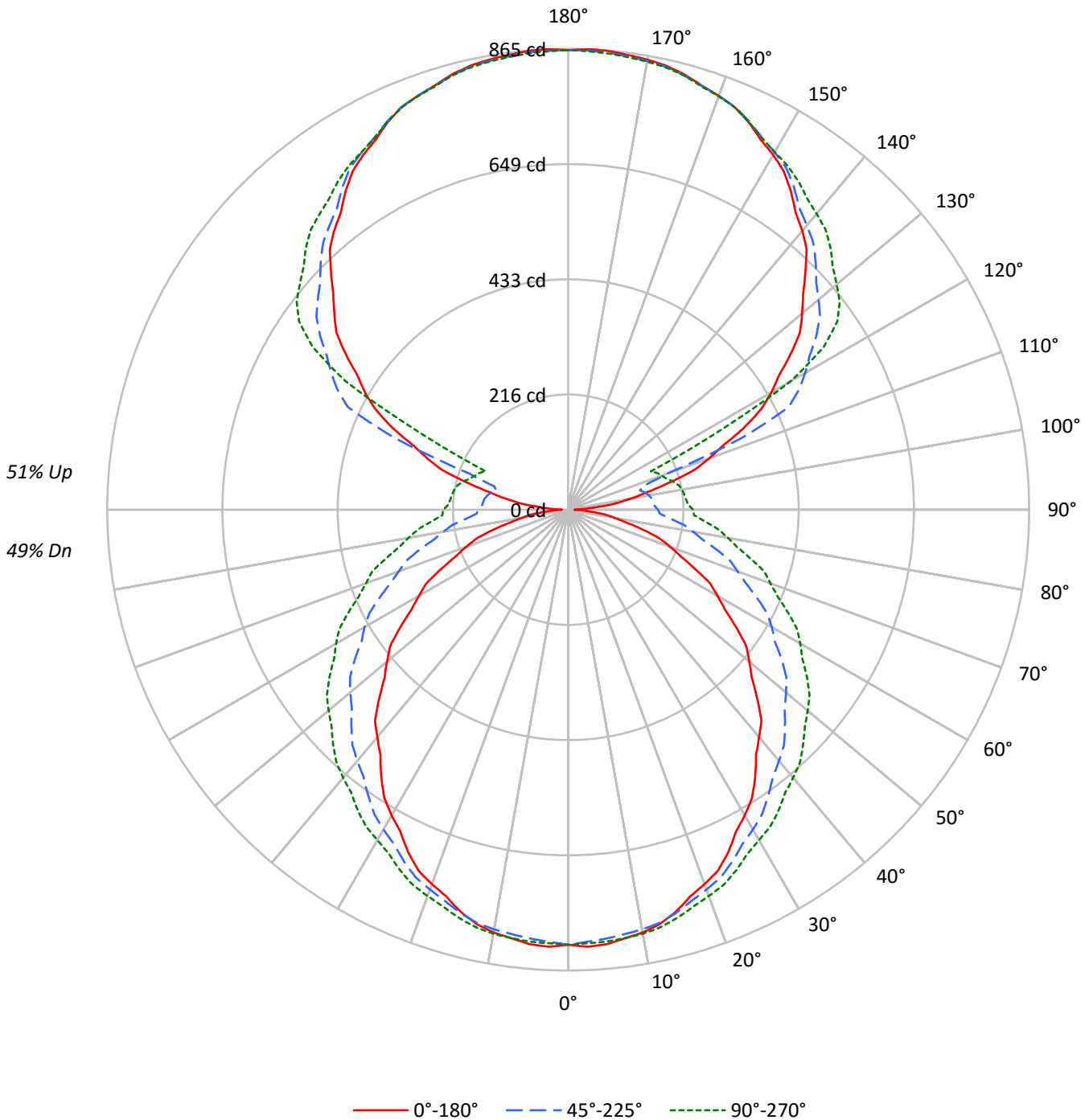
Lumens per Lamp: N/A
Luminaire Lumens: 5645.1 lumens
Efficiency: N/A
Efficacy: 105.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: General Diffuse

Input Watts (W): 53.6
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	107	107	107	107	99	99	99	99	83	83	83	68	68	68	55	55	55	49
1	96	91	87	83	88	84	80	77	70	68	65	58	56	54	47	45	44	38
2	87	79	72	66	80	73	67	62	61	56	53	50	47	44	40	38	36	31
3	79	69	61	55	72	63	56	51	53	48	44	44	40	37	35	32	30	25
4	72	60	52	46	66	56	48	43	47	41	37	39	34	31	31	28	25	21
5	66	54	45	39	60	50	42	36	42	36	31	35	30	26	28	24	22	18
6	61	48	40	33	55	44	37	31	38	32	27	31	26	23	25	22	19	16
7	56	43	35	29	51	40	33	27	34	28	24	28	24	20	23	19	17	14
8	52	39	31	26	48	36	29	24	31	25	21	26	21	18	21	17	15	12
9	48	36	28	23	44	33	26	21	28	23	19	24	19	16	19	16	13	11
10	45	33	25	20	41	30	24	19	26	20	17	22	17	14	18	15	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13183	13183	13183
5°	13247	12690	12640
10°	13163	12315	12177
15°	12982	11917	11686
20°	12752	11492	11215
25°	12527	11082	10786
30°	12206	10661	10357
35°	11884	10253	10054
40°	11544	9907	9750
45°	11222	9597	9493
50°	10875	9317	9238
55°	10513	9015	8977
60°	10070	8702	8703
65°	9607	8336	8376
70°	9087	7940	8025
75°	8422	7553	7701
80°	7376	7159	7372
85°	6374	6817	7118



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.4	1.4
10°-20°	221.8	3.9
20°-30°	336.2	6.0
30°-40°	409.5	7.3
40°-50°	440.5	7.8
50°-60°	427.8	7.6
60°-70°	373.5	6.6
70°-80°	287.6	5.1
80°-90°	195.1	3.5
90°-100°	161.7	2.9
100°-110°	202.6	3.6
110°-120°	346.2	6.1
120°-130°	501.4	8.9
130°-140°	510.2	9.0
140°-150°	462.9	8.2
150°-160°	370.1	6.6
160°-170°	238.5	4.2
170°-180°	82.1	1.5
0°-30°	635.4	11.3
0°-40°	1044.8	18.5
0°-60°	1913.1	33.9
0°-90°	2769.3	49.1
90°-120°	710.6	12.6
90°-150°	2185.1	38.7
90°-180°	2876.0	50.9
0°-180°	5645.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	816	816	816	816	816	
5°	819	815	808	815	814	78
15°	781	783	783	793	793	220
25°	710	718	729	742	747	326
35°	612	632	654	679	689	382
45°	502	534	575	610	624	387
55°	385	428	489	530	547	344
65°	263	321	390	437	454	261
75°	146	212	288	336	354	154
85°	43	116	192	240	258	46
90°	12	88	169	217	235	10
95°	50	87	160	207	222	57
105°	196	240	140	186	204	210
115°	364	390	456	215	171	358
125°	510	520	568	603	616	455
135°	629	640	657	686	696	486
145°	728	728	738	750	753	456
155°	802	797	804	807	803	369
165°	845	842	843	847	843	239
175°	865	860	862	865	860	82
180°	863	863	863	863	863	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	821.2	820.6	819.9	819.3	818.7	817.6	816.1	814.7	813.2	811.7	812.8
5°	818.8	818.1	817.3	816.5	815.6	814.5	812.9	811.3	809.8	808.2	809.8
7.5°	811.5	810.9	810.4	809.9	809.4	808.5	807.3	806.1	804.9	803.7	805.6
10°	805.8	805.3	804.8	804.2	803.7	803.1	802.3	801.5	800.7	799.9	802.0
12.5°	796.3	796.5	796.6	796.7	796.7	796.5	795.9	795.3	794.8	794.2	796.3
15°	781.0	781.5	782.0	782.6	783.0	783.3	783.3	783.3	783.3	783.3	785.7
17.5°	761.1	762.1	763.3	764.4	765.4	766.4	767.3	768.1	769.0	769.8	772.3
20°	747.8	749.1	750.5	751.8	753.0	754.3	755.3	756.3	757.4	758.5	761.3
22.5°	733.6	735.1	736.6	738.2	739.7	741.2	742.7	744.1	745.6	747.1	750.0
25°	710.0	711.8	713.6	715.5	717.3	719.4	721.8	724.2	726.5	728.9	732.0
27.5°	681.5	684.6	687.5	690.5	693.6	696.4	699.2	702.0	704.8	707.6	711.6
30°	662.6	666.0	669.5	672.9	676.3	679.8	683.1	686.5	690.0	693.4	697.6
32.5°	641.8	645.6	649.4	653.4	657.2	661.1	665.1	669.2	673.2	677.3	682.2
35°	611.7	616.2	620.7	625.2	629.6	634.4	639.4	644.4	649.3	654.3	660.1
37.5°	579.1	584.2	589.4	594.5	599.7	605.5	612.0	618.5	624.9	631.4	637.8
40°	557.3	563.1	568.9	574.7	580.4	586.9	594.0	601.1	608.2	615.3	622.1
42.5°	536.5	542.2	548.0	553.8	559.6	566.6	574.7	582.9	591.0	599.2	606.6
45°	501.7	508.8	515.9	523.0	530.1	538.2	547.4	556.7	565.9	575.1	583.2
47.5°	467.3	475.1	482.9	490.6	498.3	507.6	518.4	529.1	539.9	550.7	559.2
50°	443.7	451.8	460.0	468.1	476.4	486.3	498.1	510.0	521.8	533.7	542.6
52.5°	421.0	429.5	438.2	446.7	455.3	465.8	478.3	490.7	503.2	515.7	524.8
55°	384.6	394.0	403.5	413.0	422.4	434.0	447.6	461.4	475.0	488.7	498.1
57.5°	348.6	359.3	370.0	380.6	391.3	403.6	417.5	431.5	445.4	459.3	469.6
60°	323.1	334.3	345.6	357.0	368.3	381.4	396.4	411.3	426.3	441.4	451.4
62.5°	300.3	312.0	323.8	335.5	347.2	360.6	375.6	390.6	405.6	420.5	431.1
65°	262.7	275.5	288.5	301.3	314.2	328.4	343.9	359.4	375.0	390.5	401.3
67.5°	228.1	241.6	255.0	268.5	282.0	296.7	312.5	328.4	344.3	360.2	371.0
70°	203.5	217.2	230.9	244.5	258.2	273.2	289.5	305.8	322.1	338.4	349.7
72.5°	180.8	194.9	209.0	223.1	237.2	252.4	269.0	285.5	302.0	318.5	329.7
75°	145.5	160.2	175.0	189.8	204.5	220.3	237.0	253.9	270.7	287.5	298.8
77.5°	111.5	126.9	142.3	157.7	173.1	189.3	206.4	223.6	240.6	257.7	268.9
80°	88.7	104.8	120.8	136.9	152.9	169.4	186.5	203.7	220.7	237.8	248.9
82.5°	69.8	85.6	101.5	117.3	133.1	149.7	167.0	184.3	201.6	218.9	230.0
85°	42.6	58.9	75.2	91.5	107.8	124.4	141.2	158.0	174.9	191.7	202.8
87.5°	23.3	39.3	55.3	71.2	87.2	103.7	120.8	137.9	154.9	171.9	182.8
90°	12.5	29.2	46.0	62.8	79.5	96.9	114.9	132.8	150.7	168.7	179.9
92.5°	23.5	37.5	51.6	65.7	79.7	95.1	111.9	128.7	145.4	162.1	172.8
95°	50.0	57.8	65.6	73.4	81.1	93.5	110.2	126.9	143.7	160.4	171.1
97.5°	88.8	86.9	85.0	83.1	81.1	88.9	106.3	123.7	141.1	158.5	168.8
100°	118.8	109.5	100.2	91.0	81.7	85.6	102.6	119.8	136.8	153.9	164.8
102.5°	150.8	155.7	160.5	165.4	170.2	170.0	164.5	159.1	153.7	148.3	159.3
105°	195.7	207.5	219.3	231.0	242.8	236.7	212.4	188.2	164.1	139.8	150.6
107.5°	248.3	257.7	267.2	276.6	286.1	274.6	242.4	210.0	177.7	145.3	152.7
110°	281.2	289.4	297.7	305.8	314.0	304.4	277.2	250.0	222.8	195.6	190.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	313.3	320.2	327.3	334.2	341.3	345.9	348.2	350.6	352.9	355.3	313.1
115°	363.6	368.9	374.2	379.4	384.7	394.9	410.3	425.5	440.9	456.1	399.8
117.5°	407.6	412.1	416.6	421.2	425.7	434.6	447.9	461.3	474.6	487.9	480.2
120°	440.5	443.6	446.7	450.0	453.1	461.1	474.1	487.1	500.2	513.2	522.2
122.5°	468.5	471.1	473.7	476.4	478.9	486.5	499.2	511.8	524.3	537.0	545.1
125°	509.9	511.7	513.4	515.3	517.1	523.5	534.6	545.6	556.7	567.8	575.8
127.5°	548.5	550.2	552.0	553.7	555.4	560.6	569.4	578.2	586.9	595.7	603.6
130°	572.9	574.9	576.8	578.8	580.8	585.2	592.3	599.3	606.4	613.4	621.3
132.5°	597.9	599.5	601.1	602.8	604.4	608.1	613.9	619.6	625.4	631.2	638.6
135°	629.2	631.4	633.6	635.8	638.0	641.1	645.0	648.9	652.7	656.7	663.5
137.5°	662.0	663.5	665.0	666.6	668.0	670.0	672.6	675.2	677.8	680.4	686.5
140°	683.5	684.3	685.2	686.0	686.9	688.3	690.4	692.4	694.5	696.5	702.0
142.5°	701.4	702.2	702.9	703.6	704.4	705.7	707.6	709.4	711.2	713.1	717.6
145°	728.5	728.3	728.3	728.1	727.9	729.1	731.4	733.8	736.1	738.5	741.0
147.5°	753.0	752.6	752.1	751.5	751.0	751.9	754.2	756.5	758.8	761.2	762.1
150°	769.1	768.1	767.1	766.2	765.2	765.8	768.0	770.3	772.5	774.7	775.5
152.5°	782.6	781.5	780.4	779.3	778.2	778.7	780.9	782.9	785.1	787.2	788.0
155°	802.2	800.9	799.7	798.4	797.2	797.4	799.1	800.7	802.4	804.1	804.9
157.5°	817.5	816.5	815.4	814.3	813.3	813.3	814.5	815.6	816.8	818.0	818.9
160°	826.5	825.6	824.8	824.0	823.1	823.1	824.0	824.8	825.6	826.5	827.3
162.5°	834.5	833.7	832.9	832.0	831.2	831.1	831.8	832.6	833.3	834.0	834.9
165°	845.3	844.4	843.6	842.8	841.9	841.7	842.1	842.5	842.9	843.4	844.4
167.5°	853.2	852.4	851.6	850.7	849.9	849.7	850.1	850.4	850.9	851.2	852.2
170°	857.7	856.8	856.0	855.2	854.3	854.1	854.3	854.7	855.0	855.2	856.2
172.5°	860.7	859.9	859.1	858.2	857.4	857.1	857.4	857.6	857.9	858.2	859.2
175°	864.6	863.6	862.6	861.7	860.7	860.3	860.6	860.9	861.2	861.5	862.5
177.5°	865.2	864.4	863.6	862.9	862.1	861.7	861.8	862.0	862.1	862.2	863.0
180°	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	816.5	816.5	816.5	816.5	816.5	816.5	816.5	816.5
2.5°	813.8	814.8	815.9	816.3	815.8	815.4	814.9	814.6
5°	811.3	812.9	814.5	815.1	814.8	814.6	814.3	814.0
7.5°	807.4	809.3	811.3	812.1	811.8	811.5	811.3	811.0
10°	804.1	806.2	808.3	809.2	809.0	808.7	808.4	808.2
12.5°	798.4	800.5	802.6	803.5	803.3	803.0	802.7	802.5
15°	788.0	790.4	792.8	793.8	793.5	793.3	793.0	792.8
17.5°	774.8	777.2	779.7	781.0	781.0	781.0	781.0	781.0
20°	764.3	767.1	770.0	771.5	771.5	771.5	771.5	771.5
22.5°	752.9	755.8	758.7	760.4	760.7	761.2	761.6	762.1
25°	735.2	738.3	741.5	743.5	744.2	745.0	745.8	746.6
27.5°	715.6	719.6	723.5	725.9	726.5	727.0	727.6	728.2
30°	701.8	706.0	710.2	712.7	713.5	714.3	715.1	715.9
32.5°	687.0	691.8	696.6	699.8	701.2	702.6	704.0	705.4
35°	665.9	671.7	677.5	681.3	683.1	685.0	686.8	688.7
37.5°	644.2	650.6	657.0	661.2	663.2	665.1	667.1	669.1
40°	628.9	635.8	642.7	647.2	649.6	651.9	654.3	656.7
42.5°	614.1	621.6	629.1	634.0	636.3	638.7	641.1	643.5
45°	591.4	599.5	607.7	613.1	615.7	618.3	621.0	623.6
47.5°	567.8	576.2	584.8	590.5	593.3	596.3	599.1	602.1
50°	551.5	560.4	569.4	575.3	578.2	581.1	584.0	586.9
52.5°	534.0	543.1	552.2	558.4	561.5	564.6	567.7	570.8
55°	507.7	517.1	526.6	533.0	536.4	539.8	543.2	546.6
57.5°	479.7	489.9	500.2	507.0	510.4	513.9	517.4	520.8
60°	461.4	471.4	481.3	488.1	491.9	495.5	499.2	502.9
62.5°	441.8	452.4	463.0	470.1	473.5	477.0	480.5	483.9
65°	412.1	422.8	433.6	440.7	444.1	447.5	450.9	454.3
67.5°	381.9	392.8	403.8	411.0	414.6	418.1	421.7	425.3
70°	361.1	372.3	383.6	390.8	394.0	397.2	400.4	403.5
72.5°	340.7	351.8	362.9	370.3	374.2	377.9	381.7	385.5
75°	310.1	321.5	332.8	340.1	343.6	347.0	350.4	353.8
77.5°	280.3	291.5	302.7	310.2	313.9	317.5	321.3	324.9
80°	259.9	271.0	282.0	289.4	293.0	296.8	300.4	304.1
82.5°	241.0	252.0	263.1	270.4	273.8	277.2	280.7	284.2
85°	213.7	224.8	235.9	243.3	246.9	250.6	254.2	258.0
87.5°	193.7	204.6	215.4	222.6	226.0	229.4	232.8	236.2
90°	191.1	202.3	213.5	220.9	224.3	227.7	231.1	234.6
92.5°	183.5	194.1	204.8	211.8	215.2	218.5	221.8	225.1
95°	181.8	192.5	203.1	210.0	213.0	216.1	219.1	222.0
97.5°	179.1	189.3	199.7	206.4	209.6	212.9	216.2	219.5
100°	175.6	186.5	197.2	204.3	207.4	210.6	213.7	217.0
102.5°	170.2	181.2	192.2	199.2	202.5	205.8	209.1	212.4
105°	161.3	172.0	182.7	189.8	193.3	196.7	200.2	203.7
107.5°	160.0	167.2	174.5	179.9	183.3	186.7	190.2	193.7
110°	184.7	179.2	173.8	172.8	176.2	179.7	183.2	186.5



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	270.9	228.7	186.5	167.1	170.4	173.8	177.1	180.5
115°	343.5	287.1	230.8	199.1	192.0	184.9	177.8	170.7
117.5°	472.4	464.7	456.9	437.9	407.8	377.6	347.5	317.4
120°	531.3	540.3	549.3	545.9	530.0	514.2	498.4	482.5
122.5°	553.3	561.4	569.5	573.1	571.9	570.8	569.5	568.4
125°	583.9	591.9	600.0	605.4	608.2	611.0	613.8	616.5
127.5°	611.5	619.5	627.4	632.6	635.0	637.4	639.7	642.1
130°	629.1	636.9	644.8	649.7	651.7	653.6	655.6	657.5
132.5°	646.0	653.4	660.8	665.6	667.5	669.5	671.5	673.4
135°	670.4	677.3	684.2	688.6	690.5	692.2	694.1	695.9
137.5°	692.8	698.9	705.2	708.9	710.2	711.5	712.8	714.2
140°	707.4	712.9	718.4	721.5	722.4	723.3	724.2	725.1
142.5°	722.1	726.7	731.1	733.7	734.4	735.0	735.8	736.4
145°	743.6	746.1	748.7	750.3	750.9	751.5	752.2	752.8
147.5°	763.0	764.0	764.9	765.4	765.4	765.5	765.5	765.6
150°	776.3	777.2	778.0	778.1	777.4	776.7	776.0	775.3
152.5°	788.8	789.7	790.5	790.5	789.5	788.6	787.7	786.8
155°	805.7	806.6	807.4	807.2	806.1	805.0	803.9	802.8
157.5°	819.9	820.8	821.8	821.7	820.6	819.6	818.5	817.3
160°	828.1	829.0	829.8	829.7	828.8	827.8	826.9	825.9
162.5°	835.9	836.8	837.8	837.7	836.4	835.3	834.0	832.9
165°	845.3	846.2	847.2	847.2	846.2	845.3	844.4	843.4
167.5°	853.2	854.2	855.1	855.0	853.7	852.5	851.2	850.0
170°	857.2	858.1	859.1	859.0	857.7	856.5	855.2	854.0
172.5°	860.1	861.1	862.1	861.9	860.7	859.4	858.2	856.9
175°	863.4	864.3	865.3	865.1	863.7	862.4	860.9	859.6
177.5°	863.8	864.5	865.3	865.2	864.2	863.2	862.2	861.2
180°	862.7	862.7	862.7	862.7	862.7	862.7	862.7	862.7

(END OF REPORT)