

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: P332778-830

Luminaire Tested: **S124DIW-S795D470U830-4F0-1E-UDD-D1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332778-830
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-10,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DIW-S795D470U830-4F0-1E-UDD-D1
Description: DEFINE 4 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 795 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 470 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4585.7 lumens
Efficiency: N/A
Efficacy: 121.6 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4' x H: 0.08')
CIE Type: Semi-Direct

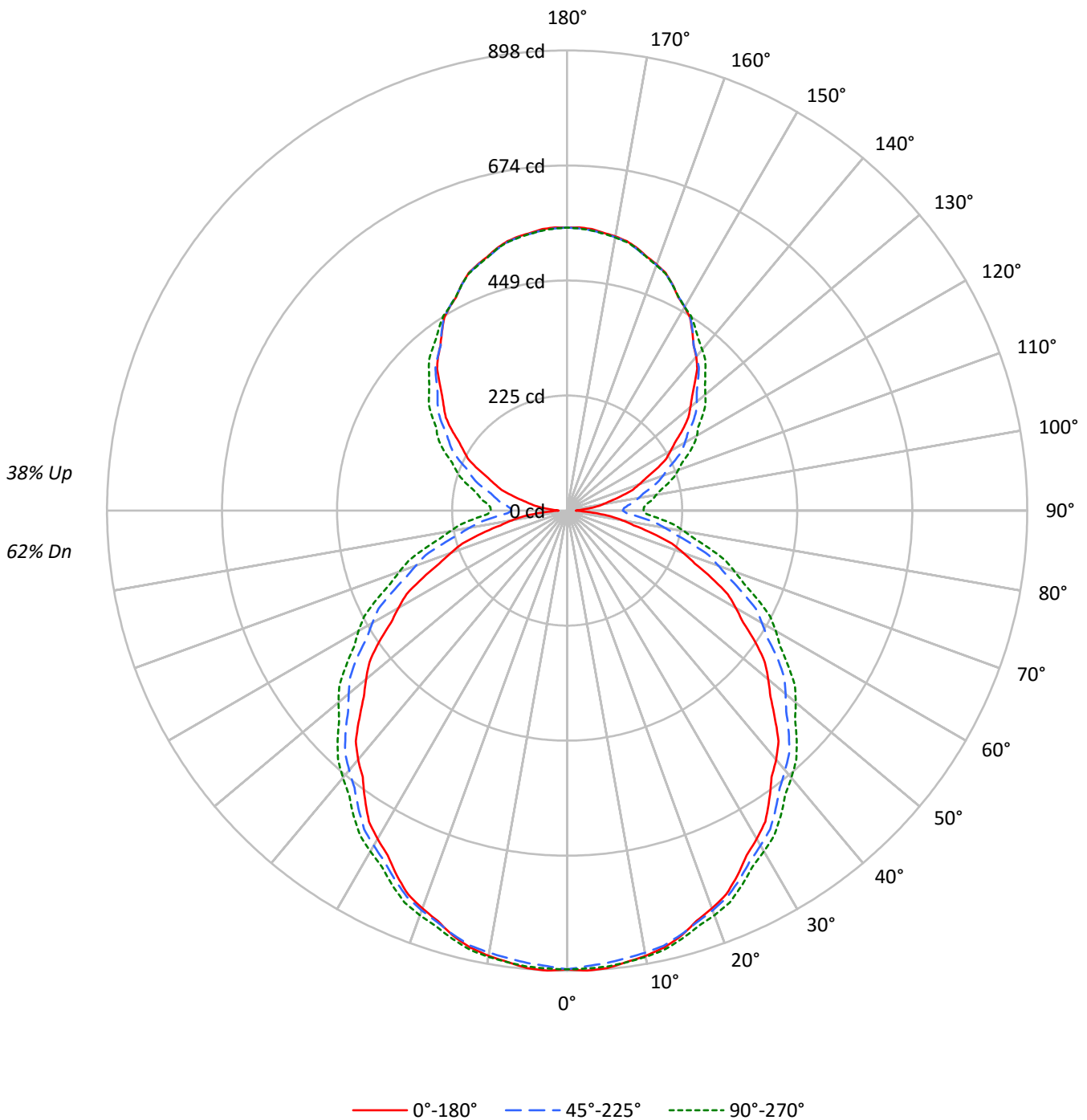
Input Watts (W): 37.7
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62
1	99	94	90	86	92	88	84	81	77	74	71	67	64	62	57	55	54	49
2	90	82	75	69	84	76	70	65	67	62	58	58	54	51	49	47	44	40
3	82	71	63	57	76	67	60	54	58	53	48	51	46	43	43	40	37	33
4	74	63	54	48	69	59	51	45	52	46	41	45	40	36	39	35	32	28
5	68	56	47	41	63	52	45	39	46	40	35	40	35	31	35	31	27	24
6	63	50	41	35	58	47	39	34	41	35	30	36	31	27	31	27	24	21
7	58	45	37	31	54	42	35	29	38	31	27	33	28	24	28	24	21	19
8	54	41	33	27	50	39	31	26	34	28	24	30	25	21	26	22	19	17
9	50	37	30	24	47	35	28	23	31	25	21	28	23	19	24	20	17	15
10	47	34	27	22	44	32	25	21	29	23	19	26	21	17	22	18	15	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7228	7228	7228
5°	7250	7064	7083
10°	7205	6948	6943
15°	7141	6814	6777
20°	7044	6667	6616
25°	6934	6501	6439
30°	6815	6336	6256
35°	6681	6168	6097
40°	6573	6008	5930
45°	6413	5859	5787
50°	6278	5689	5636
55°	6138	5529	5459
60°	5920	5324	5298
65°	5683	5104	5098
70°	5394	4853	4868
75°	4992	4579	4659
80°	4540	4312	4453
85°	3980	4075	4334



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.8	1.8
10°-20°	242.9	5.3
20°-30°	367.3	8.0
30°-40°	444.4	9.7
40°-50°	469.8	10.2
50°-60°	442.2	9.6
60°-70°	366.8	8.0
70°-80°	257.7	5.6
80°-90°	147.3	3.2
90°-100°	122.9	2.7
100°-110°	171.9	3.7
110°-120°	226.1	4.9
120°-130°	265.7	5.8
130°-140°	281.7	6.1
140°-150°	268.6	5.9
150°-160°	224.2	4.9
160°-170°	149.1	3.3
170°-180°	52.2	1.1
0°-30°	695.0	15.2
0°-40°	1139.4	24.8
0°-60°	2051.4	44.7
0°-90°	2823.2	61.6
90°-120°	521.0	11.4
90°-150°	1337.0	29.2
90°-180°	1763.0	38.4
0°-180°	4585.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	895	895	895	895	895	
5°	896	893	886	894	893	85
15°	859	860	857	866	865	242
25°	786	792	795	806	807	362
35°	688	700	710	723	727	431
45°	573	593	612	628	634	443
55°	449	471	500	520	526	400
65°	311	343	377	401	410	308
75°	172	210	252	279	289	183
85°	53	95	140	169	180	57
90°	17	62	109	139	149	12
95°	39	76	120	147	157	39
105°	109	130	168	193	204	116
115°	192	202	232	253	261	190
125°	275	276	299	316	322	245
135°	352	355	361	376	381	272
145°	426	427	427	433	436	267
155°	487	487	486	488	486	224
165°	530	529	528	530	529	149
175°	551	549	549	552	549	52
180°	552	552	552	552	552	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	898.5	898.0	897.4	896.9	896.4	895.4	893.9	892.5	891.1	889.7	890.9
5°	896.3	895.6	894.9	894.3	893.6	892.5	890.9	889.4	887.8	886.3	888.1
7.5°	888.6	888.3	887.9	887.5	887.0	886.2	885.0	883.6	882.3	881.1	883.1
10°	882.2	882.0	881.8	881.6	881.4	880.7	879.6	878.4	877.3	876.2	878.3
12.5°	873.5	873.4	873.4	873.3	873.3	872.9	872.1	871.3	870.5	869.8	871.7
15°	859.2	859.4	859.6	859.9	860.1	859.9	859.2	858.6	857.8	857.1	859.2
17.5°	839.7	840.4	841.0	841.8	842.4	842.6	842.5	842.4	842.3	842.2	844.2
20°	826.1	826.8	827.5	828.1	828.8	829.2	829.4	829.6	829.9	830.1	832.4
22.5°	810.9	811.7	812.6	813.4	814.3	814.9	815.3	815.7	816.1	816.5	818.7
25°	786.0	787.3	788.7	790.0	791.4	792.4	793.1	793.7	794.4	795.0	797.5
27.5°	758.4	760.3	762.2	764.2	766.2	767.7	768.7	769.7	770.7	771.8	774.0
30°	739.9	741.7	743.5	745.3	747.1	748.7	750.3	751.8	753.4	754.9	757.3
32.5°	719.8	722.0	724.2	726.2	728.4	730.3	732.1	733.8	735.6	737.3	740.1
35°	687.8	690.4	693.1	695.8	698.4	700.9	703.1	705.4	707.6	709.8	712.9
37.5°	655.4	658.6	661.7	664.7	667.8	670.7	673.4	676.2	679.0	681.7	684.9
40°	634.6	637.5	640.4	643.3	646.2	649.2	652.3	655.4	658.6	661.7	665.1
42.5°	610.6	613.8	617.1	620.3	623.6	627.0	630.7	634.3	638.0	641.6	645.4
45°	573.4	577.7	581.9	586.2	590.4	594.7	598.9	603.1	607.3	611.5	615.4
47.5°	538.0	542.3	546.7	551.1	555.4	560.1	565.0	569.9	574.8	579.7	583.6
50°	512.3	517.2	522.1	527.0	531.9	536.8	541.7	546.6	551.5	556.4	560.9
52.5°	486.6	491.5	496.4	501.3	506.2	511.5	517.1	522.7	528.4	534.0	538.4
55°	449.1	453.8	458.5	463.2	467.9	473.5	480.2	486.9	493.6	500.3	504.7
57.5°	407.3	413.0	418.9	424.6	430.4	436.6	443.3	449.9	456.6	463.2	468.4
60°	379.9	385.8	391.5	397.4	403.1	409.7	417.1	424.4	431.8	439.1	444.2
62.5°	353.5	359.9	366.2	372.5	378.8	385.7	393.0	400.4	407.7	415.1	420.2
65°	310.8	317.9	325.1	332.2	339.3	346.7	354.2	361.8	369.4	376.9	382.5
67.5°	269.7	277.3	284.8	292.4	300.0	307.8	315.9	324.0	332.2	340.3	345.9
70°	241.6	249.2	256.7	264.4	271.9	279.9	288.4	296.9	305.3	313.8	319.8
72.5°	214.3	222.1	229.9	237.6	245.3	253.7	262.8	271.7	280.8	289.7	295.6
75°	172.5	180.7	188.9	197.2	205.4	214.2	223.6	232.9	242.3	251.7	257.9
77.5°	133.4	142.0	150.8	159.6	168.2	177.6	187.4	197.2	207.0	216.8	223.1
80°	109.2	118.2	127.1	136.0	145.0	154.3	164.1	173.9	183.7	193.5	200.2
82.5°	85.2	94.4	103.8	113.0	122.2	131.9	141.7	151.5	161.3	171.1	177.9
85°	53.2	62.5	71.8	81.2	90.6	100.3	110.3	120.3	130.4	140.3	147.0
87.5°	30.0	39.2	48.5	57.9	67.1	76.7	86.6	96.5	106.5	116.4	122.9
90°	17.3	27.2	37.2	47.2	57.1	67.3	77.7	87.9	98.3	108.7	115.6
92.5°	24.4	33.6	42.8	52.0	61.3	70.9	81.1	91.1	101.2	111.3	118.0
95°	38.6	46.8	55.0	63.2	71.4	80.5	90.3	100.1	109.9	119.7	126.0
97.5°	56.6	63.6	70.6	77.7	84.6	93.0	102.8	112.7	122.5	132.3	138.6
100°	70.8	77.0	83.1	89.4	95.5	103.4	112.9	122.4	132.0	141.6	147.8
102.5°	86.5	91.8	97.0	102.3	107.4	114.7	124.0	133.3	142.6	151.8	158.0
105°	108.6	113.1	117.6	122.2	126.8	133.4	141.9	150.6	159.2	167.8	173.7
107.5°	133.6	137.3	141.1	144.9	148.6	154.4	162.3	170.1	178.0	185.9	191.6
110°	149.9	153.2	156.5	159.8	163.1	168.5	176.3	184.0	191.7	199.3	204.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	166.8	169.6	172.4	175.2	178.0	183.0	190.3	197.6	204.8	212.1	217.0
115°	192.3	194.3	196.2	198.2	200.3	204.7	211.7	218.6	225.6	232.5	237.3
117.5°	217.2	218.4	219.7	221.0	222.3	226.1	232.6	239.1	245.6	252.2	256.5
120°	233.1	234.1	235.2	236.2	237.2	240.9	247.0	253.3	259.4	265.6	269.6
122.5°	250.5	250.8	251.1	251.4	251.7	254.8	260.8	266.7	272.7	278.7	282.8
125°	275.2	275.0	274.8	274.6	274.4	276.9	282.4	287.9	293.4	298.9	302.9
127.5°	298.3	298.4	298.5	298.5	298.6	300.7	304.8	309.0	313.0	317.2	321.0
130°	314.0	314.0	314.1	314.1	314.1	316.0	319.5	323.1	326.7	330.3	334.0
132.5°	330.6	330.6	330.6	330.6	330.6	332.0	334.8	337.5	340.4	343.1	346.8
135°	351.8	352.4	353.0	353.5	354.1	355.2	356.8	358.3	359.9	361.4	364.8
137.5°	375.9	376.0	376.0	376.0	376.1	376.5	377.5	378.3	379.3	380.2	383.1
140°	391.9	391.9	391.9	391.8	391.8	391.9	392.1	392.4	392.6	392.9	395.6
142.5°	405.9	406.0	406.1	406.2	406.4	406.4	406.1	406.0	405.8	405.6	408.0
145°	425.9	426.1	426.3	426.4	426.6	426.7	426.8	426.9	427.0	427.1	428.4
147.5°	446.1	446.4	446.6	446.9	447.0	447.1	447.0	447.0	447.0	446.9	447.0
150°	458.5	458.5	458.7	458.9	459.0	459.1	459.1	459.1	459.1	459.1	459.1
152.5°	469.3	469.4	469.6	469.8	470.0	470.1	470.1	470.2	470.3	470.4	470.6
155°	486.9	486.9	486.9	486.9	486.9	486.8	486.7	486.6	486.5	486.4	486.8
157.5°	501.9	501.7	501.6	501.4	501.2	501.1	501.1	501.1	501.1	501.1	501.3
160°	510.9	510.8	510.7	510.6	510.5	510.4	510.3	510.2	510.1	510.0	510.3
162.5°	519.1	518.8	518.5	518.3	518.0	517.8	517.7	517.6	517.6	517.5	518.0
165°	530.0	529.7	529.4	529.1	528.9	528.7	528.5	528.3	528.1	527.9	528.5
167.5°	538.5	538.1	537.7	537.3	536.9	536.7	536.7	536.8	536.8	536.8	537.3
170°	543.3	542.8	542.3	541.9	541.4	541.2	541.3	541.4	541.5	541.6	542.2
172.5°	546.7	546.3	545.9	545.5	545.1	544.9	544.9	545.0	545.0	545.0	545.6
175°	551.4	550.9	550.4	550.0	549.5	549.2	549.1	549.0	548.9	548.8	549.5
177.5°	552.9	552.5	552.1	551.8	551.4	551.2	551.2	551.2	551.2	551.2	551.8
180°	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	895.3	895.3	895.3	895.3	895.3	895.3	895.3	895.3
2.5°	892.1	893.4	894.7	895.2	895.0	894.8	894.7	894.5
5°	889.9	891.6	893.3	894.2	893.9	893.7	893.5	893.2
7.5°	885.0	887.0	889.1	889.9	889.8	889.5	889.3	889.1
10°	880.2	882.2	884.3	885.1	885.0	884.7	884.5	884.3
12.5°	873.5	875.3	877.1	878.0	878.0	877.9	877.9	877.8
15°	861.2	863.2	865.2	866.1	865.9	865.6	865.4	865.2
17.5°	846.2	848.3	850.4	851.3	851.1	850.9	850.7	850.6
20°	834.5	836.8	839.1	840.2	840.2	840.2	840.2	840.2
22.5°	821.0	823.1	825.4	826.7	827.1	827.4	827.7	828.1
25°	799.9	802.4	804.8	806.2	806.3	806.6	806.8	807.1
27.5°	776.3	778.5	780.9	782.1	782.4	782.7	783.0	783.2
30°	759.8	762.2	764.7	766.2	766.7	767.0	767.5	768.0
32.5°	742.9	745.7	748.5	750.2	750.5	751.0	751.5	752.0
35°	716.0	719.2	722.3	724.2	724.8	725.5	726.2	726.9
37.5°	688.1	691.3	694.4	696.4	697.0	697.8	698.4	699.2
40°	668.4	671.8	675.0	677.1	678.1	678.9	679.9	680.7
42.5°	649.0	652.7	656.4	658.6	659.3	660.1	660.8	661.5
45°	619.2	622.9	626.7	629.1	630.3	631.4	632.5	633.6
47.5°	587.5	591.4	595.4	597.9	599.4	600.7	602.0	603.3
50°	565.3	569.8	574.2	577.1	578.4	579.9	581.2	582.5
52.5°	542.9	547.3	551.8	554.7	556.0	557.3	558.6	560.1
55°	509.2	513.7	518.1	521.0	522.4	523.7	525.0	526.3
57.5°	473.8	479.1	484.4	487.7	488.9	490.1	491.4	492.7
60°	449.4	454.5	459.6	463.1	464.9	466.7	468.4	470.2
62.5°	425.3	430.5	435.5	439.0	440.8	442.6	444.3	446.1
65°	388.1	393.7	399.3	402.9	404.7	406.5	408.2	410.0
67.5°	351.6	357.2	362.9	366.6	368.3	370.0	371.8	373.5
70°	325.8	331.9	337.9	341.7	343.2	344.8	346.3	347.9
72.5°	301.4	307.3	313.1	316.9	318.6	320.4	322.1	323.9
75°	264.1	270.3	276.6	280.7	282.8	284.7	286.7	288.7
77.5°	229.4	235.7	242.0	246.3	248.5	250.5	252.7	254.9
80°	206.9	213.6	220.3	224.4	226.2	228.0	229.8	231.6
82.5°	184.7	191.6	198.5	202.9	204.8	206.8	208.8	210.8
85°	153.7	160.4	167.1	171.5	173.8	176.0	178.2	180.5
87.5°	129.5	136.1	142.7	146.9	148.9	151.0	153.0	155.0
90°	122.7	129.7	136.8	141.3	143.3	145.2	147.2	149.2
92.5°	124.6	131.2	137.9	142.1	144.0	145.9	147.8	149.7
95°	132.2	138.6	144.9	149.0	151.0	153.1	155.0	157.0
97.5°	144.7	150.9	157.0	161.1	163.1	164.9	166.8	168.8
100°	153.9	160.1	166.4	170.2	171.8	173.3	174.9	176.4
102.5°	164.1	170.2	176.3	180.2	182.1	183.9	185.7	187.5
105°	179.6	185.4	191.2	195.2	197.3	199.3	201.4	203.5
107.5°	197.4	203.1	208.9	212.4	214.1	215.7	217.3	218.9
110°	209.2	214.1	219.1	222.6	224.7	226.8	228.8	230.9



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	221.9	226.9	231.8	235.1	237.0	238.7	240.6	242.4
115°	242.1	246.9	251.8	254.9	256.3	257.8	259.2	260.7
117.5°	260.8	265.1	269.4	272.4	274.0	275.6	277.1	278.7
120°	273.5	277.6	281.5	284.5	286.4	288.4	290.4	292.4
122.5°	286.9	291.1	295.2	297.9	299.2	300.4	301.7	302.9
125°	307.0	310.9	315.0	317.6	318.8	319.9	321.0	322.3
127.5°	324.8	328.7	332.4	335.1	336.4	337.8	339.1	340.5
130°	337.9	341.8	345.5	347.9	348.9	349.9	350.8	351.8
132.5°	350.4	354.0	357.7	360.1	361.3	362.5	363.6	364.9
135°	368.2	371.6	374.8	377.1	378.1	379.2	380.2	381.3
137.5°	386.2	389.2	392.2	394.3	395.5	396.6	397.8	399.0
140°	398.4	401.2	404.0	406.0	406.9	407.9	409.0	410.0
142.5°	410.6	413.1	415.7	417.4	418.3	419.1	420.1	421.0
145°	429.6	430.8	432.1	433.0	433.6	434.2	434.8	435.5
147.5°	447.0	447.1	447.2	447.6	448.2	448.8	449.5	450.1
150°	459.1	459.1	459.1	459.1	459.0	458.9	458.8	458.7
152.5°	470.9	471.1	471.4	471.3	471.1	470.8	470.6	470.3
155°	487.2	487.6	488.0	488.0	487.6	487.2	486.8	486.4
157.5°	501.6	501.9	502.2	502.2	501.9	501.5	501.2	500.9
160°	510.6	510.9	511.1	511.0	510.6	510.1	509.5	509.1
162.5°	518.5	519.1	519.5	519.5	519.1	518.6	518.1	517.6
165°	529.0	529.6	530.2	530.3	529.9	529.5	529.1	528.8
167.5°	537.9	538.5	539.0	539.0	538.5	537.9	537.2	536.7
170°	542.7	543.3	543.8	543.8	543.1	542.4	541.8	541.1
172.5°	546.3	547.0	547.5	547.5	546.9	546.2	545.5	544.9
175°	550.2	550.8	551.5	551.5	550.8	550.2	549.5	548.8
177.5°	552.3	552.8	553.4	553.3	552.7	552.1	551.5	550.9
180°	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2

(END OF REPORT)