

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: PORTFOLIO

Report Number: P857173

Luminaire Tested: **LX4C20D010 EX4C209035 4LBSWNH**

Issue Date: 2/18/2022

Test Information

Test Method: LM-79-08
Report Number: P857173
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C20D010 EX4C209035 4LBSWNH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

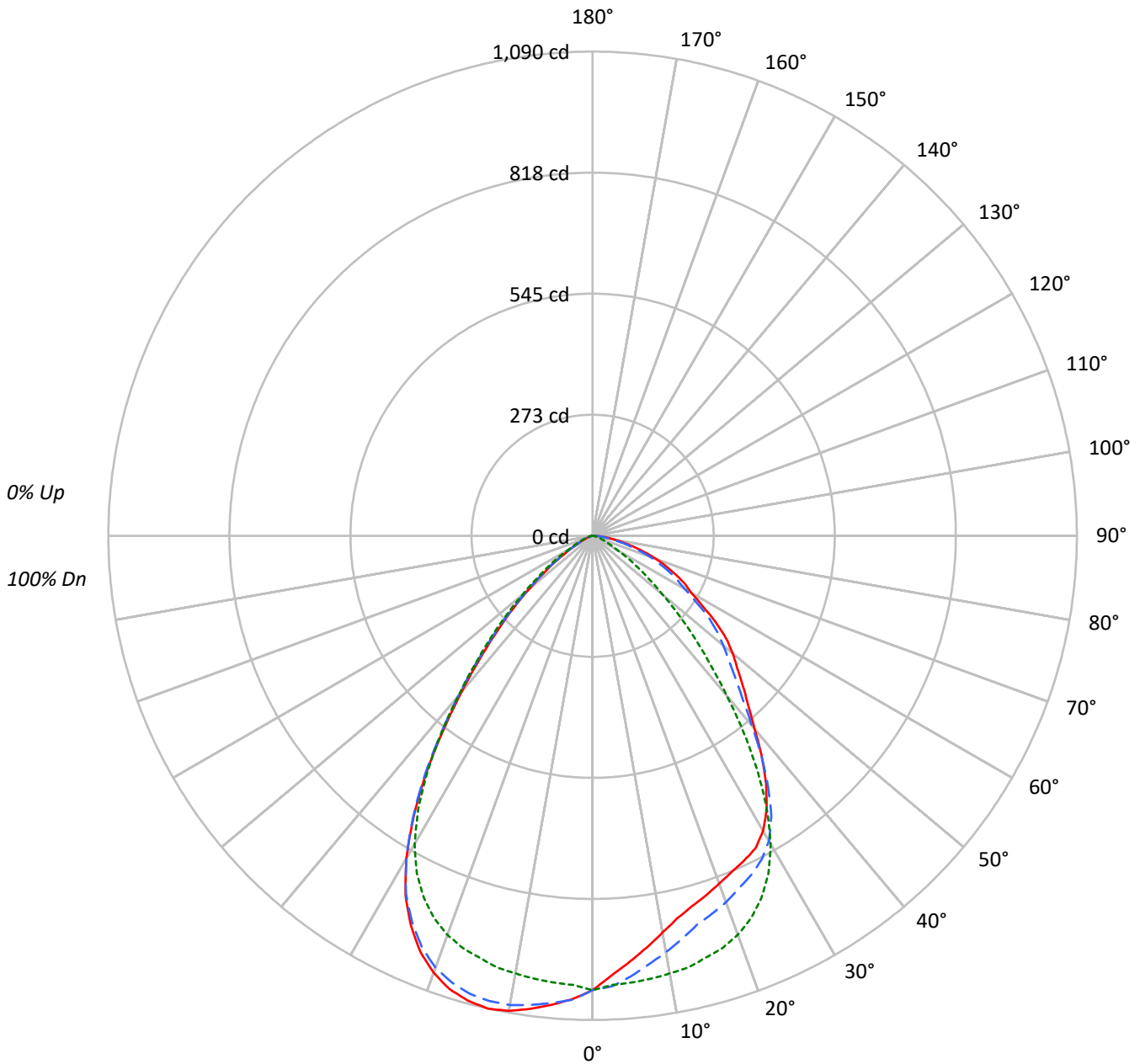
Lumens per Lamp: N/A
Luminaire Lumens: 1793.0 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V):
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									
RC	80									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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79																			
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70																			
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62																			
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56																			
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50																			
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46																			
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42																			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38																			
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	125667	125667	125667
5°	118661	124519	130697
10°	113135	124811	135490
15°	109813	125076	137807
20°	108905	124946	136830
25°	109351	121863	131148
30°	108834	113686	118920
35°	101999	97065	98055
40°	90900	75263	73563
45°	83135	56101	52678
50°	78591	39315	35530
55°	72289	26538	22297
60°	63147	15529	12310
65°	59796	9971	6889
70°	54455	7112	4274
75°	45046	4984	3133
80°	35445	2830	1839
85°	31575	1832	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.6	5.4
10°-20°	277.3	15.5
20°-30°	411.0	22.9
30°-40°	411.6	23.0
40°-50°	287.6	16.0
50°-60°	171.2	9.5
60°-70°	89.3	5.0
70°-80°	39.7	2.2
80°-90°	8.7	0.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	784.9	43.8
0°-40°	1196.5	66.7
0°-60°	1655.3	92.3
0°-90°	1793.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1793.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1023	1023	1023	1023	1023	
5°	962	995	1010	1056	1060	90
15°	863	907	983	1068	1084	244
25°	807	844	899	961	968	372
35°	680	688	647	659	654	422
45°	478	455	323	312	303	371
55°	338	316	124	108	104	299
65°	206	188	34	25	24	203
75°	95	83	10	7	7	103
85°	22	17	1	1	0	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9
2.5°	989.9	1001.8	989.9	993.9	1009.7	995.2	1003.1	1003.1	999.2	1008.4	1015.0
5°	962.2	974.1	962.2	967.5	984.6	970.1	979.4	976.7	978.1	986.0	995.2
7.5°	934.6	943.8	933.2	939.8	955.7	943.8	951.7	951.7	953.0	964.9	972.8
10°	906.9	914.8	906.9	912.1	929.3	918.8	924.0	925.3	929.3	939.8	951.7
12.5°	881.8	888.4	880.5	888.4	902.9	892.4	899.0	900.3	904.2	916.1	929.3
15°	863.4	870.0	862.1	868.6	881.8	873.9	879.2	881.8	884.5	895.0	906.9
17.5°	848.9	854.2	847.6	855.5	866.0	856.8	864.7	864.7	868.6	879.2	892.4
20°	833.0	838.3	833.0	839.7	851.5	843.6	850.2	850.2	854.2	866.0	877.9
22.5°	818.6	821.2	818.6	823.8	835.7	829.1	833.0	834.4	838.3	848.9	859.4
25°	806.7	812.0	809.3	814.6	822.5	815.9	819.9	821.2	825.1	834.4	843.6
27.5°	793.5	796.1	793.5	800.1	806.7	801.4	805.4	804.1	806.7	814.6	822.5
30°	767.2	769.8	769.8	773.7	779.0	776.4	780.3	776.4	779.0	785.6	793.5
32.5°	728.9	730.3	731.6	735.5	739.5	735.5	738.2	738.2	738.2	743.4	748.7
35°	680.1	682.8	681.5	684.1	688.1	686.8	686.8	685.4	682.8	685.4	688.1
37.5°	624.8	620.8	620.8	624.8	627.4	622.2	624.8	622.2	622.2	623.5	623.5
40°	566.8	562.9	566.8	568.1	569.4	566.8	565.5	562.9	558.9	560.2	557.6
42.5°	518.1	515.4	516.7	516.7	518.1	515.4	516.7	511.4	507.5	504.8	500.9
45°	478.5	474.5	478.5	475.8	475.8	474.5	473.2	470.6	465.3	461.4	454.8
47.5°	441.6	441.6	442.9	442.9	442.9	440.2	440.2	435.0	429.7	424.4	415.2
50°	411.2	408.6	413.9	413.9	410.0	408.6	410.0	403.3	399.4	392.8	383.6
52.5°	378.3	378.3	379.6	379.6	378.3	375.6	377.0	371.7	367.7	361.2	351.9
55°	337.5	334.8	338.8	338.8	337.5	336.1	337.5	333.5	329.6	324.3	316.3
57.5°	291.3	290.0	292.6	294.0	291.3	291.3	292.6	288.7	287.3	282.1	274.2
60°	257.0	255.7	258.4	259.7	257.0	257.0	257.0	251.7	249.1	243.8	238.6
62.5°	233.3	232.0	234.6	233.3	232.0	230.7	232.0	226.7	224.1	218.8	213.6
65°	205.7	206.9	208.3	208.3	206.9	205.7	205.7	203.0	200.4	195.1	188.5
67.5°	179.2	179.2	180.6	181.9	180.6	180.6	180.6	176.6	174.0	170.0	162.1
70°	151.6	150.3	154.2	154.2	151.6	152.9	151.6	150.3	147.6	142.4	135.8
72.5°	122.6	122.6	123.9	123.9	122.6	122.6	122.6	121.3	117.3	114.7	108.1
75°	94.9	94.9	96.2	97.6	94.9	94.9	96.2	93.6	90.9	87.0	83.0
77.5°	71.2	69.9	71.2	71.2	69.9	69.9	69.9	68.6	67.2	63.2	59.3
80°	50.1	48.8	50.1	50.1	50.1	48.8	48.8	47.4	47.4	44.8	40.9
82.5°	34.3	33.0	34.3	34.3	34.3	33.0	33.0	33.0	31.6	30.3	27.7
85°	22.4	21.1	21.1	22.4	21.1	21.1	21.1	21.1	19.8	18.4	17.2
87.5°	10.5	10.5	10.5	10.5	10.5	10.5	10.5	9.2	9.2	9.2	7.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9
2.5°	1009.7	1007.1	1015.0	1012.3	1013.6	1007.1	1017.6	1012.3	1018.9	1012.3	1025.5
5°	992.5	989.9	1001.8	1000.5	1001.8	996.5	1008.4	1007.1	1015.0	1009.7	1024.2
7.5°	974.1	971.5	984.6	986.0	988.6	983.4	999.2	999.2	1007.1	1005.7	1021.5
10°	953.0	954.3	967.5	970.1	975.4	972.8	987.3	991.3	1001.8	1000.5	1020.2
12.5°	933.2	933.2	950.4	955.7	959.6	958.3	975.4	980.7	992.5	995.2	1013.6
15°	913.5	914.8	930.6	938.5	943.8	942.5	960.9	967.5	982.0	983.4	1005.7
17.5°	897.6	896.3	913.5	920.1	928.0	926.7	946.4	954.3	968.8	972.8	993.9
20°	884.5	883.2	899.0	906.9	912.1	910.9	930.6	939.8	953.0	955.7	976.7
22.5°	868.6	866.0	881.8	888.4	893.7	892.4	909.5	916.1	929.3	931.9	951.7
25°	850.2	847.6	862.1	866.0	870.0	867.4	881.8	885.8	896.3	899.0	918.8
27.5°	829.1	822.5	834.4	834.4	837.0	833.0	843.6	847.6	856.8	856.8	875.3
30°	796.1	787.0	793.5	792.2	793.5	788.2	794.9	796.1	802.8	801.4	814.6
32.5°	750.0	736.8	740.8	736.8	732.9	725.0	732.9	730.3	735.5	730.3	742.1
35°	686.8	673.6	672.2	667.0	663.0	656.4	656.4	649.9	651.2	647.2	655.1
37.5°	618.2	601.1	598.5	587.9	581.3	573.4	573.4	568.1	561.5	558.9	565.5
40°	551.0	532.5	526.0	508.8	502.2	494.3	489.0	482.5	479.8	469.3	474.5
42.5°	493.0	473.2	458.7	440.2	433.7	421.8	413.9	406.0	402.1	390.2	395.4
45°	444.2	420.5	404.7	380.9	371.7	358.5	346.7	337.5	328.2	322.9	320.3
47.5°	403.3	378.3	357.2	330.8	316.3	304.5	288.7	279.4	267.6	261.0	257.0
50°	369.1	341.4	317.7	287.3	272.9	259.7	241.2	226.7	216.2	205.7	203.0
52.5°	338.8	309.8	283.4	249.1	232.0	216.2	196.4	180.6	171.3	159.5	158.2
55°	303.2	278.1	249.1	213.6	196.4	180.6	159.5	143.7	131.8	123.9	121.3
57.5°	265.0	241.2	213.6	178.0	160.8	143.7	123.9	109.4	98.8	92.3	90.9
60°	229.4	206.9	180.6	145.0	127.8	113.4	92.3	77.8	68.6	63.2	60.6
62.5°	203.0	181.9	156.9	123.9	108.1	93.6	73.8	60.6	52.7	47.4	44.8
65°	178.0	156.9	134.4	104.1	90.9	77.8	59.3	47.4	39.5	34.3	31.6
67.5°	151.6	133.2	112.0	87.0	73.8	63.2	47.4	36.9	30.3	26.4	23.7
70°	125.2	108.1	90.9	69.9	60.6	50.1	36.9	29.0	22.4	19.8	17.2
72.5°	98.8	85.7	71.2	54.0	46.1	39.5	29.0	21.1	17.2	14.5	11.9
75°	73.8	64.6	52.7	40.9	34.3	29.0	21.1	15.8	13.2	10.5	9.2
77.5°	52.7	44.8	36.9	27.7	25.1	21.1	14.5	11.9	9.2	6.6	5.3
80°	35.6	31.6	25.1	19.8	15.8	14.5	10.5	7.9	5.3	4.0	4.0
82.5°	23.7	19.8	15.8	11.9	10.5	9.2	6.6	5.3	4.0	2.6	2.6
85°	14.5	11.9	9.2	6.6	6.6	5.3	4.0	2.6	1.3	1.3	1.3
87.5°	6.6	5.3	4.0	2.6	2.6	1.3	1.3	1.3	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9
2.5°	1036.1	1028.2	1022.9	1029.4	1032.1	1028.2	1032.1	1038.7	1045.3	1046.6	1028.2
5°	1037.4	1029.4	1026.8	1034.7	1036.1	1034.7	1038.7	1047.9	1055.8	1058.5	1040.0
7.5°	1037.4	1032.1	1030.8	1040.0	1041.3	1040.0	1046.6	1057.1	1065.0	1070.3	1051.9
10°	1034.7	1032.1	1033.4	1041.3	1044.0	1044.0	1053.2	1065.0	1072.9	1078.2	1059.8
12.5°	1030.8	1030.8	1030.8	1040.0	1042.7	1044.0	1051.9	1067.7	1072.9	1080.9	1062.4
15°	1024.2	1024.2	1024.2	1033.4	1037.4	1037.4	1046.6	1061.1	1067.7	1075.6	1057.1
17.5°	1012.3	1012.3	1013.6	1021.5	1025.5	1025.5	1034.7	1050.6	1054.5	1063.8	1045.3
20°	995.2	995.2	996.5	1004.4	1008.4	1005.7	1017.6	1030.8	1034.7	1042.7	1024.2
22.5°	970.1	970.1	970.1	978.1	980.7	979.4	991.3	1003.1	1003.1	1013.6	993.9
25°	933.2	935.9	933.2	941.1	943.8	942.5	953.0	963.6	960.9	972.8	953.0
27.5°	888.4	887.1	887.1	893.7	893.7	892.4	900.3	912.1	909.5	917.4	899.0
30°	826.5	830.4	823.8	833.0	829.1	826.5	831.7	842.3	838.3	844.9	830.4
32.5°	755.3	750.0	750.0	750.0	752.6	746.1	751.3	756.6	752.6	759.3	743.4
35°	661.7	663.0	659.1	660.4	661.7	653.8	659.1	664.3	659.1	663.0	648.5
37.5°	568.1	569.4	560.2	565.5	560.2	557.6	562.9	565.5	560.2	564.1	548.3
40°	474.5	471.9	470.6	470.6	471.9	465.3	469.3	473.2	469.3	471.9	457.4
42.5°	392.8	391.5	388.9	390.2	386.2	384.9	386.2	390.2	386.2	388.9	378.3
45°	321.6	319.0	315.0	316.3	316.3	309.8	313.7	316.3	312.4	313.7	304.5
47.5°	255.7	251.7	251.7	250.4	250.4	247.8	251.7	250.4	246.5	249.1	239.9
50°	199.0	196.4	196.4	196.4	196.4	192.4	193.8	196.4	192.4	192.4	187.2
52.5°	155.5	151.6	149.0	149.0	149.0	147.6	147.6	149.0	145.0	145.0	143.7
55°	117.3	116.0	112.0	112.0	112.0	108.1	109.4	109.4	108.1	108.1	104.1
57.5°	87.0	83.0	80.4	80.4	77.8	77.8	76.5	77.8	75.1	75.1	72.5
60°	58.0	55.3	54.0	52.7	52.7	51.4	52.7	51.4	51.4	50.1	48.8
62.5°	42.2	39.5	36.9	36.9	36.9	35.6	35.6	35.6	35.6	35.6	34.3
65°	30.3	27.7	27.7	26.4	26.4	25.1	25.1	25.1	25.1	25.1	23.7
67.5°	21.1	19.8	18.4	18.4	18.4	18.4	18.4	18.4	17.2	17.2	17.2
70°	15.8	14.5	13.2	13.2	13.2	13.2	13.2	11.9	13.2	13.2	11.9
72.5°	10.5	10.5	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
75°	7.9	7.9	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
77.5°	5.3	5.3	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
80°	4.0	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	2.6	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9	1022.9
2.5°	1047.9	1046.6	1044.0	1047.9	1037.4	1033.4	1032.1	1044.0
5°	1062.4	1059.8	1059.8	1063.8	1051.9	1049.2	1046.6	1059.8
7.5°	1075.6	1072.9	1072.9	1076.9	1066.4	1063.8	1061.1	1074.3
10°	1083.5	1083.5	1083.5	1086.1	1076.9	1074.3	1072.9	1086.1
12.5°	1087.5	1087.5	1086.1	1091.4	1079.6	1079.6	1076.9	1090.1
15°	1082.2	1082.2	1082.2	1086.1	1075.6	1072.9	1072.9	1083.5
17.5°	1069.0	1069.0	1067.7	1071.7	1059.8	1059.8	1058.5	1070.3
20°	1049.2	1049.2	1046.6	1051.9	1040.0	1036.1	1034.7	1046.6
22.5°	1017.6	1016.3	1015.0	1017.6	1007.1	1004.4	1003.1	1013.6
25°	976.7	975.4	972.8	975.4	963.6	959.6	959.6	967.5
27.5°	918.8	918.8	914.8	918.8	905.5	904.2	902.9	912.1
30°	847.6	842.3	839.7	844.9	831.7	831.7	829.1	838.3
32.5°	759.3	754.0	752.6	755.3	743.4	739.5	744.7	750.0
35°	657.8	659.1	653.8	653.8	643.3	644.5	645.9	653.8
37.5°	560.2	557.6	556.2	557.6	549.7	547.0	544.4	552.3
40°	469.3	462.7	461.4	461.4	454.8	453.5	454.8	458.7
42.5°	383.6	382.3	377.0	379.6	373.0	375.6	374.4	374.4
45°	309.8	311.1	305.8	309.8	304.5	300.5	300.5	303.2
47.5°	245.2	245.2	243.8	243.8	239.9	241.2	238.6	242.5
50°	189.8	189.8	187.2	188.5	185.9	185.9	184.5	185.9
52.5°	145.0	143.7	143.7	142.4	139.7	141.1	142.4	139.7
55°	105.5	106.8	104.1	105.5	102.8	104.1	102.8	104.1
57.5°	72.5	73.8	71.2	73.8	71.2	72.5	71.2	71.2
60°	50.1	50.1	48.8	50.1	48.8	48.8	47.4	50.1
62.5°	34.3	34.3	34.3	34.3	34.3	33.0	34.3	34.3
65°	25.1	23.7	23.7	23.7	23.7	23.7	23.7	23.7
67.5°	17.2	17.2	17.2	17.2	17.2	17.2	17.2	17.2
70°	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
72.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
75°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
77.5°	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
80°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
82.5°	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
85°	1.3	1.3	1.3	0.0	1.3	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°













(END OF REPORT)