

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: P857195

Luminaire Tested: **LX4C20D010 EX4C209040 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P857195
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 EX4C209040 4LBSWNH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

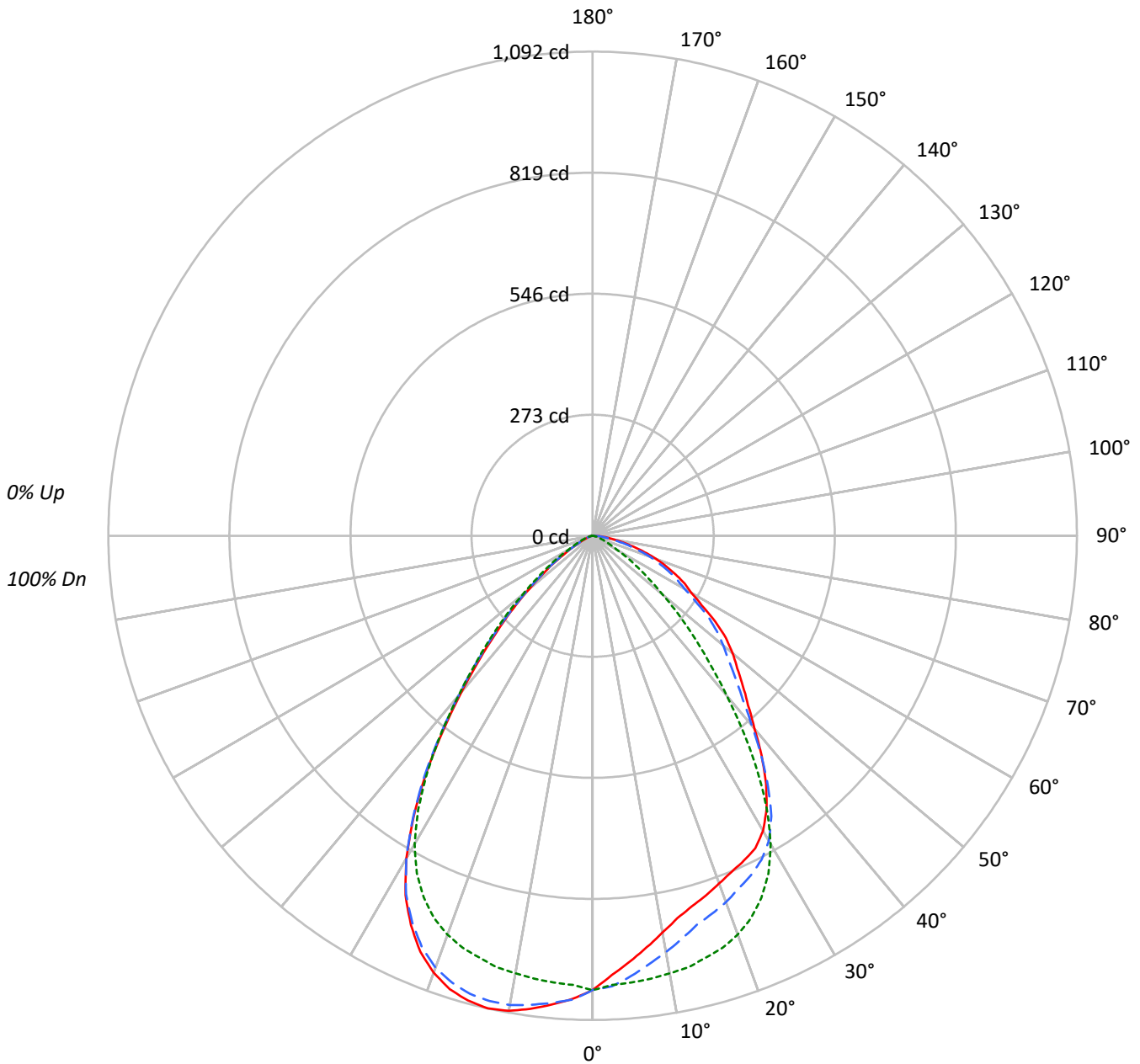
Lumens per Lamp: N/A
Luminaire Lumens: 1796.0 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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°	125876	125876	125876
5°	118858	124729	130907
10°	113322	125011	135714
15°	109992	125279	138036
20°	109088	125155	137053
25°	109527	122066	131365
30°	109004	113884	119119
35°	102179	97230	98220
40°	91044	75392	73692
45°	83274	56205	52765
50°	78725	39372	35588
55°	72396	26581	22340
60°	63245	15578	12334
65°	59883	9971	6919
70°	54562	7112	4274
75°	45141	5031	3133
80°	35516	2830	1839
85°	31716	1832	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.8	5.4
10°-20°	277.7	15.5
20°-30°	411.7	22.9
30°-40°	412.3	23.0
40°-50°	288.1	16.0
50°-60°	171.4	9.5
60°-70°	89.5	5.0
70°-80°	39.8	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°	786.2	43.8
0°-40°	1198.5	66.7
0°-60°	1658.1	92.3
0°-90°	1796.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1796.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1025	1025	1025	1025	1025	
5°	964	997	1011	1058	1062	90
15°	865	908	985	1070	1085	245
25°	808	845	900	962	969	372
35°	681	689	648	660	655	422
45°	479	456	324	313	304	372
55°	338	317	124	108	104	300
65°	206	189	34	25	24	204
75°	95	83	11	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°	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6
2.5°	991.6	1003.5	991.6	995.6	1011.4	996.8	1004.8	1004.8	1000.8	1010.0	1016.7
5°	963.8	975.7	963.8	969.1	986.3	971.7	981.0	978.4	979.7	987.6	996.8
7.5°	936.1	945.4	934.8	941.4	957.3	945.4	953.3	953.3	954.6	966.5	974.4
10°	908.4	916.3	908.4	913.7	930.9	920.3	925.6	926.9	930.9	941.4	953.3
12.5°	883.3	889.9	882.0	889.9	904.4	893.9	900.5	901.8	905.8	917.7	930.9
15°	864.8	871.4	863.5	870.1	883.3	875.4	880.7	883.3	885.9	896.5	908.4
17.5°	850.3	855.6	849.0	856.9	867.5	858.2	866.2	866.2	870.1	880.7	893.9
20°	834.4	839.7	834.4	841.1	853.0	845.0	851.6	851.6	855.6	867.5	879.4
22.5°	819.9	822.6	819.9	825.2	837.1	830.5	834.4	835.8	839.7	850.3	860.9
25°	808.0	813.3	810.7	816.0	823.9	817.3	821.2	822.6	826.5	835.8	845.0
27.5°	794.8	797.5	794.8	801.5	808.0	802.8	806.7	805.4	808.0	816.0	823.9
30°	768.4	771.1	771.1	775.0	780.3	777.7	781.6	777.7	780.3	786.9	794.8
32.5°	730.1	731.5	732.8	736.8	740.7	736.8	739.4	739.4	739.4	744.7	750.0
35°	681.3	683.9	682.6	685.3	689.2	687.9	687.9	686.6	683.9	686.6	689.2
37.5°	625.9	621.9	621.9	625.9	628.5	623.2	625.9	623.2	623.2	624.5	624.5
40°	567.7	563.8	567.7	569.1	570.4	567.7	566.4	563.8	559.8	561.2	558.5
42.5°	518.9	516.2	517.6	517.6	518.9	516.2	517.6	512.3	508.3	505.7	501.7
45°	479.3	475.3	479.3	476.6	476.6	475.3	474.0	471.4	466.1	462.1	455.5
47.5°	442.3	442.3	443.6	443.6	443.6	441.0	441.0	435.7	430.4	425.1	415.9
50°	411.9	409.3	414.6	414.6	410.6	409.3	410.6	404.0	400.1	393.5	384.2
52.5°	378.9	378.9	380.3	380.3	378.9	376.3	377.6	372.3	368.4	361.8	352.5
55°	338.0	335.4	339.3	339.3	338.0	336.7	338.0	334.0	330.1	324.8	316.9
57.5°	291.8	290.5	293.1	294.4	291.8	291.8	293.1	289.2	287.8	282.5	274.6
60°	257.4	256.1	258.8	260.1	257.4	257.4	257.4	252.2	249.5	244.2	239.0
62.5°	233.7	232.4	235.0	233.7	232.4	231.0	232.4	227.1	224.5	219.2	213.9
65°	206.0	207.3	208.6	208.6	207.3	206.0	206.0	203.4	200.7	195.4	188.8
67.5°	179.5	179.5	180.9	182.2	180.9	180.9	180.9	176.9	174.3	170.3	162.4
70°	151.9	150.5	154.5	154.5	151.9	153.2	151.9	150.5	147.9	142.6	136.0
72.5°	122.8	122.8	124.1	124.1	122.8	122.8	122.8	121.5	117.5	114.8	108.3
75°	95.1	95.1	96.4	97.7	95.1	95.1	96.4	93.7	91.1	87.2	83.2
77.5°	71.3	70.0	71.3	71.3	70.0	70.0	70.0	68.7	67.3	63.4	59.4
80°	50.2	48.9	50.2	50.2	50.2	48.9	48.9	47.5	47.5	44.9	40.9
82.5°	34.3	33.0	34.3	34.3	34.3	33.0	33.0	33.0	31.7	30.4	27.7
85°	22.5	21.1	21.1	22.5	21.1	21.1	21.1	21.1	19.8	18.5	17.2
87.5°	10.6	10.6	10.6	10.6	10.6	10.6	10.6	9.3	9.3	9.3	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°	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6
2.5°	1011.4	1008.8	1016.7	1014.0	1015.3	1008.8	1019.3	1014.0	1020.6	1014.0	1027.2
5°	994.2	991.6	1003.5	1002.1	1003.5	998.2	1010.0	1008.8	1016.7	1011.4	1025.9
7.5°	975.7	973.1	986.3	987.6	990.3	985.0	1000.8	1000.8	1008.8	1007.4	1023.2
10°	954.6	955.9	969.1	971.7	977.1	974.4	988.9	992.9	1003.5	1002.1	1022.0
12.5°	934.8	934.8	952.0	957.3	961.2	959.9	977.1	982.4	994.2	996.8	1015.3
15°	915.0	916.3	932.2	940.1	945.4	944.1	962.5	969.1	983.7	985.0	1007.4
17.5°	899.1	897.8	915.0	921.6	929.5	928.2	948.0	955.9	970.5	974.4	995.6
20°	885.9	884.6	900.5	908.4	913.7	912.4	932.2	941.4	954.6	957.3	978.4
22.5°	870.1	867.5	883.3	889.9	895.2	893.9	911.0	917.7	930.9	933.5	953.3
25°	851.6	849.0	863.5	867.5	871.4	868.8	883.3	887.3	897.8	900.5	920.3
27.5°	830.5	823.9	835.8	835.8	838.4	834.4	845.0	849.0	858.2	858.2	876.7
30°	797.5	788.3	794.8	793.5	794.8	789.6	796.2	797.5	804.1	802.8	816.0
32.5°	751.3	738.1	742.0	738.1	734.1	726.2	734.1	731.5	736.8	731.5	743.3
35°	687.9	674.7	673.4	668.1	664.2	657.5	657.5	651.0	652.2	648.3	656.2
37.5°	619.2	602.1	599.5	588.9	582.3	574.4	574.4	569.1	562.4	559.8	566.4
40°	551.9	533.4	526.8	509.7	503.0	495.1	489.8	483.3	480.6	470.1	475.3
42.5°	493.8	474.0	459.5	441.0	434.4	422.5	414.6	406.7	402.7	390.8	396.1
45°	445.0	421.2	405.4	381.6	372.3	359.1	347.2	338.0	328.8	323.5	320.8
47.5°	404.0	378.9	357.8	331.4	316.9	305.0	289.2	279.9	268.1	261.4	257.4
50°	369.7	342.0	318.2	287.8	273.3	260.1	241.6	227.1	216.6	206.0	203.4
52.5°	339.3	310.3	283.9	249.5	232.4	216.6	196.7	180.9	171.6	159.8	158.4
55°	303.7	278.6	249.5	213.9	196.7	180.9	159.8	143.9	132.0	124.1	121.5
57.5°	265.4	241.6	213.9	178.3	161.1	143.9	124.1	109.6	99.0	92.4	91.1
60°	229.8	207.3	180.9	145.2	128.0	113.6	92.4	77.9	68.7	63.4	60.7
62.5°	203.4	182.2	157.1	124.1	108.3	93.7	74.0	60.7	52.8	47.5	44.9
65°	178.3	157.1	134.7	104.3	91.1	77.9	59.4	47.5	39.6	34.3	31.7
67.5°	151.9	133.4	112.2	87.2	74.0	63.4	47.5	37.0	30.4	26.4	23.8
70°	125.4	108.3	91.1	70.0	60.7	50.2	37.0	29.0	22.5	19.8	17.2
72.5°	99.0	85.8	71.3	54.1	46.2	39.6	29.0	21.1	17.2	14.5	11.9
75°	74.0	64.7	52.8	40.9	34.3	29.0	21.1	15.8	13.2	10.6	9.3
77.5°	52.8	44.9	37.0	27.7	25.1	21.1	14.5	11.9	9.3	6.6	5.3
80°	35.7	31.7	25.1	19.8	15.8	14.5	10.6	7.9	5.3	4.0	4.0
82.5°	23.8	19.8	15.8	11.9	10.6	9.3	6.6	5.3	4.0	2.6	2.6
85°	14.5	11.9	9.3	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°	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6
2.5°	1037.8	1029.9	1024.6	1031.2	1033.8	1029.9	1033.8	1040.4	1047.1	1048.3	1029.9
5°	1039.1	1031.2	1028.5	1036.4	1037.8	1036.4	1040.4	1049.7	1057.6	1060.3	1041.8
7.5°	1039.1	1033.8	1032.5	1041.8	1043.1	1041.8	1048.3	1058.9	1066.8	1072.1	1053.6
10°	1036.4	1033.8	1035.2	1043.1	1045.7	1045.7	1055.0	1066.8	1074.7	1080.0	1061.5
12.5°	1032.5	1032.5	1032.5	1041.8	1044.4	1045.7	1053.6	1069.5	1074.7	1082.7	1064.2
15°	1025.9	1025.9	1025.9	1035.2	1039.1	1039.1	1048.3	1062.9	1069.5	1077.4	1058.9
17.5°	1014.0	1014.0	1015.3	1023.2	1027.2	1027.2	1036.4	1052.3	1056.3	1065.5	1047.1
20°	996.8	996.8	998.2	1006.1	1010.0	1007.4	1019.3	1032.5	1036.4	1044.4	1025.9
22.5°	971.7	971.7	971.7	979.7	982.4	981.0	992.9	1004.8	1004.8	1015.3	995.6
25°	934.8	937.4	934.8	942.7	945.4	944.1	954.6	965.2	962.5	974.4	954.6
27.5°	889.9	888.6	888.6	895.2	895.2	893.9	901.8	913.7	911.0	919.0	900.5
30°	827.9	831.8	825.2	834.4	830.5	827.9	833.1	843.7	839.7	846.3	831.8
32.5°	756.5	751.3	751.3	751.3	753.9	747.3	752.6	757.9	753.9	760.5	744.7
35°	662.8	664.2	660.2	661.5	662.8	654.9	660.2	665.4	660.2	664.2	649.6
37.5°	569.1	570.4	561.2	566.4	561.2	558.5	563.8	566.4	561.2	565.1	549.3
40°	475.3	472.7	471.4	471.4	472.7	466.1	470.1	474.0	470.1	472.7	458.2
42.5°	393.5	392.2	389.5	390.8	386.8	385.5	386.8	390.8	386.8	389.5	378.9
45°	322.1	319.5	315.6	316.9	316.9	310.3	314.2	316.9	312.9	314.2	305.0
47.5°	256.1	252.2	252.2	250.9	250.9	248.2	252.2	250.9	246.9	249.5	240.3
50°	199.4	196.7	196.7	196.7	196.7	192.7	194.1	196.7	192.7	192.7	187.5
52.5°	155.8	151.9	149.2	149.2	149.2	147.9	147.9	149.2	145.2	145.2	143.9
55°	117.5	116.2	112.2	112.2	112.2	108.3	109.6	109.6	108.3	108.3	104.3
57.5°	87.2	83.2	80.5	80.5	77.9	77.9	76.6	77.9	75.3	75.3	72.6
60°	58.1	55.4	54.1	52.8	52.8	51.5	52.8	51.5	51.5	50.2	48.9
62.5°	42.2	39.6	37.0	37.0	37.0	35.7	35.7	35.7	35.7	35.7	34.3
65°	30.4	27.7	27.7	26.4	26.4	25.1	25.1	25.1	25.1	25.1	23.8
67.5°	21.1	19.8	18.5	18.5	18.5	18.5	18.5	18.5	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°	10.6	10.6	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
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°	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6	1024.6
2.5°	1049.7	1048.3	1045.7	1049.7	1039.1	1035.2	1033.8	1045.7
5°	1064.2	1061.5	1061.5	1065.5	1053.6	1051.0	1048.3	1061.5
7.5°	1077.4	1074.7	1074.7	1078.7	1068.2	1065.5	1062.9	1076.1
10°	1085.3	1085.3	1085.3	1087.9	1078.7	1076.1	1074.7	1087.9
12.5°	1089.3	1089.3	1087.9	1093.2	1081.4	1081.4	1078.7	1091.9
15°	1084.0	1084.0	1084.0	1087.9	1077.4	1074.7	1074.7	1085.3
17.5°	1070.8	1070.8	1069.5	1073.5	1061.5	1061.5	1060.3	1072.1
20°	1051.0	1051.0	1048.3	1053.6	1041.8	1037.8	1036.4	1048.3
22.5°	1019.3	1018.0	1016.7	1019.3	1008.8	1006.1	1004.8	1015.3
25°	978.4	977.1	974.4	977.1	965.2	961.2	961.2	969.1
27.5°	920.3	920.3	916.3	920.3	907.1	905.8	904.4	913.7
30°	849.0	843.7	841.1	846.3	833.1	833.1	830.5	839.7
32.5°	760.5	755.2	753.9	756.5	744.7	740.7	746.0	751.3
35°	658.9	660.2	654.9	654.9	644.3	645.6	647.0	654.9
37.5°	561.2	558.5	557.2	558.5	550.6	548.0	545.3	553.2
40°	470.1	463.4	462.1	462.1	455.5	454.2	455.5	459.5
42.5°	384.2	382.9	377.6	380.3	373.6	376.3	375.0	375.0
45°	310.3	311.6	306.3	310.3	305.0	301.0	301.0	303.7
47.5°	245.6	245.6	244.2	244.2	240.3	241.6	239.0	242.9
50°	190.1	190.1	187.5	188.8	186.2	186.2	184.8	186.2
52.5°	145.2	143.9	143.9	142.6	140.0	141.3	142.6	140.0
55°	105.6	106.9	104.3	105.6	103.0	104.3	103.0	104.3
57.5°	72.6	74.0	71.3	74.0	71.3	72.6	71.3	71.3
60°	50.2	50.2	48.9	50.2	48.9	48.9	47.5	50.2
62.5°	34.3	34.3	34.3	34.3	34.3	33.0	34.3	34.3
65°	25.1	23.8	23.8	23.8	23.8	23.8	23.8	23.8
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°	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
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)