

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P226279

Luminaire Tested: **LD2B20D010 EU2B20WW9050 2LBSW***

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P226279
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P14828)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD2B20D010 EU2B20WW9050 2LBSW*
Description: 2000 Lumen, 2inch Portfolio LED Downlight
WALL WASH OPTIC
WALL WASH LENSED TRIM
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1170.1 lumens
Efficiency: N/A
Efficacy: 56.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.79 / 1.02
Luminous Opening: Rectangular (W 0.17' x L: 0.17' x H: 0')
CIE Type: Direct

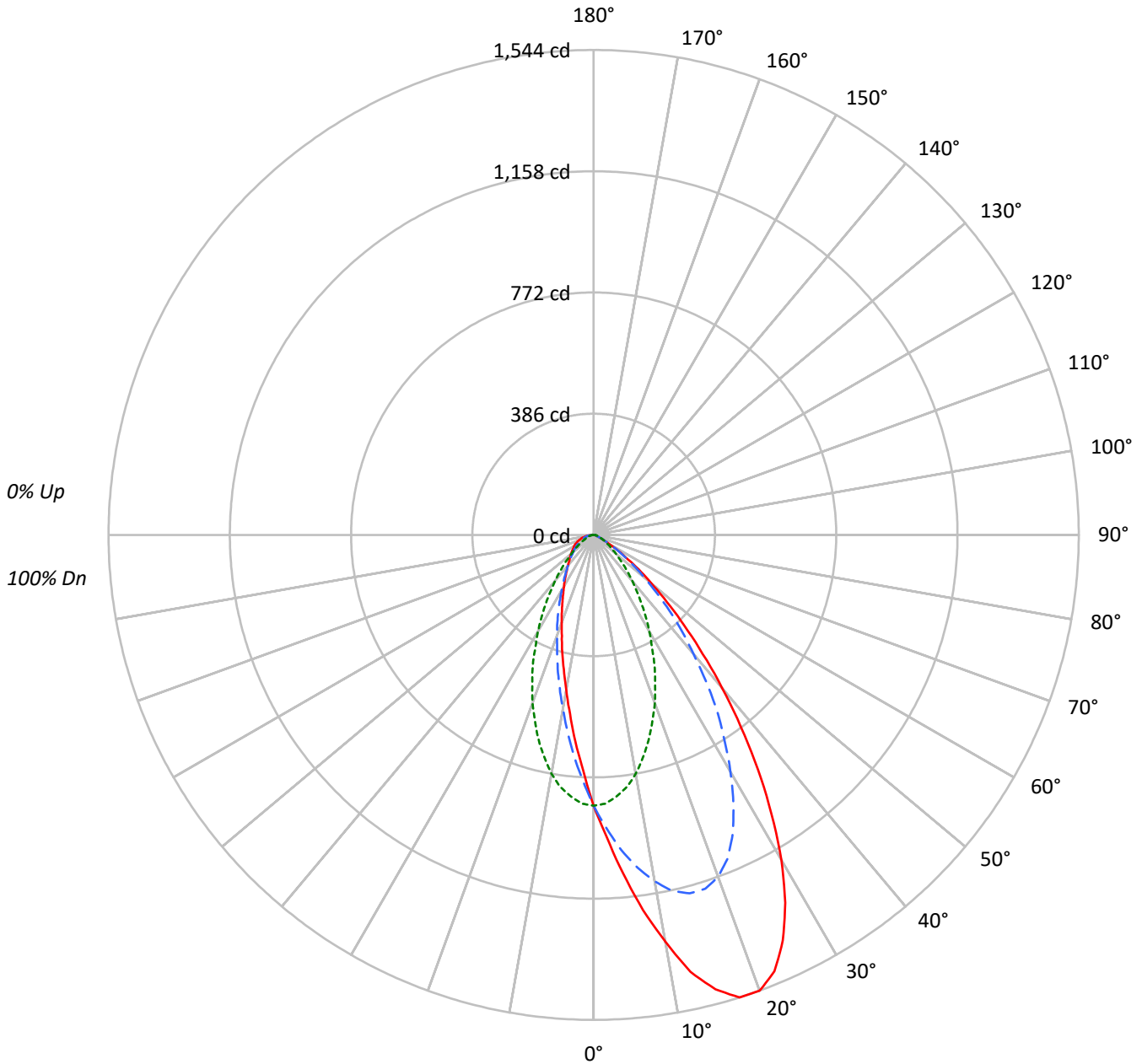
Input Watts (W): 20.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	109	105	103	109	106	104	101	102	100	98	98	97	95	95	94	92	90																			
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81																			
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73																			
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66																			
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60																			
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55																			
7	76	65	58	53	75	64	58	53	63	57	52	62	56	52	60	56	52	50																			
8	72	60	53	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46																			
9	68	56	50	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43																			
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	333892	333892	333892
5°	420943	325019	257325
10°	517139	303683	197487
15°	600593	271203	154790
20°	636486	234503	122054
25°	609072	196001	100479
30°	534844	158378	84400
35°	430967	124883	72726
40°	321438	96881	64571
45°	222622	73130	58833
50°	143420	54234	55982
55°	84280	41194	54903
60°	45010	33699	56243
65°	21264	26580	55909
70°	9853	22990	55833
75°	13020	21701	60762
80°	12938	19407	58220
85°	12888	25777	51554



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.4	7.0
10°-20°	227.3	19.4
20°-30°	296.6	25.3
30°-40°	256.8	21.9
40°-50°	162.5	13.9
50°-60°	81.4	7.0
60°-70°	37.4	3.2
70°-80°	20.1	1.7
80°-90°	6.5	0.6
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°	605.4	51.7
0°-40°	862.1	73.7
0°-60°	1106.1	94.5
0°-90°	1170.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1170.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	862	862	862	862	862	
5°	1083	1007	836	708	662	110
15°	1498	1181	676	441	386	421
25°	1425	1048	459	264	235	645
35°	911	685	264	160	154	566
45°	406	340	134	104	107	320
55°	125	116	61	70	81	120
65°	23	26	29	49	61	27
75°	9	9	14	29	41	8
85°	3	3	6	9	12	2
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°	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0
2.5°	963.6	969.4	969.4	972.3	960.7	963.6	963.6	957.8	949.1	943.3	934.6
5°	1082.6	1082.6	1079.7	1082.6	1073.9	1068.1	1071.0	1059.4	1036.2	1024.6	1007.2
7.5°	1204.5	1198.7	1198.7	1195.8	1181.3	1172.6	1169.7	1149.4	1117.5	1094.3	1068.1
10°	1314.8	1314.8	1309.0	1303.2	1282.9	1271.3	1262.6	1230.7	1195.8	1158.1	1120.4
12.5°	1425.1	1419.3	1410.6	1399.0	1370.0	1358.4	1343.9	1306.1	1253.9	1210.4	1161.0
15°	1497.7	1500.6	1486.1	1471.6	1439.7	1422.2	1404.8	1358.4	1297.4	1242.3	1181.3
17.5°	1544.1	1541.2	1526.7	1509.3	1474.5	1454.2	1433.8	1378.7	1314.8	1248.1	1181.3
20°	1544.1	1544.1	1526.7	1509.3	1471.6	1448.4	1428.0	1370.0	1300.3	1230.7	1158.1
22.5°	1503.5	1497.7	1486.1	1468.7	1430.9	1410.6	1387.4	1329.4	1256.8	1190.0	1114.6
25°	1425.1	1425.1	1410.6	1390.3	1358.4	1335.2	1314.8	1256.8	1187.1	1120.4	1047.8
27.5°	1320.6	1317.7	1303.2	1288.7	1253.9	1236.5	1216.2	1161.0	1100.1	1039.1	963.6
30°	1195.8	1190.0	1184.2	1161.0	1137.8	1123.3	1105.9	1056.5	995.6	937.5	870.8
32.5°	1053.6	1062.3	1047.8	1033.3	1013.0	998.5	984.0	946.2	891.1	838.8	775.0
35°	911.4	917.2	908.5	896.9	876.6	867.9	853.3	821.4	780.8	731.4	685.0
37.5°	769.2	769.2	769.2	760.5	748.9	740.1	731.4	702.4	667.6	629.8	586.3
40°	635.7	644.4	632.8	629.8	621.1	618.2	609.5	589.2	560.2	534.1	493.4
42.5°	513.7	513.7	516.6	510.8	507.9	502.1	496.3	484.7	464.4	441.2	415.1
45°	406.4	409.3	412.2	403.5	403.5	403.5	400.5	388.9	371.5	357.0	339.6
47.5°	316.4	316.4	319.3	316.4	316.4	316.4	310.6	310.6	299.0	284.4	269.9
50°	238.0	240.9	243.8	243.8	243.8	240.9	240.9	235.1	229.3	223.5	209.0
52.5°	180.0	180.0	177.1	180.0	180.0	180.0	180.0	177.1	174.2	168.3	159.6
55°	124.8	124.8	127.7	127.7	127.7	130.6	130.6	130.6	127.7	124.8	116.1
57.5°	87.1	87.1	87.1	90.0	92.9	92.9	92.9	92.9	90.0	87.1	84.2
60°	58.1	58.1	58.1	61.0	61.0	61.0	61.0	63.9	61.0	61.0	58.1
62.5°	37.7	37.7	37.7	37.7	37.7	40.6	40.6	40.6	40.6	40.6	37.7
65°	23.2	23.2	23.2	23.2	23.2	23.2	26.1	26.1	26.1	26.1	26.1
67.5°	14.5	14.5	14.5	14.5	14.5	17.4	17.4	17.4	17.4	17.4	17.4
70°	8.7	8.7	8.7	8.7	11.6	11.6	11.6	11.6	11.6	11.6	11.6
72.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
75°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
77.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	8.7	8.7	8.7
80°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.8	5.8	2.9
85°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0
2.5°	934.6	923.0	917.2	902.7	899.8	888.2	888.2	876.6	862.0	856.2	841.7
5°	995.6	972.3	960.7	934.6	925.9	908.5	899.8	876.6	853.3	835.9	815.6
7.5°	1047.8	1013.0	989.8	954.9	940.4	914.3	896.9	867.9	835.9	809.8	780.8
10°	1088.4	1042.0	1007.2	960.7	943.3	911.4	885.3	844.6	804.0	772.1	737.2
12.5°	1114.6	1059.4	1010.1	954.9	931.7	896.9	859.1	812.7	766.3	725.6	687.9
15°	1126.2	1059.4	1001.4	934.6	908.5	870.8	827.2	772.1	719.8	676.3	635.7
17.5°	1117.5	1039.1	978.2	902.7	873.7	830.1	780.8	722.7	667.6	621.1	580.5
20°	1088.4	1007.2	937.5	859.1	827.2	783.7	728.5	670.5	615.3	568.9	525.4
22.5°	1039.1	954.9	882.4	804.0	772.1	728.5	670.5	612.4	557.3	510.8	470.2
25°	978.2	888.2	815.6	740.1	705.3	667.6	609.5	551.5	499.2	458.6	418.0
27.5°	896.9	818.5	745.9	670.5	638.6	603.7	545.7	493.4	441.2	400.5	365.7
30°	809.8	734.3	673.4	600.8	571.8	537.0	487.6	435.4	391.8	354.1	322.2
32.5°	722.7	650.2	592.1	531.2	505.0	470.2	426.7	380.2	339.6	307.7	281.5
35°	632.8	571.8	516.6	458.6	438.3	409.3	368.6	328.0	293.2	264.1	238.0
37.5°	542.8	493.4	444.1	397.6	374.4	351.2	313.5	278.6	246.7	223.5	203.2
40°	461.5	418.0	377.3	333.8	313.5	296.1	264.1	235.1	211.9	191.6	174.2
42.5°	383.1	348.3	313.5	278.6	261.2	246.7	220.6	194.5	174.2	159.6	145.1
45°	313.5	287.3	258.3	226.4	217.7	200.3	180.0	162.5	145.1	133.5	121.9
47.5°	252.5	229.3	206.1	182.9	174.2	162.5	145.1	130.6	119.0	110.3	101.6
50°	197.4	180.0	165.4	145.1	139.3	127.7	116.1	104.5	95.8	90.0	84.2
52.5°	150.9	136.4	124.8	113.2	107.4	101.6	90.0	84.2	78.4	75.5	72.6
55°	110.3	101.6	92.9	84.2	81.3	75.5	69.7	63.9	61.0	61.0	61.0
57.5°	78.4	72.6	66.8	61.0	61.0	58.1	55.1	52.2	49.3	49.3	49.3
60°	55.1	52.2	49.3	46.4	43.5	43.5	40.6	43.5	40.6	43.5	43.5
62.5°	37.7	34.8	34.8	31.9	31.9	31.9	31.9	31.9	34.8	34.8	37.7
65°	23.2	23.2	23.2	23.2	23.2	23.2	26.1	26.1	26.1	29.0	29.0
67.5°	17.4	17.4	17.4	20.3	20.3	20.3	20.3	23.2	23.2	23.2	26.1
70°	11.6	14.5	14.5	14.5	14.5	14.5	17.4	17.4	17.4	20.3	20.3
72.5°	11.6	11.6	11.6	11.6	11.6	11.6	14.5	14.5	14.5	17.4	17.4
75°	8.7	11.6	11.6	11.6	11.6	11.6	11.6	14.5	14.5	14.5	17.4
77.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	11.6	11.6	11.6	11.6
80°	5.8	5.8	5.8	8.7	8.7	8.7	8.7	8.7	8.7	8.7	11.6
82.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8	8.7
85°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	5.8	2.9	5.8	5.8
87.5°	0.0	0.0	0.0	2.9	0.0	2.9	2.9	2.9	2.9	2.9	2.9
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0
2.5°	835.9	827.2	830.1	812.7	815.6	804.0	798.2	789.5	783.7	775.0	777.9
5°	801.1	786.6	780.8	760.5	763.4	745.9	734.3	719.8	708.2	693.7	690.8
7.5°	757.6	734.3	725.6	705.3	702.4	679.2	664.7	647.3	632.8	618.2	612.4
10°	708.2	682.1	664.7	644.4	641.5	615.3	597.9	580.5	563.1	548.6	542.8
12.5°	656.0	626.9	606.6	583.4	577.6	554.4	534.1	516.6	499.2	484.7	476.0
15°	600.8	568.9	548.6	525.4	519.6	493.4	476.0	455.7	441.2	426.7	420.9
17.5°	545.7	513.7	490.5	470.2	464.4	438.3	418.0	403.5	386.0	377.3	368.6
20°	490.5	458.6	435.4	418.0	409.3	388.9	368.6	354.1	339.6	330.9	322.2
22.5°	435.4	406.4	386.0	368.6	362.8	342.5	325.1	310.6	301.9	290.3	284.4
25°	386.0	357.0	339.6	322.2	316.4	299.0	287.3	272.8	264.1	255.4	249.6
27.5°	339.6	313.5	296.1	281.5	278.6	264.1	249.6	240.9	232.2	226.4	223.5
30°	293.2	272.8	258.3	246.7	243.8	229.3	217.7	211.9	203.2	200.3	197.4
32.5°	258.3	238.0	226.4	214.8	211.9	200.3	194.5	185.8	180.0	177.1	177.1
35°	220.6	206.1	194.5	188.7	185.8	177.1	168.3	165.4	159.6	156.7	156.7
37.5°	188.7	177.1	168.3	159.6	159.6	153.8	148.0	145.1	142.2	142.2	139.3
40°	162.5	150.9	148.0	142.2	139.3	136.4	133.5	130.6	127.7	127.7	127.7
42.5°	136.4	130.6	124.8	121.9	121.9	119.0	116.1	116.1	113.2	116.1	116.1
45°	116.1	110.3	107.4	104.5	107.4	104.5	104.5	101.6	104.5	104.5	104.5
47.5°	98.7	95.8	92.9	92.9	92.9	92.9	92.9	92.9	92.9	95.8	95.8
50°	84.2	81.3	81.3	81.3	81.3	81.3	84.2	84.2	84.2	87.1	87.1
52.5°	69.7	69.7	69.7	69.7	72.6	72.6	75.5	75.5	78.4	78.4	81.3
55°	61.0	61.0	61.0	61.0	63.9	63.9	66.8	69.7	69.7	72.6	75.5
57.5°	52.2	52.2	55.1	55.1	58.1	58.1	61.0	63.9	63.9	66.8	69.7
60°	43.5	46.4	49.3	49.3	49.3	52.2	55.1	58.1	58.1	61.0	63.9
62.5°	37.7	40.6	43.5	43.5	43.5	46.4	49.3	52.2	52.2	55.1	58.1
65°	31.9	34.8	37.7	37.7	37.7	40.6	43.5	46.4	49.3	49.3	52.2
67.5°	29.0	29.0	31.9	31.9	34.8	37.7	37.7	40.6	43.5	46.4	49.3
70°	23.2	26.1	29.0	29.0	29.0	31.9	34.8	37.7	37.7	40.6	43.5
72.5°	20.3	20.3	23.2	23.2	26.1	29.0	29.0	31.9	34.8	34.8	37.7
75°	17.4	20.3	20.3	20.3	23.2	23.2	26.1	29.0	29.0	31.9	31.9
77.5°	14.5	14.5	17.4	17.4	17.4	20.3	20.3	23.2	23.2	26.1	26.1
80°	11.6	11.6	14.5	14.5	14.5	14.5	17.4	17.4	20.3	20.3	20.3
82.5°	8.7	8.7	8.7	8.7	11.6	11.6	11.6	11.6	14.5	14.5	14.5
85°	5.8	5.8	5.8	5.8	5.8	8.7	8.7	8.7	8.7	8.7	11.6
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	862.0	862.0	862.0	862.0	862.0	862.0	862.0	862.0
2.5°	769.2	769.2	766.3	763.4	760.5	757.6	754.7	751.8
5°	682.1	685.0	673.4	670.5	670.5	664.7	667.6	661.8
7.5°	600.8	600.8	592.1	589.2	586.3	580.5	577.6	574.7
10°	528.3	525.4	519.6	516.6	510.8	507.9	507.9	502.1
12.5°	464.4	461.5	455.7	452.8	447.0	444.1	441.2	438.3
15°	409.3	406.4	400.5	397.6	394.7	388.9	388.9	386.0
17.5°	357.0	354.1	351.2	345.4	345.4	339.6	336.7	336.7
20°	316.4	313.5	307.7	304.8	304.8	301.9	301.9	296.1
22.5°	278.6	275.7	272.8	269.9	269.9	267.0	264.1	264.1
25°	246.7	243.8	240.9	240.9	238.0	235.1	235.1	235.1
27.5°	217.7	217.7	214.8	214.8	214.8	211.9	211.9	209.0
30°	194.5	194.5	191.6	191.6	191.6	188.7	191.6	188.7
32.5°	174.2	174.2	174.2	174.2	174.2	171.2	171.2	171.2
35°	156.7	156.7	156.7	156.7	156.7	153.8	156.7	153.8
37.5°	139.3	142.2	139.3	139.3	142.2	139.3	139.3	139.3
40°	127.7	127.7	127.7	127.7	127.7	127.7	127.7	127.7
42.5°	116.1	116.1	116.1	116.1	116.1	116.1	116.1	116.1
45°	104.5	107.4	107.4	107.4	107.4	107.4	107.4	107.4
47.5°	98.7	98.7	98.7	98.7	101.6	98.7	101.6	101.6
50°	90.0	90.0	90.0	92.9	92.9	92.9	92.9	92.9
52.5°	84.2	84.2	84.2	84.2	87.1	87.1	87.1	87.1
55°	75.5	78.4	78.4	78.4	81.3	81.3	81.3	81.3
57.5°	72.6	72.6	72.6	75.5	75.5	75.5	78.4	75.5
60°	66.8	66.8	69.7	69.7	69.7	72.6	72.6	72.6
62.5°	61.0	63.9	63.9	63.9	63.9	66.8	66.8	66.8
65°	55.1	58.1	58.1	58.1	61.0	61.0	61.0	61.0
67.5°	49.3	52.2	52.2	55.1	55.1	55.1	55.1	55.1
70°	43.5	46.4	46.4	46.4	49.3	49.3	49.3	49.3
72.5°	40.6	40.6	40.6	43.5	43.5	43.5	46.4	43.5
75°	34.8	37.7	37.7	37.7	37.7	37.7	40.6	40.6
77.5°	29.0	29.0	29.0	29.0	31.9	31.9	31.9	31.9
80°	23.2	23.2	23.2	23.2	26.1	26.1	26.1	26.1
82.5°	17.4	17.4	17.4	17.4	17.4	17.4	17.4	17.4
85°	11.6	11.6	11.6	11.6	11.6	11.6	11.6	11.6
87.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
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)