

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: P226269

Luminaire Tested: **LD2B20D010 EU2B20WW8027 2LBSW***

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P226269
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 EU2B20WW8027 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: 1306.6 lumens
Efficiency: N/A
Efficacy: 62.5 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

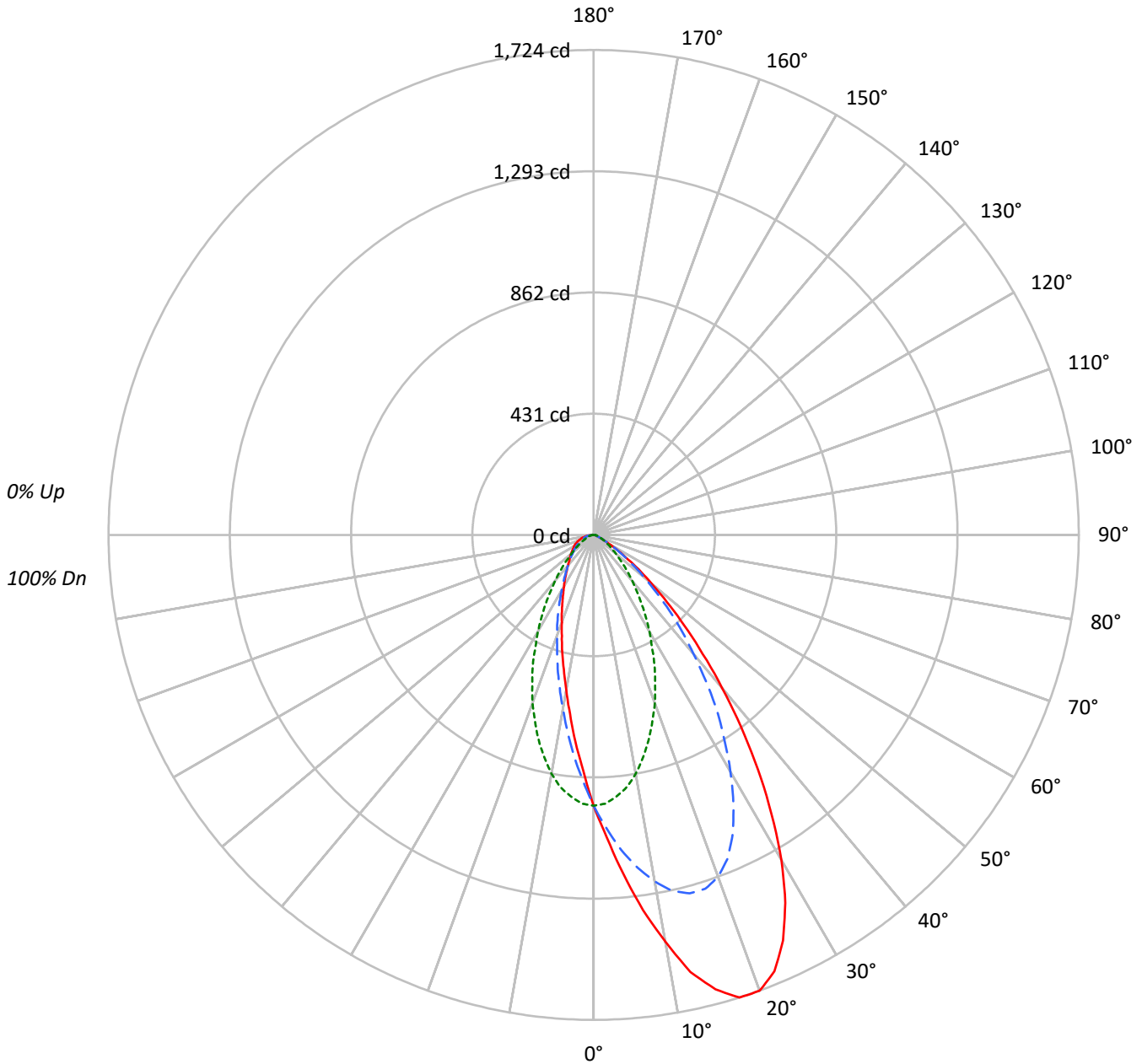
Input Watts (W): 20.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100			100
1	112	109	105	103	109	106	104	101	102	100	98	98	97	95	95	94	92	90			90
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81			81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73			73
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66			66
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60			60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55			55
7	76	65	58	53	75	64	58	53	63	57	52	62	56	52	60	56	52	50			50
8	72	60	53	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46			46
9	68	56	50	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43			43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40			40

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	372859	372859	372859
5°	470051	362930	287342
10°	577475	339082	220535
15°	670649	302843	172875
20°	710765	261874	136275
25°	680147	218866	112190
30°	597238	176850	94239
35°	481232	139447	81238
40°	358906	108157	72105
45°	248587	81675	65680
50°	160172	60562	62490
55°	94139	45989	61319
60°	50200	37650	62750
65°	23738	29696	62416
70°	10985	25708	62402
75°	14517	24245	67945
80°	14499	21637	65135
85°	14222	28888	57776



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	7.0
10°-20°	253.9	19.4
20°-30°	331.2	25.3
30°-40°	286.7	21.9
40°-50°	181.5	13.9
50°-60°	90.9	7.0
60°-70°	41.8	3.2
70°-80°	22.4	1.7
80°-90°	7.2	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°	676.0	51.7
0°-40°	962.7	73.7
0°-60°	1235.1	94.5
0°-90°	1306.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1306.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	963	963	963	963	963	
5°	1209	1125	933	791	739	123
15°	1672	1319	755	493	431	470
25°	1591	1170	512	295	262	721
35°	1018	765	295	178	172	632
45°	454	379	149	117	120	357
55°	139	130	68	78	91	133
65°	26	29	32	55	68	30
75°	10	10	16	32	45	9
85°	3	3	6	10	13	3
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°	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6
2.5°	1076.1	1082.5	1082.5	1085.8	1072.8	1076.1	1076.1	1069.6	1059.8	1053.4	1043.6
5°	1208.9	1208.9	1205.7	1208.9	1199.2	1192.7	1196.0	1183.0	1157.1	1144.1	1124.7
7.5°	1345.1	1338.6	1338.6	1335.3	1319.1	1309.4	1306.2	1283.5	1247.8	1221.9	1192.7
10°	1468.2	1468.2	1461.7	1455.3	1432.6	1419.6	1409.9	1374.2	1335.3	1293.2	1251.1
12.5°	1591.4	1584.9	1575.2	1562.2	1529.8	1516.8	1500.6	1458.5	1400.2	1351.5	1296.4
15°	1672.4	1675.7	1659.5	1643.2	1607.6	1588.1	1568.7	1516.8	1448.8	1387.2	1319.1
17.5°	1724.3	1721.0	1704.8	1685.4	1646.5	1623.8	1601.1	1539.5	1468.2	1393.7	1319.1
20°	1724.3	1724.3	1704.8	1685.4	1643.2	1617.3	1594.6	1529.8	1452.0	1374.2	1293.2
22.5°	1678.9	1672.4	1659.5	1640.0	1597.9	1575.2	1549.3	1484.4	1403.4	1328.9	1244.6
25°	1591.4	1591.4	1575.2	1552.5	1516.8	1490.9	1468.2	1403.4	1325.6	1251.1	1170.0
27.5°	1474.7	1471.5	1455.3	1439.1	1400.2	1380.7	1358.0	1296.4	1228.4	1160.3	1076.1
30°	1335.3	1328.9	1322.4	1296.4	1270.5	1254.3	1234.9	1179.8	1111.7	1046.9	972.3
32.5°	1176.5	1186.2	1170.0	1153.8	1131.1	1114.9	1098.7	1056.6	995.0	936.7	865.4
35°	1017.7	1024.2	1014.5	1001.5	978.8	969.1	952.9	917.2	871.9	816.8	764.9
37.5°	858.9	858.9	858.9	849.2	836.2	826.5	816.8	784.3	745.5	703.3	654.7
40°	709.8	719.5	706.6	703.3	693.6	690.4	680.6	657.9	625.5	596.4	551.0
42.5°	573.7	573.7	576.9	570.4	567.2	560.7	554.2	541.3	518.6	492.6	463.5
45°	453.8	457.0	460.2	450.5	450.5	450.5	447.3	434.3	414.9	398.7	379.2
47.5°	353.3	353.3	356.5	353.3	353.3	353.3	346.8	346.8	333.8	317.6	301.4
50°	265.8	269.0	272.3	272.3	272.3	269.0	269.0	262.5	256.0	249.6	233.4
52.5°	200.9	200.9	197.7	200.9	200.9	200.9	200.9	197.7	194.5	188.0	178.3
55°	139.4	139.4	142.6	142.6	142.6	145.9	145.9	145.9	142.6	139.4	129.6
57.5°	97.2	97.2	97.2	100.5	103.7	103.7	103.7	103.7	100.5	97.2	94.0
60°	64.8	64.8	64.8	68.1	68.1	68.1	68.1	71.3	68.1	68.1	64.8
62.5°	42.1	42.1	42.1	42.1	42.1	45.4	45.4	45.4	45.4	45.4	42.1
65°	25.9	25.9	25.9	25.9	25.9	25.9	29.2	29.2	29.2	29.2	29.2
67.5°	16.2	16.2	16.2	16.2	16.2	19.4	19.4	19.4	19.4	19.4	19.4
70°	9.7	9.7	9.7	9.7	13.0	13.0	13.0	13.0	13.0	13.0	13.0
72.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
75°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
77.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	9.7	9.7	9.7
80°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
82.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.5	6.5	3.2
85°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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°	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6
2.5°	1043.6	1030.7	1024.2	1008.0	1004.7	991.8	991.8	978.8	962.6	956.1	939.9
5°	1111.7	1085.8	1072.8	1043.6	1033.9	1014.5	1004.7	978.8	952.9	933.4	910.8
7.5°	1170.0	1131.1	1105.2	1066.3	1050.1	1021.0	1001.5	969.1	933.4	904.3	871.9
10°	1215.4	1163.6	1124.7	1072.8	1053.4	1017.7	988.5	943.2	897.8	862.1	823.2
12.5°	1244.6	1183.0	1127.9	1066.3	1040.4	1001.5	959.4	907.5	855.7	810.3	768.1
15°	1257.6	1183.0	1118.2	1043.6	1014.5	972.3	923.7	862.1	803.8	755.2	709.8
17.5°	1247.8	1160.3	1092.3	1008.0	975.6	927.0	871.9	807.0	745.5	693.6	648.2
20°	1215.4	1124.7	1046.9	959.4	923.7	875.1	813.5	748.7	687.1	635.3	586.6
22.5°	1160.3	1066.3	985.3	897.8	862.1	813.5	748.7	683.9	622.3	570.4	525.1
25°	1092.3	991.8	910.8	826.5	787.6	745.5	680.6	615.8	557.5	512.1	466.7
27.5°	1001.5	914.0	833.0	748.7	713.0	674.2	609.3	551.0	492.6	447.3	408.4
30°	904.3	820.0	751.9	670.9	638.5	599.6	544.5	486.2	437.6	395.4	359.8
32.5°	807.0	726.0	661.2	593.1	564.0	525.1	476.4	424.6	379.2	343.6	314.4
35°	706.6	638.5	576.9	512.1	489.4	457.0	411.6	366.2	327.4	294.9	265.8
37.5°	606.1	551.0	495.9	444.0	418.1	392.2	350.0	311.1	275.5	249.6	226.9
40°	515.3	466.7	421.3	372.7	350.0	330.6	294.9	262.5	236.6	213.9	194.5
42.5°	427.8	388.9	350.0	311.1	291.7	275.5	246.3	217.2	194.5	178.3	162.1
45°	350.0	320.9	288.5	252.8	243.1	223.6	200.9	181.5	162.1	149.1	136.1
47.5°	282.0	256.0	230.1	204.2	194.5	181.5	162.1	145.9	132.9	123.2	113.4
50°	220.4	200.9	184.7	162.1	155.6	142.6	129.6	116.7	107.0	100.5	94.0
52.5°	168.5	152.3	139.4	126.4	119.9	113.4	100.5	94.0	87.5	84.3	81.0
55°	123.2	113.4	103.7	94.0	90.8	84.3	77.8	71.3	68.1	68.1	68.1
57.5°	87.5	81.0	74.5	68.1	68.1	64.8	61.6	58.3	55.1	55.1	55.1
60°	61.6	58.3	55.1	51.9	48.6	48.6	45.4	48.6	45.4	48.6	48.6
62.5°	42.1	38.9	38.9	35.7	35.7	35.7	35.7	35.7	38.9	38.9	42.1
65°	25.9	25.9	25.9	25.9	25.9	25.9	29.2	29.2	29.2	32.4	32.4
67.5°	19.4	19.4	19.4	22.7	22.7	22.7	22.7	25.9	25.9	25.9	29.2
70°	13.0	16.2	16.2	16.2	16.2	16.2	19.4	19.4	19.4	22.7	22.7
72.5°	13.0	13.0	13.0	13.0	13.0	13.0	16.2	16.2	16.2	19.4	19.4
75°	9.7	13.0	13.0	13.0	13.0	13.0	13.0	16.2	16.2	16.2	19.4
77.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	13.0	13.0	13.0	13.0
80°	6.5	6.5	6.5	9.7	9.7	9.7	9.7	9.7	9.7	9.7	13.0
82.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	9.7
85°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.5	3.2	6.5	6.5
87.5°	0.0	0.0	0.0	3.2	0.0	3.2	3.2	3.2	3.2	3.2	3.2
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°	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6
2.5°	933.4	923.7	927.0	907.5	910.8	897.8	891.3	881.6	875.1	865.4	868.6
5°	894.5	878.3	871.9	849.2	852.4	833.0	820.0	803.8	790.8	774.6	771.4
7.5°	845.9	820.0	810.3	787.6	784.3	758.4	742.2	722.8	706.6	690.4	683.9
10°	790.8	761.7	742.2	719.5	716.3	687.1	667.7	648.2	628.8	612.6	606.1
12.5°	732.5	700.1	677.4	651.5	645.0	619.1	596.4	576.9	557.5	541.3	531.5
15°	670.9	635.3	612.6	586.6	580.2	551.0	531.5	508.9	492.6	476.4	470.0
17.5°	609.3	573.7	547.7	525.1	518.6	489.4	466.7	450.5	431.1	421.3	411.6
20°	547.7	512.1	486.2	466.7	457.0	434.3	411.6	395.4	379.2	369.5	359.8
22.5°	486.2	453.8	431.1	411.6	405.1	382.5	363.0	346.8	337.1	324.1	317.6
25°	431.1	398.7	379.2	359.8	353.3	333.8	320.9	304.7	294.9	285.2	278.7
27.5°	379.2	350.0	330.6	314.4	311.1	294.9	278.7	269.0	259.3	252.8	249.6
30°	327.4	304.7	288.5	275.5	272.3	256.0	243.1	236.6	226.9	223.6	220.4
32.5°	288.5	265.8	252.8	239.8	236.6	223.6	217.2	207.4	200.9	197.7	197.7
35°	246.3	230.1	217.2	210.7	207.4	197.7	188.0	184.7	178.3	175.0	175.0
37.5°	210.7	197.7	188.0	178.3	178.3	171.8	165.3	162.1	158.8	158.8	155.6
40°	181.5	168.5	165.3	158.8	155.6	152.3	149.1	145.9	142.6	142.6	142.6
42.5°	152.3	145.9	139.4	136.1	136.1	132.9	129.6	129.6	126.4	129.6	129.6
45°	129.6	123.2	119.9	116.7	119.9	116.7	116.7	113.4	116.7	116.7	116.7
47.5°	110.2	107.0	103.7	103.7	103.7	103.7	103.7	103.7	103.7	107.0	107.0
50°	94.0	90.8	90.8	90.8	90.8	90.8	94.0	94.0	94.0	97.2	97.2
52.5°	77.8	77.8	77.8	77.8	81.0	81.0	84.3	84.3	87.5	87.5	90.8
55°	68.1	68.1	68.1	68.1	71.3	71.3	74.5	77.8	77.8	81.0	84.3
57.5°	58.3	58.3	61.6	61.6	64.8	64.8	68.1	71.3	71.3	74.5	77.8
60°	48.6	51.9	55.1	55.1	55.1	58.3	61.6	64.8	64.8	68.1	71.3
62.5°	42.1	45.4	48.6	48.6	48.6	51.9	55.1	58.3	58.3	61.6	64.8
65°	35.7	38.9	42.1	42.1	42.1	45.4	48.6	51.9	55.1	55.1	58.3
67.5°	32.4	32.4	35.7	35.7	38.9	42.1	42.1	45.4	48.6	51.9	55.1
70°	25.9	29.2	32.4	32.4	32.4	35.7	38.9	42.1	42.1	45.4	48.6
72.5°	22.7	22.7	25.9	25.9	29.2	32.4	32.4	35.7	38.9	38.9	42.1
75°	19.4	22.7	22.7	22.7	25.9	25.9	29.2	32.4	32.4	35.7	35.7
77.5°	16.2	16.2	19.4	19.4	19.4	22.7	22.7	25.9	25.9	29.2	29.2
80°	13.0	13.0	16.2	16.2	16.2	16.2	19.4	19.4	22.7	22.7	22.7
82.5°	9.7	9.7	9.7	9.7	13.0	13.0	13.0	13.0	16.2	16.2	16.2
85°	6.5	6.5	6.5	6.5	6.5	9.7	9.7	9.7	9.7	9.7	13.0
87.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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°	962.6	962.6	962.6	962.6	962.6	962.6	962.6	962.6
2.5°	858.9	858.9	855.7	852.4	849.2	845.9	842.7	839.4
5°	761.7	764.9	751.9	748.7	748.7	742.2	745.5	739.0
7.5°	670.9	670.9	661.2	657.9	654.7	648.2	645.0	641.7
10°	589.9	586.6	580.2	576.9	570.4	567.2	567.2	560.7
12.5°	518.6	515.3	508.9	505.6	499.1	495.9	492.6	489.4
15°	457.0	453.8	447.3	444.0	440.8	434.3	434.3	431.1
17.5°	398.7	395.4	392.2	385.7	385.7	379.2	376.0	376.0
20°	353.3	350.0	343.6	340.3	340.3	337.1	337.1	330.6
22.5°	311.1	307.9	304.7	301.4	301.4	298.2	294.9	294.9
25°	275.5	272.3	269.0	269.0	265.8	262.5	262.5	262.5
27.5°	243.1	243.1	239.8	239.8	239.8	236.6	236.6	233.4
30°	217.2	217.2	213.9	213.9	213.9	210.7	213.9	210.7
32.5°	194.5	194.5	194.5	194.5	194.5	191.2	191.2	191.2
35°	175.0	175.0	175.0	175.0	175.0	171.8	175.0	171.8
37.5°	155.6	158.8	155.6	155.6	158.8	155.6	155.6	155.6
40°	142.6	142.6	142.6	142.6	142.6	142.6	142.6	142.6
42.5°	129.6	129.6	129.6	129.6	129.6	129.6	129.6	129.6
45°	116.7	119.9	119.9	119.9	119.9	119.9	119.9	119.9
47.5°	110.2	110.2	110.2	110.2	113.4	110.2	113.4	113.4
50°	100.5	100.5	100.5	103.7	103.7	103.7	103.7	103.7
52.5°	94.0	94.0	94.0	94.0	97.2	97.2	97.2	97.2
55°	84.3	87.5	87.5	87.5	90.8	90.8	90.8	90.8
57.5°	81.0	81.0	81.0	84.3	84.3	84.3	87.5	84.3
60°	74.5	74.5	77.8	77.8	77.8	81.0	81.0	81.0
62.5°	68.1	71.3	71.3	71.3	71.3	74.5	74.5	74.5
65°	61.6	64.8	64.8	64.8	68.1	68.1	68.1	68.1
67.5°	55.1	58.3	58.3	61.6	61.6	61.6	61.6	61.6
70°	48.6	51.9	51.9	51.9	55.1	55.1	55.1	55.1
72.5°	45.4	45.4	45.4	48.6	48.6	48.6	51.9	48.6
75°	38.9	42.1	42.1	42.1	42.1	42.1	45.4	45.4
77.5°	32.4	32.4	32.4	32.4	35.7	35.7	35.7	35.7
80°	25.9	25.9	25.9	25.9	29.2	29.2	29.2	29.2
82.5°	19.4	19.4	19.4	19.4	19.4	19.4	19.4	19.4
85°	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
87.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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)