

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: P135679

Luminaire Tested: **LD6A15D010TE ERM6A15940 6LM111H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135679
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23372)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD6A15D010TE ERM6A15940 6LM111H
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER
Light Source: (1) HIGH LUMEN LED 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1375.0 lumens
Efficiency: N/A
Efficacy: 60.8 lumens/watt
Spacing Criteria (0/90/45): 0.9 / 0.96 / 0.92
Luminous Opening: Circular (Dia: 0.46' x H: 0')
CIE Type: Direct

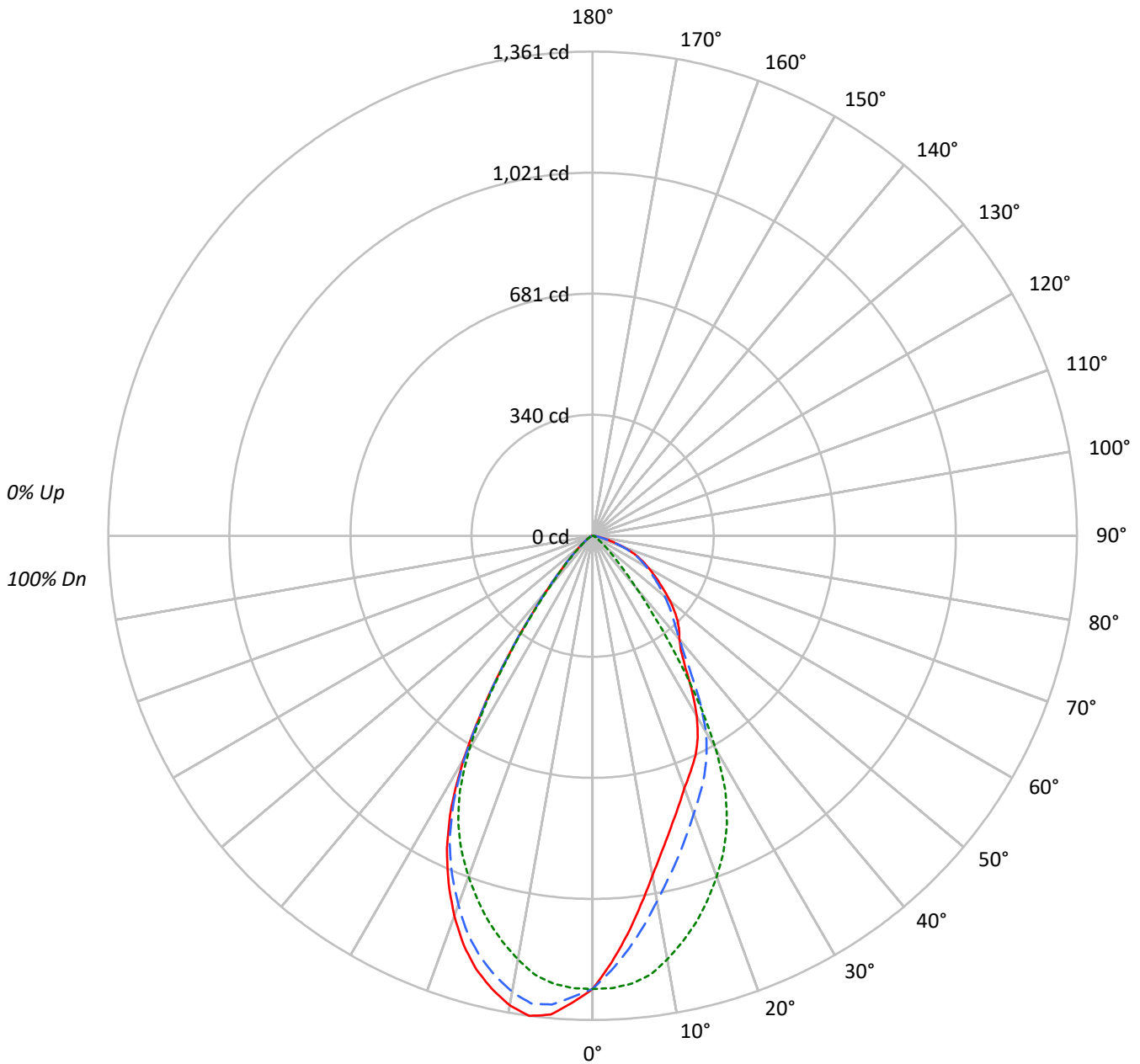
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91								
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83								
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75								
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68								
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	64	63								
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58								
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53								
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50								
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46								
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	83110	83110	83110
5°	73637	82753	88477
10°	64180	80079	88811
15°	57330	75944	85245
20°	52348	70761	78884
25°	49159	64304	69739
30°	44078	52221	54572
35°	36222	32328	33156
40°	32303	15900	16778
45°	31158	7925	8470
50°	28713	4202	4517
55°	25945	2525	2696
60°	23774	1748	1748
65°	21720	1374	1142
70°	17511	1125	839
75°	10814	731	378
80°	6124	564	0
85°	3294	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.8	8.5
10°-20°	303.4	22.1
20°-30°	386.1	28.1
30°-40°	276.6	20.1
40°-50°	138.0	10.0
50°-60°	83.5	6.1
60°-70°	51.1	3.7
70°-80°	17.6	1.3
80°-90°	1.9	0.1
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°	806.3	58.6
0°-40°	1083.0	78.8
0°-60°	1304.5	94.9
0°-90°	1375.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1375.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1274	1274	1274	1274	1274	
5°	1124	1166	1264	1323	1351	103
15°	849	933	1124	1224	1262	239
25°	683	744	893	951	969	311
35°	455	490	406	416	416	290
45°	338	316	86	95	92	258
55°	228	215	22	24	24	205
65°	141	136	9	7	7	137
75°	43	38	3	2	2	50
85°	4	3	0	0	0	6
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9
2.5°	1201.4	1202.8	1205.9	1202.8	1204.3	1211.8	1208.8	1210.3	1214.7	1222.1	1217.7
5°	1124.4	1125.8	1133.2	1128.8	1131.7	1140.7	1140.7	1146.6	1155.5	1165.8	1165.8
7.5°	1044.3	1047.4	1054.7	1051.8	1056.2	1068.1	1069.6	1078.4	1090.3	1105.1	1112.5
10°	968.8	971.7	979.2	977.7	983.6	995.5	1001.4	1010.2	1025.1	1042.8	1051.8
12.5°	905.1	908.1	914.0	914.0	921.4	933.2	939.1	951.0	965.9	985.1	997.0
15°	848.8	853.2	859.2	859.2	866.6	878.4	885.8	896.2	912.5	933.2	946.6
17.5°	799.9	801.5	807.3	807.3	814.7	826.6	834.0	844.4	860.7	879.9	894.8
20°	754.0	755.5	761.4	762.9	768.9	779.2	786.6	796.9	811.8	831.0	844.4
22.5°	718.5	721.4	725.8	727.3	730.4	740.7	749.6	757.0	770.3	786.6	799.9
25°	682.9	684.4	688.8	690.3	694.7	702.2	708.1	715.5	727.3	743.6	754.0
27.5°	639.9	644.4	645.9	647.4	651.8	657.7	663.7	669.6	680.0	693.2	702.2
30°	585.1	586.6	591.1	594.0	598.5	604.4	611.8	617.7	626.6	637.0	643.0
32.5°	521.5	522.9	527.4	530.3	537.8	543.7	549.6	554.0	560.0	565.9	565.9
35°	454.8	459.2	460.7	465.1	472.6	478.5	482.9	484.4	487.4	490.3	479.9
37.5°	407.4	410.3	413.3	416.3	422.2	426.6	429.6	429.6	428.1	425.1	411.8
40°	379.3	380.7	383.7	385.2	391.1	394.0	394.0	391.1	385.2	377.7	357.0
42.5°	359.9	361.5	363.0	364.4	367.4	368.9	367.4	361.5	354.0	343.7	320.0
45°	337.7	339.2	340.7	340.7	343.7	343.7	342.2	336.3	327.4	315.5	290.4
47.5°	311.1	312.6	314.1	315.5	317.0	317.0	315.5	309.6	300.7	290.4	263.7
50°	282.9	284.4	285.9	285.9	288.8	288.8	287.4	281.5	274.1	263.7	240.0
52.5°	254.7	256.3	256.3	259.3	259.3	259.3	257.8	251.8	245.9	238.5	216.3
55°	228.1	229.6	229.6	232.6	234.0	232.6	231.1	226.7	220.8	214.8	197.0
57.5°	204.5	205.9	205.9	207.4	208.9	207.4	205.9	203.0	199.9	194.1	179.2
60°	182.2	183.6	183.6	185.2	185.2	183.6	183.6	180.7	177.8	174.8	161.5
62.5°	161.5	161.5	161.5	162.9	162.9	161.5	161.5	158.5	157.0	155.6	145.1
65°	140.7	140.7	140.7	140.7	140.7	137.8	137.8	136.3	134.8	136.3	127.4
67.5°	117.1	117.1	115.6	115.6	115.6	112.5	112.5	112.5	111.1	112.5	105.2
70°	91.8	91.8	90.4	90.4	88.9	85.9	85.9	85.9	84.5	85.9	81.5
72.5°	65.2	66.7	63.7	63.7	62.3	59.2	60.7	59.2	60.7	60.7	57.7
75°	42.9	44.5	41.4	41.4	40.0	38.5	38.5	38.5	40.0	38.5	37.0
77.5°	26.7	28.2	26.7	26.7	25.1	23.7	23.7	23.7	23.7	23.7	22.2
80°	16.3	16.3	16.3	14.8	14.8	13.4	13.4	13.4	13.4	13.4	11.9
82.5°	8.9	8.9	8.9	8.9	8.9	7.4	7.4	7.4	7.4	7.4	5.9
85°	4.4	4.4	4.4	4.4	4.4	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	1.5	1.5	1.5	1.5	1.5	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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9
2.5°	1231.0	1236.9	1232.5	1250.3	1247.3	1260.7	1259.2	1272.5	1271.0	1272.5	1275.4
5°	1183.6	1195.5	1196.9	1219.1	1220.6	1241.4	1245.8	1263.6	1266.6	1272.5	1279.9
7.5°	1131.7	1149.5	1155.5	1180.6	1189.6	1211.8	1220.6	1244.4	1250.3	1260.7	1269.5
10°	1075.5	1096.2	1105.1	1134.7	1146.6	1171.8	1183.6	1208.8	1217.7	1229.5	1239.9
12.5°	1022.1	1044.3	1056.2	1087.3	1103.6	1128.8	1142.1	1168.7	1177.7	1192.5	1202.8
15°	971.7	995.5	1008.8	1039.9	1056.2	1084.4	1097.6	1124.4	1134.7	1149.5	1159.9
17.5°	919.9	943.7	958.4	988.0	1008.8	1032.5	1047.4	1074.0	1084.4	1097.6	1108.1
20°	869.5	893.3	906.6	936.2	955.4	979.2	992.5	1019.2	1026.5	1039.9	1048.8
22.5°	822.2	844.4	856.3	887.3	903.6	924.4	937.7	961.4	970.3	980.7	986.6
25°	774.7	794.0	802.9	829.5	842.9	862.1	872.6	893.3	902.1	911.1	918.4
27.5°	721.4	731.8	734.8	755.5	765.9	783.7	788.1	807.3	814.7	820.7	826.6
30°	654.7	656.2	647.4	657.7	662.2	675.5	675.5	693.2	699.2	703.6	709.5
32.5°	570.3	561.4	540.7	537.8	534.7	542.2	539.2	554.0	560.0	562.9	567.3
35°	477.0	457.7	423.7	410.3	401.5	400.0	395.5	405.9	410.3	413.3	416.3
37.5°	395.5	367.4	324.4	300.7	285.9	280.0	274.1	280.0	282.9	285.9	288.8
40°	336.3	300.7	250.3	220.8	199.9	191.1	183.6	186.7	189.6	192.6	194.1
42.5°	293.3	253.3	198.5	162.9	142.2	131.8	124.4	125.9	127.4	128.8	131.8
45°	260.7	217.7	161.5	123.0	102.2	91.8	85.9	85.9	87.4	88.9	90.4
47.5°	234.0	188.2	131.8	94.8	75.5	65.2	59.2	59.2	60.7	60.7	62.3
50°	208.9	162.9	108.1	74.0	56.3	47.4	42.9	41.4	42.9	42.9	44.5
52.5°	188.2	143.7	90.4	59.2	42.9	35.6	31.1	31.1	31.1	31.1	31.1
55°	168.9	125.9	75.5	47.4	34.1	28.2	23.7	22.2	22.2	22.2	22.2
57.5°	154.1	112.5	65.2	40.0	28.2	22.2	19.2	17.8	17.8	17.8	17.8
60°	139.3	99.3	56.3	32.6	22.2	19.2	16.3	13.4	13.4	13.4	13.4
62.5°	124.4	85.9	47.4	28.2	19.2	14.8	13.4	10.4	10.4	10.4	10.4
65°	108.1	74.0	40.0	22.2	14.8	11.9	10.4	8.9	8.9	7.4	7.4
67.5°	88.9	59.2	32.6	19.2	13.4	10.4	8.9	7.4	5.9	5.9	5.9
70°	68.2	44.5	25.1	14.8	10.4	8.9	5.9	5.9	4.4	4.4	4.4
72.5°	48.9	31.1	17.8	11.9	7.4	5.9	5.9	4.4	4.4	4.4	2.9
75°	31.1	20.7	11.9	7.4	5.9	4.4	4.4	2.9	2.9	2.9	2.9
77.5°	19.2	13.4	8.9	5.9	4.4	2.9	2.9	2.9	1.5	1.5	1.5
80°	10.4	7.4	4.4	2.9	2.9	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	5.9	4.4	2.9	1.5	1.5	1.5	1.5	1.5	0.0	0.0	0.0
85°	2.9	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9	1273.9
2.5°	1284.3	1291.7	1287.3	1290.2	1303.6	1297.7	1308.0	1308.0	1319.9	1319.9	1311.0
5°	1293.3	1302.1	1303.6	1308.0	1325.8	1322.8	1334.7	1337.7	1351.0	1354.0	1346.6
7.5°	1287.3	1297.7	1302.1	1309.5	1327.3	1325.8	1339.1	1345.0	1356.9	1361.3	1355.4
10°	1259.2	1271.0	1277.0	1284.3	1303.6	1302.1	1316.9	1324.3	1334.7	1339.1	1334.7
12.5°	1222.1	1235.4	1241.4	1248.8	1268.0	1266.6	1281.4	1288.8	1297.7	1303.6	1299.2
15°	1180.6	1189.6	1199.9	1207.3	1225.1	1223.6	1238.4	1245.8	1253.2	1260.7	1256.2
17.5°	1127.3	1136.2	1146.6	1152.5	1170.3	1170.3	1182.1	1188.1	1198.4	1204.3	1198.4
20°	1066.6	1076.9	1084.4	1088.8	1105.1	1103.6	1115.4	1121.4	1130.3	1134.7	1130.3
22.5°	1002.9	1011.8	1017.7	1020.7	1034.0	1032.5	1041.4	1047.4	1054.7	1059.2	1054.7
25°	930.3	936.2	940.6	942.2	954.0	951.0	962.9	962.9	968.8	973.2	968.8
27.5°	837.0	841.4	844.4	842.9	851.7	847.3	857.7	850.3	862.1	865.1	860.7
30°	717.0	719.9	722.9	717.0	722.9	717.0	725.8	715.5	725.8	730.4	725.8
32.5°	574.8	574.8	577.7	570.3	573.3	567.3	571.8	568.8	571.8	576.3	571.8
35°	422.2	422.2	425.1	420.7	422.2	416.3	419.2	416.3	417.8	420.7	419.2
37.5°	293.3	291.9	296.3	293.3	294.8	291.9	293.3	290.4	291.9	293.3	291.9
40°	198.5	198.5	201.4	199.9	201.4	199.9	201.4	199.9	199.9	199.9	198.5
42.5°	133.4	134.8	136.3	136.3	137.8	136.3	137.8	136.3	136.3	136.3	134.8
45°	91.8	91.8	93.3	93.3	94.8	94.8	94.8	93.3	93.3	93.3	93.3
47.5°	63.7	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	65.2	63.7
50°	44.5	46.0	46.0	46.0	46.0	46.0	46.0	44.5	44.5	44.5	44.5
52.5°	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	32.6	31.1	31.1
55°	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7	23.7
57.5°	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
60°	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4	13.4
62.5°	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
65°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
67.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
72.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
75°	2.9	2.9	2.9	2.9	2.9	1.5	1.5	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
80°	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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):

	165°	170°	175°	180°
0°	1273.9	1273.9	1273.9	1273.9
2.5°	1306.5	1318.4	1314.0	1314.0
5°	1342.1	1355.4	1352.5	1351.0
7.5°	1352.5	1364.4	1361.3	1361.3
10°	1331.8	1343.6	1340.6	1340.6
12.5°	1297.7	1308.0	1306.5	1305.1
15°	1254.7	1265.1	1263.6	1262.1
17.5°	1196.9	1208.8	1207.3	1205.9
20°	1127.3	1137.7	1137.7	1136.2
22.5°	1051.8	1059.2	1060.6	1057.7
25°	965.9	971.7	971.7	968.8
27.5°	857.7	862.1	862.1	860.7
30°	724.4	725.8	727.3	724.4
32.5°	568.8	568.8	571.8	568.8
35°	414.8	414.8	417.8	416.3
37.5°	288.8	288.8	290.4	288.8
40°	197.0	197.0	198.5	197.0
42.5°	134.8	133.4	134.8	134.8
45°	91.8	91.8	93.3	91.8
47.5°	63.7	63.7	63.7	63.7
50°	44.5	44.5	44.5	44.5
52.5°	31.1	31.1	31.1	31.1
55°	22.2	23.7	23.7	23.7
57.5°	16.3	17.8	17.8	17.8
60°	13.4	13.4	13.4	13.4
62.5°	10.4	10.4	10.4	10.4
65°	7.4	7.4	7.4	7.4
67.5°	5.9	5.9	5.9	5.9
70°	4.4	4.4	4.4	4.4
72.5°	2.9	2.9	2.9	2.9
75°	1.5	1.5	1.5	1.5
77.5°	1.5	1.5	1.5	1.5
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)