

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: P135647

Luminaire Tested: **LD6A10D010TE ERM6A10940 6LM111H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P135647  
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: LD6A10D010TE ERM6A10940 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: 1056.6 lumens  
Efficiency: N/A  
Efficacy: 75.5 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

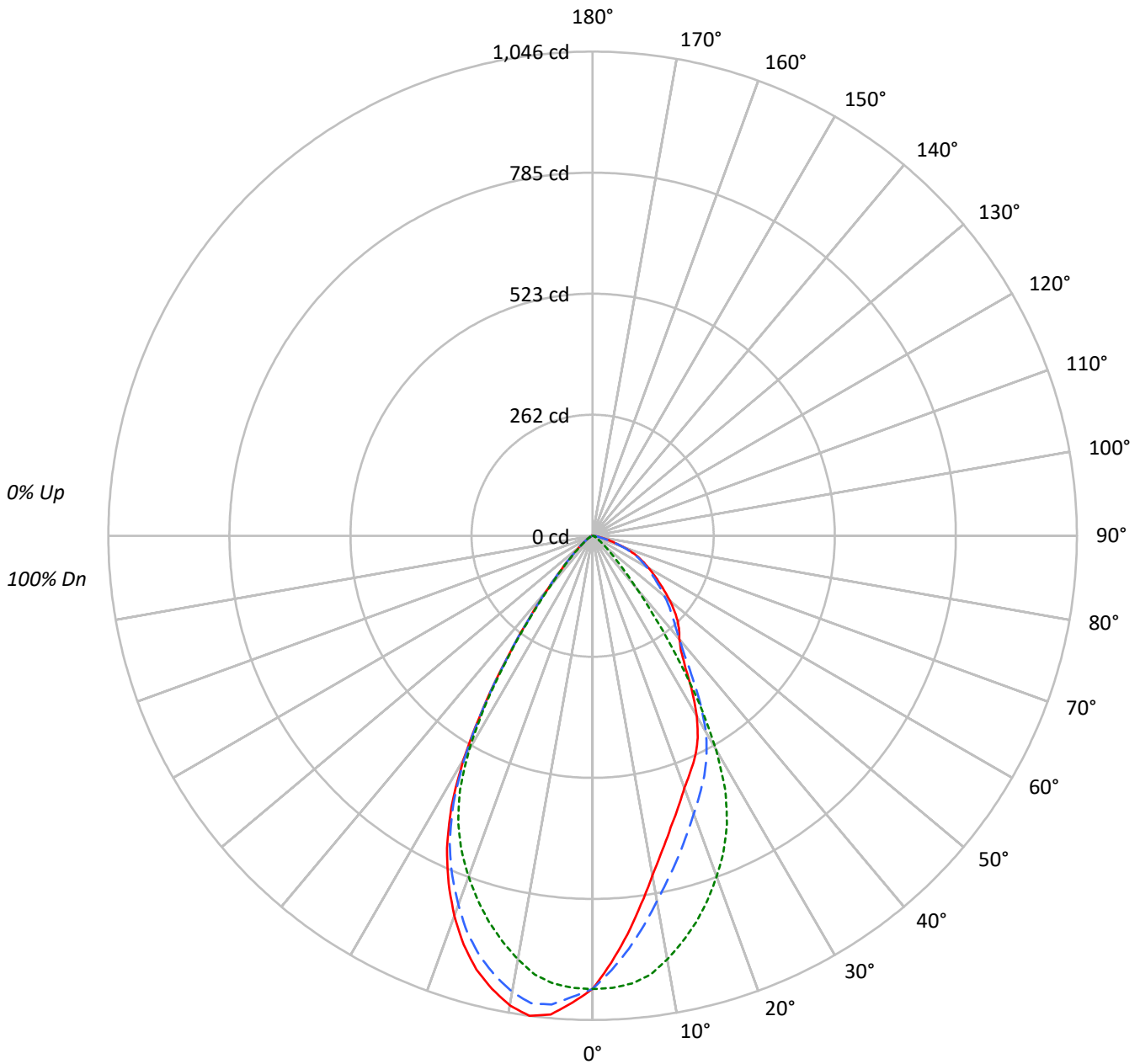
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				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	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83				83
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75				75
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68				68
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	64	63				63
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58				58
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53				53
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50				50
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46				46
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43				43

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	63871	63871	63871
5°	56577	63591	67992
10°	49314	61530	68248
15°	44051	58350	65509
20°	40226	54369	60617
25°	37771	49411	53586
30°	33870	40130	41938
35°	27836	24841	25470
40°	24817	12213	12894
45°	23943	6089	6514
50°	22065	3238	3461
55°	19939	1945	2070
60°	18267	1344	1344
65°	16688	1050	880
70°	13467	877	649
75°	8318	580	277
80°	4696	413	0
85°	2545	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.8	8.5
10°-20°	233.1	22.1
20°-30°	296.7	28.1
30°-40°	212.6	20.1
40°-50°	106.0	10.0
50°-60°	64.2	6.1
60°-70°	39.3	3.7
70°-80°	13.5	1.3
80°-90°	1.4	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°	619.6	58.6
0°-40°	832.2	78.8
0°-60°	1002.4	94.9
0°-90°	1056.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1056.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	979	979	979	979	979	
5°	864	896	971	1016	1038	79
15°	652	717	864	940	970	184
25°	525	572	686	731	744	239
35°	350	377	312	320	320	223
45°	260	242	66	73	71	199
55°	175	165	17	18	18	158
65°	108	105	7	6	6	106
75°	33	30	2	1	1	38
85°	3	2	0	0	0	5
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°	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0
2.5°	923.1	924.3	926.5	924.3	925.4	931.1	928.8	930.0	933.4	939.1	935.7
5°	863.9	865.1	870.8	867.4	869.6	876.5	876.5	881.0	887.9	895.9	895.9
7.5°	802.5	804.8	810.5	808.2	811.6	820.7	821.9	828.7	837.8	849.2	854.8
10°	744.4	746.7	752.4	751.3	755.8	765.0	769.5	776.4	787.7	801.3	808.2
12.5°	695.5	697.8	702.4	702.4	708.1	717.1	721.6	730.8	742.2	757.0	766.1
15°	652.2	655.6	660.2	660.2	665.9	675.0	680.7	688.7	701.2	717.1	727.3
17.5°	614.7	615.8	620.4	620.4	626.1	635.2	640.9	648.8	661.3	676.1	687.5
20°	579.4	580.5	585.1	586.2	590.8	598.7	604.4	612.4	623.8	638.6	648.8
22.5°	552.1	554.4	557.8	558.9	561.2	569.2	576.0	581.6	591.9	604.4	614.7
25°	524.7	525.9	529.3	530.4	533.9	539.6	544.1	549.8	558.9	571.5	579.4
27.5°	491.8	495.2	496.3	497.5	500.9	505.5	509.9	514.5	522.5	532.7	539.6
30°	449.6	450.7	454.2	456.4	459.9	464.4	470.1	474.7	481.5	489.5	494.1
32.5°	400.7	401.8	405.2	407.5	413.2	417.8	422.3	425.8	430.3	434.9	434.9
35°	349.5	352.9	354.0	357.5	363.2	367.7	371.1	372.2	374.5	376.7	368.9
37.5°	313.0	315.3	317.6	319.8	324.4	327.8	330.1	330.1	329.0	326.7	316.4
40°	291.4	292.6	294.9	296.0	300.6	302.8	302.8	300.6	296.0	290.3	274.3
42.5°	276.6	277.8	278.9	280.0	282.3	283.5	282.3	277.8	272.1	264.1	245.8
45°	259.5	260.7	261.8	261.8	264.1	264.1	262.9	258.4	251.5	242.4	223.1
47.5°	239.0	240.1	241.3	242.4	243.6	243.6	242.4	237.9	231.1	223.1	202.6
50°	217.4	218.6	219.7	219.7	222.0	222.0	220.9	216.3	210.6	202.6	184.4
52.5°	195.8	196.9	196.9	199.2	199.2	199.2	198.1	193.5	188.9	183.2	166.2
55°	175.3	176.4	176.4	178.7	179.8	178.7	177.5	174.1	169.6	165.1	151.4
57.5°	157.1	158.3	158.3	159.4	160.5	159.4	158.3	156.0	153.7	149.1	137.7
60°	140.0	141.2	141.2	142.3	142.3	141.2	141.2	138.9	136.6	134.3	124.1
62.5°	124.1	124.1	124.1	125.2	125.2	124.1	124.1	121.8	120.6	119.5	111.5
65°	108.1	108.1	108.1	108.1	108.1	105.8	105.8	104.7	103.6	104.7	97.9
67.5°	90.0	90.0	88.8	88.8	88.8	86.5	86.5	86.5	85.4	86.5	80.8
70°	70.6	70.6	69.4	69.4	68.3	66.0	66.0	66.0	64.9	66.0	62.6
72.5°	50.1	51.2	48.9	48.9	47.8	45.5	46.6	45.5	46.6	46.6	44.4
75°	33.0	34.1	31.9	31.9	30.8	29.6	29.6	29.6	30.8	29.6	28.5
77.5°	20.5	21.7	20.5	20.5	19.4	18.2	18.2	18.2	18.2	18.2	17.1
80°	12.5	12.5	12.5	11.4	11.4	10.3	10.3	10.3	10.3	10.3	9.1
82.5°	6.8	6.8	6.8	6.8	6.8	5.7	5.7	5.7	5.7	5.7	4.6
85°	3.4	3.4	3.4	3.4	3.4	2.3	2.3	2.3	2.3	2.3	2.3
87.5°	1.1	1.1	1.1	1.1	1.1	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°	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0
2.5°	945.9	950.5	947.1	960.7	958.5	968.7	967.6	977.8	976.7	977.8	980.1
5°	909.5	918.6	919.7	936.8	937.9	953.9	957.3	971.0	973.3	977.8	983.5
7.5°	869.6	883.3	887.9	907.3	914.1	931.1	937.9	956.2	960.7	968.7	975.6
10°	826.4	842.4	849.2	871.9	881.0	900.4	909.5	928.8	935.7	944.8	952.8
12.5°	785.4	802.5	811.6	835.5	848.0	867.4	877.6	898.1	905.0	916.3	924.3
15°	746.7	765.0	775.2	799.1	811.6	833.3	843.5	863.9	871.9	883.3	891.3
17.5°	706.9	725.1	736.5	759.3	775.2	793.4	804.8	825.3	833.3	843.5	851.4
20°	668.2	686.4	696.7	719.4	734.2	752.4	762.7	783.1	788.8	799.1	805.9
22.5°	631.8	648.8	657.9	681.8	694.4	710.3	720.5	738.7	745.6	753.6	758.1
25°	595.3	610.1	617.0	637.5	647.6	662.5	670.4	686.4	693.2	700.1	705.8
27.5°	554.4	562.4	564.6	580.5	588.5	602.1	605.6	620.4	626.1	630.6	635.2
30°	503.2	504.3	497.5	505.5	508.8	519.0	519.0	532.7	537.3	540.7	545.3
32.5°	438.3	431.5	415.5	413.2	410.9	416.6	414.4	425.8	430.3	432.6	436.0
35°	366.6	351.8	325.5	315.3	308.4	307.3	303.9	311.9	315.3	317.6	319.8
37.5°	303.9	282.3	249.3	231.1	219.7	215.2	210.6	215.2	217.4	219.7	222.0
40°	258.4	231.1	192.4	169.6	153.7	146.9	141.2	143.4	145.7	148.0	149.1
42.5°	225.4	194.6	152.6	125.2	109.2	101.3	95.7	96.8	97.9	99.1	101.3
45°	200.3	167.4	124.1	94.5	78.6	70.6	66.0	66.0	67.2	68.3	69.4
47.5°	179.8	144.6	101.3	72.9	58.0	50.1	45.5	45.5	46.6	46.6	47.8
50°	160.5	125.2	83.1	56.9	43.2	36.4	33.0	31.9	33.0	33.0	34.1
52.5°	144.6	110.4	69.4	45.5	33.0	27.4	23.9	23.9	23.9	23.9	23.9
55°	129.8	96.8	58.0	36.4	26.2	21.7	18.2	17.1	17.1	17.1	17.1
57.5°	118.4	86.5	50.1	30.8	21.7	17.1	14.8	13.7	13.7	13.7	13.7
60°	107.0	76.3	43.2	25.1	17.1	14.8	12.5	10.3	10.3	10.3	10.3
62.5°	95.7	66.0	36.4	21.7	14.8	11.4	10.3	8.0	8.0	8.0	8.0
65°	83.1	56.9	30.8	17.1	11.4	9.1	8.0	6.8	6.8	5.7	5.7
67.5°	68.3	45.5	25.1	14.8	10.3	8.0	6.8	5.7	4.6	4.6	4.6
70°	52.3	34.1	19.4	11.4	8.0	6.8	4.6	4.6	3.4	3.4	3.4
72.5°	37.5	23.9	13.7	9.1	5.7	4.6	4.6	3.4	3.4	3.4	2.3
75°	23.9	16.0	9.1	5.7	4.6	3.4	3.4	2.3	2.3	2.3	2.3
77.5°	14.8	10.3	6.8	4.6	3.4	2.3	2.3	2.3	1.1	1.1	1.1
80°	8.0	5.7	3.4	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1
82.5°	4.6	3.4	2.3	1.1	1.1	1.1	1.1	1.1	0.0	0.0	0.0
85°	2.3	1.1	1.1	1.1	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°	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0	979.0
2.5°	986.9	992.6	989.1	991.4	1001.7	997.1	1005.1	1005.1	1014.2	1014.2	1007.4
5°	993.7	1000.5	1001.7	1005.1	1018.8	1016.5	1025.6	1027.9	1038.2	1040.4	1034.7
7.5°	989.1	997.1	1000.5	1006.2	1019.9	1018.8	1029.0	1033.6	1042.7	1046.1	1041.6
10°	967.6	976.7	981.3	986.9	1001.7	1000.5	1011.9	1017.6	1025.6	1029.0	1025.6
12.5°	939.1	949.3	953.9	959.6	974.4	973.3	984.6	990.3	997.1	1001.7	998.3
15°	907.3	914.1	922.0	927.7	941.4	940.2	951.6	957.3	963.0	968.7	965.3
17.5°	866.2	873.1	881.0	885.6	899.3	899.3	908.4	913.0	920.8	925.4	920.8
20°	819.6	827.6	833.3	836.7	849.2	848.0	857.1	861.7	868.5	871.9	868.5
22.5°	770.7	777.5	782.0	784.2	794.5	793.4	800.2	804.8	810.5	813.9	810.5
25°	714.8	719.4	722.8	723.9	733.0	730.8	739.9	739.9	744.4	747.9	744.4
27.5°	643.2	646.5	648.8	647.6	654.5	651.1	659.0	653.3	662.5	664.7	661.3
30°	551.0	553.2	555.5	551.0	555.5	551.0	557.8	549.8	557.8	561.2	557.8
32.5°	441.6	441.6	443.9	438.3	440.5	436.0	439.4	437.2	439.4	442.8	439.4
35°	324.4	324.4	326.7	323.3	324.4	319.8	322.1	319.8	321.0	323.3	322.1
37.5°	225.4	224.3	227.7	225.4	226.6	224.3	225.4	223.1	224.3	225.4	224.3
40°	152.6	152.6	154.8	153.7	154.8	153.7	154.8	153.7	153.7	153.7	152.6
42.5°	102.4	103.6	104.7	104.7	105.8	104.7	105.8	104.7	104.7	104.7	103.6
45°	70.6	70.6	71.7	71.7	72.9	72.9	72.9	71.7	71.7	71.7	71.7
47.5°	48.9	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	50.1	48.9
50°	34.1	35.3	35.3	35.3	35.3	35.3	35.3	34.1	34.1	34.1	34.1
52.5°	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	25.1	23.9	23.9
55°	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.2
57.5°	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
60°	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3	10.3
62.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
65°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
67.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
70°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
72.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
75°	2.3	2.3	2.3	2.3	2.3	1.1	1.1	1.1	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	0.0	1.1	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°	979.0	979.0	979.0	979.0
2.5°	1004.0	1013.1	1009.7	1009.7
5°	1031.3	1041.6	1039.3	1038.2
7.5°	1039.3	1048.4	1046.1	1046.1
10°	1023.3	1032.5	1030.2	1030.2
12.5°	997.1	1005.1	1004.0	1002.8
15°	964.2	972.1	971.0	969.9
17.5°	919.7	928.8	927.7	926.5
20°	866.2	874.2	874.2	873.1
22.5°	808.2	813.9	815.0	812.7
25°	742.2	746.7	746.7	744.4
27.5°	659.0	662.5	662.5	661.3
30°	556.7	557.8	558.9	556.7
32.5°	437.2	437.2	439.4	437.2
35°	318.7	318.7	321.0	319.8
37.5°	222.0	222.0	223.1	222.0
40°	151.4	151.4	152.6	151.4
42.5°	103.6	102.4	103.6	103.6
45°	70.6	70.6	71.7	70.6
47.5°	48.9	48.9	48.9	48.9
50°	34.1	34.1	34.1	34.1
52.5°	23.9	23.9	23.9	23.9
55°	17.1	18.2	18.2	18.2
57.5°	12.5	13.7	13.7	13.7
60°	10.3	10.3	10.3	10.3
62.5°	8.0	8.0	8.0	8.0
65°	5.7	5.7	5.7	5.7
67.5°	4.6	4.6	4.6	4.6
70°	3.4	3.4	3.4	3.4
72.5°	2.3	2.3	2.3	2.3
75°	1.1	1.1	1.1	1.1
77.5°	1.1	1.1	1.1	1.1
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)