

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: P251704

Luminaire Tested: **LD4B30D010 EU4B30509024 4LBLWW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P251704
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-11)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B30D010 EU4B30509024 4LBLWW1LI
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2400K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1706.0 lumens
Efficiency: N/A
Efficacy: 60.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.03 / 1.12
Luminous Opening: Circular (Dia: 0.38' x H: 0')
CIE Type: Direct

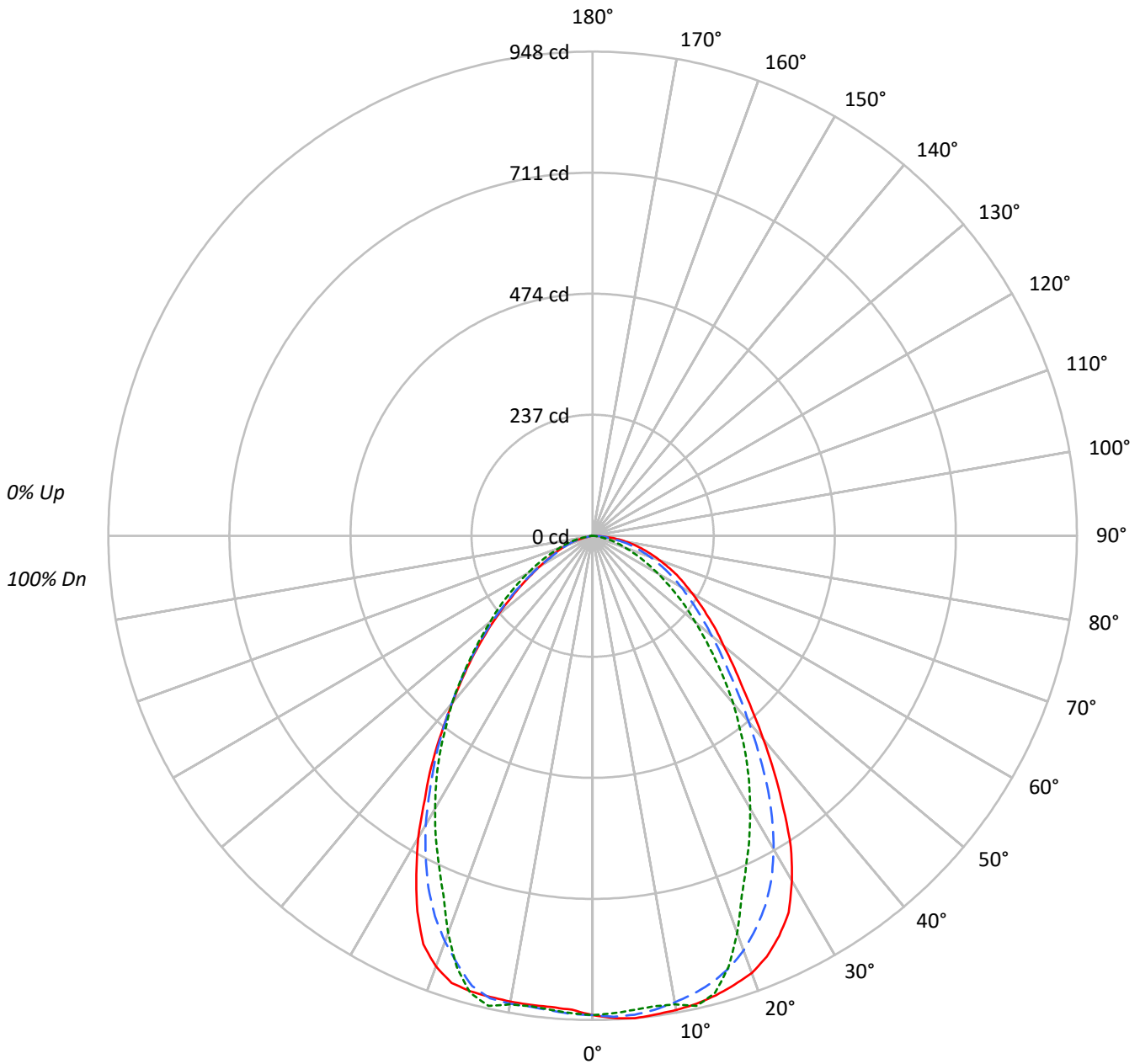
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P251704

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1LI

Luminous Intensity Polar Plot





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CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1LI

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	111	107	103	100	108	105	101	99	101	98	96	97	95	93	93	91	90	88				88				
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77				77				
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67				67				
4	88	78	70	64	86	76	69	64	74	68	63	72	67	62	70	65	62	60				60				
5	82	71	63	57	80	70	62	57	68	61	56	66	60	56	64	59	55	53				53				
6	76	65	57	51	75	64	56	51	62	55	50	60	54	50	59	54	50	48				48				
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43				43				
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	51	45	41	39				39				
9	63	51	43	38	62	50	43	38	49	43	38	48	42	38	47	42	38	36				36				
10	59	47	40	35	58	47	40	35	46	39	35	45	39	35	44	39	35	33				33				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	91464	91464	91464
5°	92763	91149	90610
10°	93291	92202	91658
15°	94005	93450	93167
20°	94482	85781	93061
25°	92930	76510	87306
30°	87811	69378	76816
35°	77440	62057	65495
40°	66181	54451	54273
45°	56716	46475	45331
50°	50701	39648	36934
55°	46760	33898	29225
60°	43720	28692	23059
65°	41901	23798	19048
70°	39608	19206	16071
75°	38333	15551	11409
80°	37098	8475	3087
85°	32316	4585	1565



TEST NUMBER: P251704

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1LI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.2	5.2
10°-20°	256.5	15.0
20°-30°	355.8	20.9
30°-40°	351.2	20.6
40°-50°	275.5	16.1
50°-60°	190.8	11.2
60°-70°	116.9	6.9
70°-80°	58.4	3.4
80°-90°	11.7	0.7
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°	701.5	41.1
0°-40°	1052.7	61.7
0°-60°	1518.9	89.0
0°-90°	1706.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1706.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	938	938	938	938	938	
5°	948	941	932	933	926	90
15°	932	906	926	912	923	263
25°	864	800	712	761	812	396
35°	651	594	522	538	550	406
45°	412	377	337	333	329	322
55°	275	246	200	178	172	248
65°	182	157	103	77	83	179
75°	102	85	41	32	30	108
85°	29	16	4	1	1	33
90°	0	0	0	0	0	



TEST NUMBER: P251704

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1LI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5
2.5°	945.4	942.7	941.3	945.4	944.0	946.8	945.4	944.0	941.3	942.7	942.7
5°	948.2	944.0	942.7	945.4	945.4	948.2	946.8	944.0	941.3	942.7	941.3
7.5°	945.4	942.7	942.7	944.0	942.7	945.4	942.7	939.9	937.2	938.5	935.8
10°	942.7	938.5	938.5	938.5	938.5	941.3	938.5	934.4	930.3	930.3	927.5
12.5°	938.5	934.4	934.4	935.8	933.0	935.8	933.0	926.2	922.0	920.6	917.9
15°	931.7	927.5	927.5	927.5	924.8	926.2	922.0	915.1	909.6	909.6	905.5
17.5°	922.0	917.9	916.5	916.5	912.4	913.8	909.6	902.8	894.5	891.7	887.6
20°	911.0	905.5	902.8	902.8	898.6	900.0	894.5	886.2	875.2	871.1	864.2
22.5°	891.7	889.0	884.9	883.5	879.4	878.0	872.5	861.5	851.8	845.0	833.9
25°	864.2	862.8	858.7	857.3	851.8	849.1	843.6	831.2	821.6	810.6	799.5
27.5°	831.2	825.7	822.9	818.8	813.3	811.9	805.1	794.0	778.9	772.0	758.3
30°	780.3	777.5	774.8	770.6	765.1	762.4	758.3	745.9	733.5	721.1	708.7
32.5°	722.5	717.0	712.8	714.2	707.3	704.6	697.7	686.7	675.7	667.4	653.7
35°	650.9	649.5	648.2	645.4	639.9	638.5	633.0	624.8	612.4	602.8	594.5
37.5°	583.5	579.4	576.6	576.6	571.1	571.1	567.0	557.3	550.5	543.6	532.6
40°	520.2	513.3	513.3	513.3	507.8	509.2	506.4	496.8	489.9	481.7	474.8
42.5°	461.0	458.3	456.9	454.1	451.4	451.4	448.6	443.1	436.2	430.7	423.9
45°	411.5	410.1	408.7	407.3	404.6	403.2	401.8	393.6	389.5	383.9	377.1
47.5°	371.6	368.8	367.4	366.1	363.3	361.9	359.2	353.7	349.5	344.0	338.5
50°	334.4	333.0	331.7	331.7	328.9	327.5	324.8	320.6	313.8	311.0	304.1
52.5°	305.5	302.8	300.0	300.0	297.2	297.2	293.1	289.0	282.1	279.4	273.9
55°	275.2	273.9	272.5	272.5	269.7	268.4	267.0	261.5	256.0	251.8	246.3
57.5°	249.1	247.7	246.3	246.3	243.6	242.2	240.8	236.7	231.2	228.4	221.6
60°	224.3	224.3	222.9	221.6	220.2	218.8	217.4	213.3	209.2	205.0	199.5
62.5°	202.3	200.9	199.5	198.2	198.2	196.8	195.4	189.9	187.2	183.0	177.5
65°	181.7	178.9	178.9	177.5	177.5	176.1	174.8	169.3	166.5	162.4	156.9
67.5°	159.6	158.3	156.9	156.9	155.5	155.5	154.1	150.0	145.9	143.1	137.6
70°	139.0	139.0	137.6	137.6	136.2	134.9	134.9	132.1	128.0	123.9	118.3
72.5°	121.1	119.7	118.3	118.3	117.0	117.0	115.6	112.8	110.1	107.3	100.5
75°	101.8	100.5	100.5	100.5	99.1	99.1	97.7	95.0	92.2	89.5	85.3
77.5°	83.9	83.9	82.6	82.6	81.2	81.2	81.2	78.4	75.7	72.9	67.4
80°	66.1	66.1	66.1	64.7	63.3	63.3	63.3	60.6	57.8	55.0	50.9
82.5°	48.2	46.8	46.8	45.4	44.0	44.0	44.0	41.3	39.9	35.8	33.0
85°	28.9	27.5	27.5	26.1	24.8	24.8	24.8	23.4	20.6	19.3	16.5
87.5°	11.0	11.0	11.0	11.0	11.0	9.6	9.6	8.3	8.3	6.9	6.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P251704

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1LI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5
2.5°	942.7	941.3	941.3	939.9	941.3	938.5	938.5	938.5	938.5	935.8	935.8
5°	939.9	939.9	938.5	937.2	938.5	935.8	937.2	935.8	935.8	931.7	931.7
7.5°	934.4	933.0	930.3	928.9	930.3	928.9	928.9	928.9	931.7	928.9	928.9
10°	924.8	923.4	920.6	919.3	919.3	917.9	920.6	923.4	928.9	931.7	937.2
12.5°	915.1	912.4	911.0	911.0	912.4	912.4	917.9	924.8	938.5	942.7	948.2
15°	902.8	901.4	901.4	905.5	911.0	915.1	926.2	930.3	931.7	926.2	923.4
17.5°	886.2	886.2	887.6	891.7	895.9	895.9	897.3	894.5	891.7	884.9	876.6
20°	858.7	857.3	854.6	854.6	854.6	849.1	851.8	842.2	835.3	827.1	814.7
22.5°	824.3	817.4	807.8	800.9	796.8	794.0	787.2	776.2	767.9	762.4	756.9
25°	787.2	776.2	762.4	751.4	744.5	743.1	733.5	723.9	718.4	711.5	708.7
27.5°	744.5	732.1	715.6	704.6	699.1	695.0	686.7	677.1	670.2	664.7	660.6
30°	695.0	682.6	668.8	655.0	649.5	642.7	634.4	627.5	620.6	616.5	613.8
32.5°	639.9	627.5	613.8	604.1	597.3	591.7	584.9	578.0	572.5	569.7	567.0
35°	583.5	571.1	560.1	550.5	545.0	540.8	535.3	527.1	522.9	521.6	518.8
37.5°	522.9	514.7	505.0	496.8	492.7	487.2	484.4	477.5	477.5	472.0	472.0
40°	466.5	461.0	451.4	444.5	441.7	437.6	433.5	430.7	429.4	428.0	426.6
42.5°	417.0	408.7	403.2	397.7	393.6	390.8	390.8	386.7	385.3	381.2	379.8
45°	371.6	367.4	357.8	353.7	352.3	348.2	346.8	344.0	339.9	337.2	335.8
47.5°	331.7	327.5	322.0	316.5	313.8	311.0	308.3	304.1	301.4	297.2	295.9
50°	298.6	291.7	286.2	282.1	278.0	276.6	273.9	268.4	265.6	261.5	261.5
52.5°	268.4	262.8	256.0	251.8	247.7	245.0	240.8	236.7	232.6	231.2	227.1
55°	242.2	235.3	228.4	222.9	218.8	214.7	213.3	207.8	202.3	199.5	196.8
57.5°	217.4	210.6	202.3	195.4	192.7	189.9	185.8	180.3	176.1	172.0	169.3
60°	192.7	187.2	178.9	172.0	169.3	165.1	161.0	155.5	151.4	147.2	144.5
62.5°	172.0	163.8	156.9	150.0	145.9	143.1	137.6	133.5	128.0	123.9	119.7
65°	151.4	143.1	136.2	129.4	126.6	122.5	118.3	112.8	107.3	103.2	97.7
67.5°	130.7	123.9	117.0	110.1	107.3	104.6	99.1	93.6	88.1	83.9	78.4
70°	112.8	106.0	99.1	93.6	90.8	88.1	82.6	77.1	72.9	67.4	63.3
72.5°	96.3	90.8	83.9	78.4	75.7	72.9	67.4	63.3	57.8	55.0	50.9
75°	79.8	74.3	68.8	63.3	60.6	57.8	53.7	49.5	45.4	41.3	38.5
77.5°	63.3	57.8	52.3	48.2	45.4	44.0	39.9	35.8	31.7	28.9	24.8
80°	46.8	41.3	37.2	33.0	30.3	28.9	24.8	22.0	19.3	15.1	13.8
82.5°	28.9	24.8	22.0	19.3	17.9	16.5	13.8	11.0	9.6	8.3	6.9
85°	15.1	13.8	11.0	9.6	8.3	8.3	6.9	5.5	4.1	4.1	2.8
87.5°	5.5	4.1	4.1	2.8	2.8	2.8	2.8	1.4	1.4	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P251704

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1LI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5
2.5°	933.0	934.4	935.8	937.2	935.8	935.8	938.5	933.0	937.2	937.2	931.7
5°	930.3	933.0	931.7	934.4	931.7	931.7	933.0	930.3	933.0	933.0	928.9
7.5°	927.5	930.3	930.3	931.7	930.3	930.3	931.7	927.5	930.3	930.3	926.2
10°	939.9	942.7	941.3	939.9	935.8	933.0	934.4	927.5	930.3	930.3	926.2
12.5°	944.0	942.7	937.2	934.4	931.7	928.9	930.3	924.8	927.5	927.5	924.8
15°	916.5	913.8	909.6	911.0	908.3	906.9	909.6	906.9	912.4	915.1	912.4
17.5°	869.7	868.4	865.6	865.6	865.6	867.0	871.1	871.1	879.4	884.9	887.6
20°	809.2	807.8	809.2	811.9	813.3	818.8	828.4	833.9	845.0	854.6	861.5
22.5°	754.1	756.9	761.0	766.5	767.9	774.8	787.2	792.7	806.4	817.4	824.3
25°	707.3	711.5	714.2	718.4	719.7	728.0	739.0	745.9	761.0	769.3	777.5
27.5°	660.6	666.1	667.4	672.9	672.9	681.2	690.8	697.7	707.3	715.6	722.5
30°	615.1	616.5	620.6	622.0	624.8	633.0	638.5	642.7	653.7	657.8	661.9
32.5°	565.6	571.1	573.9	575.2	573.9	580.7	586.2	589.0	593.1	598.6	601.4
35°	518.8	521.6	522.9	525.7	527.1	528.4	531.2	532.6	538.1	539.5	540.8
37.5°	472.0	476.1	474.8	476.1	476.1	477.5	480.3	478.9	483.0	484.4	483.0
40°	425.2	425.2	428.0	426.6	428.0	426.6	429.4	429.4	429.4	430.7	429.4
42.5°	378.4	379.8	378.4	381.2	378.4	379.8	379.8	378.4	379.8	378.4	378.4
45°	335.8	335.8	335.8	335.8	333.0	333.0	335.8	334.4	333.0	331.7	330.3
47.5°	294.5	295.9	293.1	294.5	293.1	291.7	290.4	290.4	289.0	286.2	284.9
50°	260.1	257.3	256.0	257.3	256.0	254.6	253.2	250.5	249.1	246.3	245.0
52.5°	225.7	222.9	220.2	220.2	218.8	216.1	214.7	211.9	210.6	207.8	207.8
55°	195.4	192.7	189.9	188.5	185.8	183.0	181.7	178.9	177.5	174.8	172.0
57.5°	166.5	162.4	159.6	158.3	156.9	152.8	151.4	148.6	145.9	143.1	141.7
60°	140.4	136.2	132.1	130.7	129.4	125.2	123.9	119.7	118.3	115.6	114.2
62.5°	115.6	112.8	107.3	106.0	103.2	100.5	96.3	95.0	93.6	95.0	95.0
65°	93.6	89.5	85.3	83.9	81.2	78.4	77.1	75.7	77.1	77.1	78.4
67.5°	74.3	70.2	66.1	66.1	64.7	61.9	61.9	61.9	63.3	63.3	64.7
70°	59.2	56.4	53.7	52.3	52.3	50.9	52.3	52.3	53.7	53.7	53.7
72.5°	46.8	45.4	44.0	42.7	42.7	42.7	42.7	42.7	42.7	42.7	44.0
75°	35.8	34.4	33.0	33.0	31.7	31.7	31.7	31.7	31.7	31.7	30.3
77.5°	23.4	22.0	20.6	20.6	19.3	17.9	17.9	16.5	16.5	16.5	16.5
80°	12.4	11.0	9.6	8.3	8.3	6.9	6.9	6.9	6.9	5.5	5.5
82.5°	5.5	4.1	4.1	4.1	4.1	2.8	2.8	2.8	2.8	2.8	2.8
85°	2.8	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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



TEST NUMBER: P251704

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1LI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	938.5	938.5	938.5	938.5	938.5	938.5	938.5	938.5
2.5°	934.4	931.7	934.4	935.8	933.0	931.7	934.4	928.9
5°	933.0	928.9	930.3	931.7	928.9	927.5	930.3	926.2
7.5°	930.3	928.9	930.3	931.7	927.5	927.5	930.3	926.2
10°	930.3	927.5	928.9	931.7	928.9	928.9	931.7	926.2
12.5°	928.9	924.8	928.9	930.3	927.5	927.5	930.3	924.8
15°	919.3	919.3	920.6	923.4	922.0	923.4	927.5	923.4
17.5°	898.6	901.4	906.9	911.0	913.8	916.5	920.6	917.9
20°	873.9	878.0	884.9	889.0	894.5	895.9	902.8	897.3
22.5°	835.3	843.6	849.1	853.2	857.3	861.5	867.0	865.6
25°	788.5	794.0	798.2	802.3	807.8	810.6	813.3	811.9
27.5°	732.1	734.9	740.4	743.1	745.9	748.6	754.1	747.3
30°	670.2	671.6	674.3	678.4	678.4	681.2	683.9	682.6
32.5°	606.9	606.9	609.6	612.4	611.0	612.4	617.9	611.0
35°	545.0	543.6	547.7	549.1	549.1	547.7	551.8	550.5
37.5°	484.4	485.8	487.2	488.5	485.8	488.5	488.5	485.8
40°	429.4	428.0	430.7	432.1	430.7	432.1	432.1	426.6
42.5°	379.8	377.1	378.4	379.8	378.4	379.8	378.4	375.7
45°	331.7	330.3	330.3	331.7	328.9	328.9	328.9	328.9
47.5°	286.2	284.9	286.2	286.2	283.5	283.5	284.9	283.5
50°	245.0	243.6	243.6	243.6	242.2	242.2	243.6	243.6
52.5°	207.8	205.0	205.0	205.0	205.0	205.0	206.4	203.7
55°	170.6	170.6	170.6	170.6	172.0	172.0	172.0	172.0
57.5°	140.4	141.7	141.7	143.1	141.7	143.1	143.1	141.7
60°	117.0	115.6	117.0	117.0	118.3	118.3	118.3	118.3
62.5°	96.3	96.3	96.3	97.7	97.7	97.7	99.1	97.7
65°	79.8	79.8	81.2	81.2	81.2	82.6	82.6	82.6
67.5°	66.1	66.1	66.1	66.1	67.4	67.4	68.8	67.4
70°	55.0	55.0	55.0	55.0	55.0	56.4	56.4	56.4
72.5°	44.0	44.0	44.0	44.0	45.4	45.4	45.4	45.4
75°	30.3	30.3	30.3	31.7	30.3	30.3	30.3	30.3
77.5°	15.1	15.1	15.1	15.1	15.1	13.8	13.8	13.8
80°	5.5	5.5	5.5	5.5	5.5	5.5	4.1	5.5
82.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	1.4
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
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)