

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: P226235

Luminaire Tested: **LD2B05D010 EU2B05WW9024 2LBSW\***

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P226235  
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: LD2B05D010 EU2B05WW9024 2LBSW\*  
Description: 500 Lumen, 2inch Portfolio LED Downlight  
WALL WASH OPTIC  
WALL WASH LENSED TRIM  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 394.4 lumens  
Efficiency: N/A  
Efficacy: 54.0 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

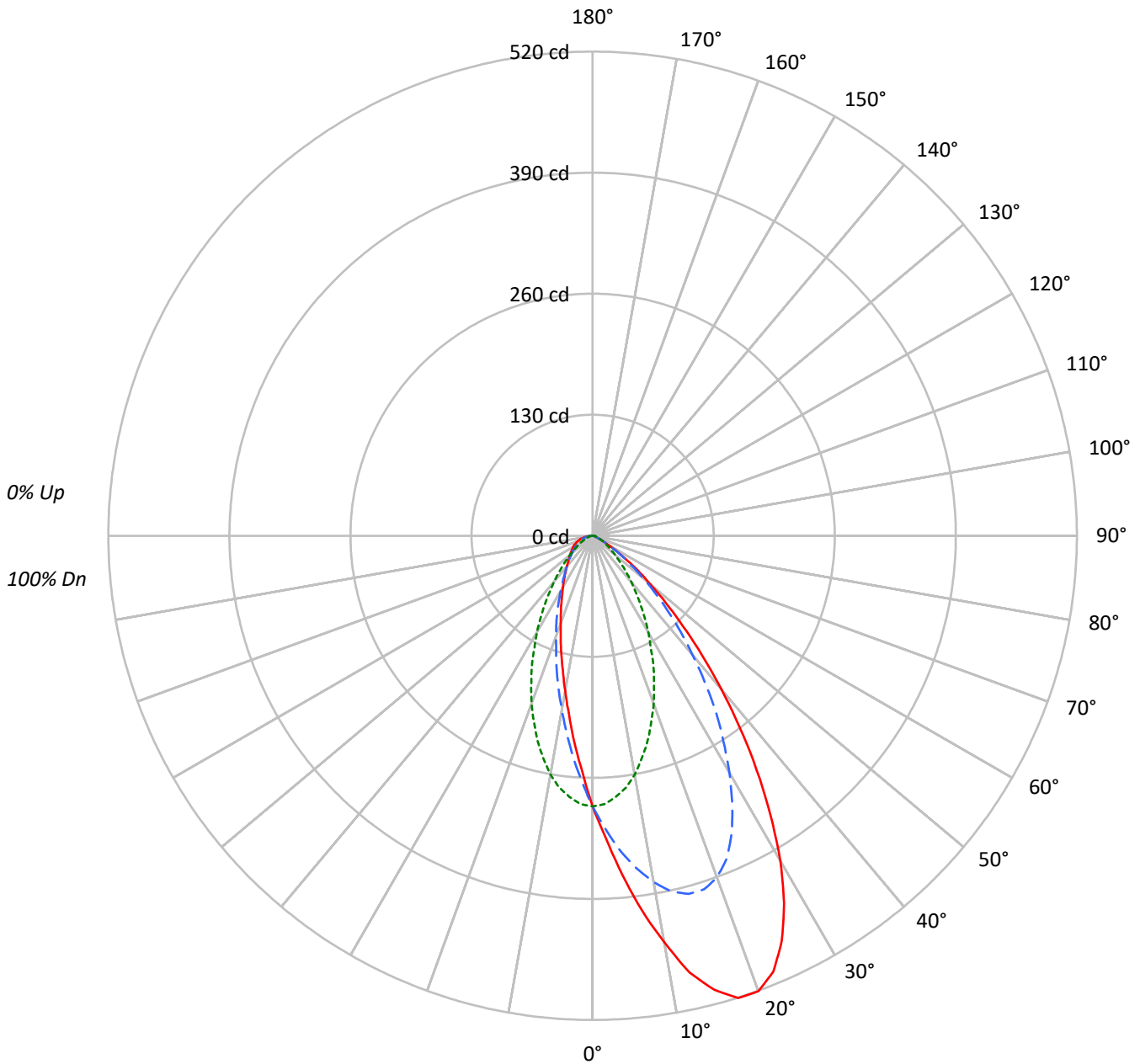
Input Watts (W): 7.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P226235

CATALOG NUMBER: LD2B05D010 EU2B05WW9024 2LBSW\*

### Luminous Intensity Polar Plot





TEST NUMBER: P226235

CATALOG NUMBER: LD2B05D010 EU2B05WW9024 2LBSW\*

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

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

	0°	90°	180°
0°	112563	112563	112563
5°	141921	109571	86747
10°	174320	102382	66589
15°	202470	91430	52171
20°	214553	79061	41138
25°	205318	66074	33892
30°	180294	53404	28446
35°	145263	42085	24542
40°	108360	32665	21793
45°	75047	24651	19830
50°	48329	18259	18861
55°	28431	13844	18504
60°	15184	11388	18980
65°	7149	8982	18789
70°	3284	7701	18800
75°	4340	7333	20503
80°	4461	6469	19630
85°	4444	8889	17333



TEST NUMBER: P226235

CATALOG NUMBER: LD2B05D010 EU2B05WW9024 2LBSW\*

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.5	7.0
10°-20°	76.6	19.4
20°-30°	100.0	25.3
30°-40°	86.6	21.9
40°-50°	54.8	13.9
50°-60°	27.4	7.0
60°-70°	12.6	3.2
70°-80°	6.8	1.7
80°-90°	2.2	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°	204.1	51.7
0°-40°	290.6	73.7
0°-60°	372.9	94.5
0°-90°	394.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	394.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	291	291	291	291	291	
5°	365	340	282	239	223	37
15°	505	398	228	149	130	142
25°	480	353	155	89	79	218
35°	307	231	89	54	52	191
45°	137	114	45	35	36	108
55°	42	39	20	24	27	40
65°	8	9	10	17	20	9
75°	3	3	5	10	14	3
85°	1	1	2	3	4	1
90°	0	0	0	0	0	



TEST NUMBER: P226235

CATALOG NUMBER: LD2B05D010 EU2B05WW9024 2LBSW\*

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6
2.5°	324.8	326.8	326.8	327.8	323.9	324.8	324.8	322.9	320.0	318.0	315.1
5°	365.0	365.0	364.0	365.0	362.0	360.1	361.1	357.1	349.3	345.4	339.5
7.5°	406.1	404.1	404.1	403.1	398.2	395.3	394.3	387.5	376.7	368.9	360.1
10°	443.2	443.2	441.3	439.3	432.5	428.6	425.6	414.9	403.1	390.4	377.7
12.5°	480.4	478.5	475.5	471.6	461.8	457.9	453.0	440.3	422.7	408.0	391.4
15°	504.9	505.9	501.0	496.1	485.3	479.4	473.6	457.9	437.4	418.8	398.2
17.5°	520.5	519.6	514.7	508.8	497.1	490.2	483.4	464.8	443.2	420.7	398.2
20°	520.5	520.5	514.7	508.8	496.1	488.3	481.4	461.8	438.3	414.9	390.4
22.5°	506.8	504.9	501.0	495.1	482.4	475.5	467.7	448.1	423.7	401.2	375.7
25°	480.4	480.4	475.5	468.7	457.9	450.1	443.2	423.7	400.2	377.7	353.2
27.5°	445.2	444.2	439.3	434.4	422.7	416.8	410.0	391.4	370.8	350.3	324.8
30°	403.1	401.2	399.2	391.4	383.6	378.7	372.8	356.2	335.6	316.0	293.5
32.5°	355.2	358.1	353.2	348.3	341.5	336.6	331.7	319.0	300.4	282.8	261.2
35°	307.2	309.2	306.3	302.3	295.5	292.6	287.7	276.9	263.2	246.6	230.9
37.5°	259.3	259.3	259.3	256.4	252.4	249.5	246.6	236.8	225.0	212.3	197.6
40°	214.3	217.2	213.3	212.3	209.4	208.4	205.5	198.6	188.8	180.0	166.3
42.5°	173.2	173.2	174.2	172.2	171.2	169.3	167.3	163.4	156.6	148.7	139.9
45°	137.0	138.0	138.9	136.0	136.0	136.0	135.0	131.1	125.2	120.4	114.5
47.5°	106.7	106.7	107.6	106.7	106.7	106.7	104.7	104.7	100.8	95.9	91.0
50°	80.2	81.2	82.2	82.2	82.2	81.2	81.2	79.3	77.3	75.3	70.4
52.5°	60.7	60.7	59.7	60.7	60.7	60.7	60.7	59.7	58.7	56.8	53.8
55°	42.1	42.1	43.1	43.1	43.1	44.0	44.0	44.0	43.1	42.1	39.1
57.5°	29.4	29.4	29.4	30.3	31.3	31.3	31.3	31.3	30.3	29.4	28.4
60°	19.6	19.6	19.6	20.5	20.5	20.5	20.5	21.5	20.5	20.5	19.6
62.5°	12.7	12.7	12.7	12.7	12.7	13.7	13.7	13.7	13.7	13.7	12.7
65°	7.8	7.8	7.8	7.8	7.8	7.8	8.8	8.8	8.8	8.8	8.8
67.5°	4.9	4.9	4.9	4.9	4.9	5.9	5.9	5.9	5.9	5.9	5.9
70°	2.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
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	2.9	2.9	2.9	2.9	2.9	2.9
77.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9	2.9	2.9
80°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	2.0	1.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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



TEST NUMBER: P226235

CATALOG NUMBER: LD2B05D010 EU2B05WW9024 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6
2.5°	315.1	311.1	309.2	304.3	303.3	299.4	299.4	295.5	290.6	288.6	283.8
5°	335.6	327.8	323.9	315.1	312.1	306.3	303.3	295.5	287.7	281.8	274.9
7.5°	353.2	341.5	333.7	321.9	317.0	308.2	302.3	292.6	281.8	273.0	263.2
10°	366.9	351.3	339.5	323.9	318.0	307.2	298.4	284.7	271.0	260.3	248.5
12.5°	375.7	357.1	340.5	321.9	314.1	302.3	289.6	274.0	258.3	244.6	231.9
15°	379.6	357.1	337.6	315.1	306.3	293.5	278.9	260.3	242.7	228.0	214.3
17.5°	376.7	350.3	329.7	304.3	294.5	279.8	263.2	243.6	225.0	209.4	195.7
20°	366.9	339.5	316.0	289.6	278.9	264.2	245.6	226.0	207.4	191.8	177.1
22.5°	350.3	321.9	297.5	271.0	260.3	245.6	226.0	206.5	187.9	172.2	158.5
25°	329.7	299.4	274.9	249.5	237.8	225.0	205.5	185.9	168.3	154.6	140.9
27.5°	302.3	275.9	251.5	226.0	215.3	203.5	184.0	166.3	148.7	135.0	123.3
30°	273.0	247.5	227.0	202.5	192.8	181.0	164.4	146.8	132.1	119.4	108.6
32.5°	243.6	219.2	199.6	179.1	170.3	158.5	143.8	128.2	114.5	103.7	94.9
35°	213.3	192.8	174.2	154.6	147.7	138.0	124.3	110.6	98.8	89.0	80.2
37.5°	183.0	166.3	149.7	134.0	126.2	118.4	105.7	93.9	83.2	75.3	68.5
40°	155.6	140.9	127.2	112.5	105.7	99.8	89.0	79.3	71.4	64.6	58.7
42.5°	129.2	117.4	105.7	93.9	88.1	83.2	74.4	65.6	58.7	53.8	48.9
45°	105.7	96.9	87.1	76.3	73.4	67.5	60.7	54.8	48.9	45.0	41.1
47.5°	85.1	77.3	69.5	61.6	58.7	54.8	48.9	44.0	40.1	37.2	34.2
50°	66.5	60.7	55.8	48.9	47.0	43.1	39.1	35.2	32.3	30.3	28.4
52.5°	50.9	46.0	42.1	38.2	36.2	34.2	30.3	28.4	26.4	25.4	24.5
55°	37.2	34.2	31.3	28.4	27.4	25.4	23.5	21.5	20.5	20.5	20.5
57.5°	26.4	24.5	22.5	20.5	20.5	19.6	18.6	17.6	16.6	16.6	16.6
60°	18.6	17.6	16.6	15.7	14.7	14.7	13.7	14.7	13.7	14.7	14.7
62.5°	12.7	11.7	11.7	10.8	10.8	10.8	10.8	10.8	11.7	11.7	12.7
65°	7.8	7.8	7.8	7.8	7.8	7.8	8.8	8.8	8.8	9.8	9.8
67.5°	5.9	5.9	5.9	6.8	6.8	6.8	6.8	7.8	7.8	7.8	8.8
70°	3.9	4.9	4.9	4.9	4.9	4.9	5.9	5.9	5.9	6.8	6.8
72.5°	3.9	3.9	3.9	3.9	3.9	3.9	4.9	4.9	4.9	5.9	5.9
75°	2.9	3.9	3.9	3.9	3.9	3.9	3.9	4.9	4.9	4.9	5.9
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9
80°	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.9
82.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.9
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.0	1.0	2.0	2.0
87.5°	0.0	0.0	0.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P226235

CATALOG NUMBER: LD2B05D010 EU2B05WW9024 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6
2.5°	281.8	278.9	279.8	274.0	274.9	271.0	269.1	266.1	264.2	261.2	262.2
5°	270.1	265.2	263.2	256.4	257.3	251.5	247.5	242.7	238.7	233.9	232.9
7.5°	255.4	247.5	244.6	237.8	236.8	229.0	224.1	218.2	213.3	208.4	206.5
10°	238.7	229.9	224.1	217.2	216.2	207.4	201.6	195.7	189.8	184.9	183.0
12.5°	221.1	211.3	204.5	196.7	194.7	186.9	180.0	174.2	168.3	163.4	160.5
15°	202.5	191.8	184.9	177.1	175.1	166.3	160.5	153.6	148.7	143.8	141.9
17.5°	184.0	173.2	165.4	158.5	156.6	147.7	140.9	136.0	130.1	127.2	124.3
20°	165.4	154.6	146.8	140.9	138.0	131.1	124.3	119.4	114.5	111.5	108.6
22.5°	146.8	137.0	130.1	124.3	122.3	115.5	109.6	104.7	101.8	97.8	95.9
25°	130.1	120.4	114.5	108.6	106.7	100.8	96.9	92.0	89.0	86.1	84.1
27.5°	114.5	105.7	99.8	94.9	93.9	89.0	84.1	81.2	78.3	76.3	75.3
30°	98.8	92.0	87.1	83.2	82.2	77.3	73.4	71.4	68.5	67.5	66.5
32.5°	87.1	80.2	76.3	72.4	71.4	67.5	65.6	62.6	60.7	59.7	59.7
35°	74.4	69.5	65.6	63.6	62.6	59.7	56.8	55.8	53.8	52.8	52.8
37.5°	63.6	59.7	56.8	53.8	53.8	51.9	49.9	48.9	47.9	47.9	47.0
40°	54.8	50.9	49.9	47.9	47.0	46.0	45.0	44.0	43.1	43.1	43.1
42.5°	46.0	44.0	42.1	41.1	41.1	40.1	39.1	39.1	38.2	39.1	39.1
45°	39.1	37.2	36.2	35.2	36.2	35.2	35.2	34.2	35.2	35.2	35.2
47.5°	33.3	32.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	32.3	32.3
50°	28.4	27.4	27.4	27.4	27.4	27.4	28.4	28.4	28.4	29.4	29.4
52.5°	23.5	23.5	23.5	23.5	24.5	24.5	25.4	25.4	26.4	26.4	27.4
55°	20.5	20.5	20.5	20.5	21.5	21.5	22.5	23.5	23.5	24.5	25.4
57.5°	17.6	17.6	18.6	18.6	19.6	19.6	20.5	21.5	21.5	22.5	23.5
60°	14.7	15.7	16.6	16.6	16.6	17.6	18.6	19.6	19.6	20.5	21.5
62.5°	12.7	13.7	14.7	14.7	14.7	15.7	16.6	17.6	17.6	18.6	19.6
65°	10.8	11.7	12.7	12.7	12.7	13.7	14.7	15.7	16.6	16.6	17.6
67.5°	9.8	9.8	10.8	10.8	11.7	12.7	12.7	13.7	14.7	15.7	16.6
70°	7.8	8.8	9.8	9.8	9.8	10.8	11.7	12.7	12.7	13.7	14.7
72.5°	6.8	6.8	7.8	7.8	8.8	9.8	9.8	10.8	11.7	11.7	12.7
75°	5.9	6.8	6.8	6.8	7.8	7.8	8.8	9.8	9.8	10.8	10.8
77.5°	4.9	4.9	5.9	5.9	5.9	6.8	6.8	7.8	7.8	8.8	8.8
80°	3.9	3.9	4.9	4.9	4.9	4.9	5.9	5.9	6.8	6.8	6.8
82.5°	2.9	2.9	2.9	2.9	3.9	3.9	3.9	3.9	4.9	4.9	4.9
85°	2.0	2.0	2.0	2.0	2.0	2.9	2.9	2.9	2.9	2.9	3.9
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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: P226235

CATALOG NUMBER: LD2B05D010 EU2B05WW9024 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	290.6	290.6	290.6	290.6	290.6	290.6	290.6	290.6
2.5°	259.3	259.3	258.3	257.3	256.4	255.4	254.4	253.4
5°	229.9	230.9	227.0	226.0	226.0	224.1	225.0	223.1
7.5°	202.5	202.5	199.6	198.6	197.6	195.7	194.7	193.7
10°	178.1	177.1	175.1	174.2	172.2	171.2	171.2	169.3
12.5°	156.6	155.6	153.6	152.6	150.7	149.7	148.7	147.7
15°	138.0	137.0	135.0	134.0	133.1	131.1	131.1	130.1
17.5°	120.4	119.4	118.4	116.4	116.4	114.5	113.5	113.5
20°	106.7	105.7	103.7	102.7	102.7	101.8	101.8	99.8
22.5°	93.9	93.0	92.0	91.0	91.0	90.0	89.0	89.0
25°	83.2	82.2	81.2	81.2	80.2	79.3	79.3	79.3
27.5°	73.4	73.4	72.4	72.4	72.4	71.4	71.4	70.4
30°	65.6	65.6	64.6	64.6	64.6	63.6	64.6	63.6
32.5°	58.7	58.7	58.7	58.7	58.7	57.7	57.7	57.7
35°	52.8	52.8	52.8	52.8	52.8	51.9	52.8	51.9
37.5°	47.0	47.9	47.0	47.0	47.9	47.0	47.0	47.0
40°	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1
42.5°	39.1	39.1	39.1	39.1	39.1	39.1	39.1	39.1
45°	35.2	36.2	36.2	36.2	36.2	36.2	36.2	36.2
47.5°	33.3	33.3	33.3	33.3	34.2	33.3	34.2	34.2
50°	30.3	30.3	30.3	31.3	31.3	31.3	31.3	31.3
52.5°	28.4	28.4	28.4	28.4	29.4	29.4	29.4	29.4
55°	25.4	26.4	26.4	26.4	27.4	27.4	27.4	27.4
57.5°	24.5	24.5	24.5	25.4	25.4	25.4	26.4	25.4
60°	22.5	22.5	23.5	23.5	23.5	24.5	24.5	24.5
62.5°	20.5	21.5	21.5	21.5	21.5	22.5	22.5	22.5
65°	18.6	19.6	19.6	19.6	20.5	20.5	20.5	20.5
67.5°	16.6	17.6	17.6	18.6	18.6	18.6	18.6	18.6
70°	14.7	15.7	15.7	15.7	16.6	16.6	16.6	16.6
72.5°	13.7	13.7	13.7	14.7	14.7	14.7	15.7	14.7
75°	11.7	12.7	12.7	12.7	12.7	12.7	13.7	13.7
77.5°	9.8	9.8	9.8	9.8	10.8	10.8	10.8	10.8
80°	7.8	7.8	7.8	7.8	8.8	8.8	8.8	8.8
82.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
85°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
87.5°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By E9808895 / USPTCWHP6082093





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















(END OF REPORT)