

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: P226233

Luminaire Tested: **LD2B05D010 EU2B05WW8040 2LBSW\***

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P226233  
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 EU2B05WW8040 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: 578.5 lumens  
Efficiency: N/A  
Efficacy: 79.3 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

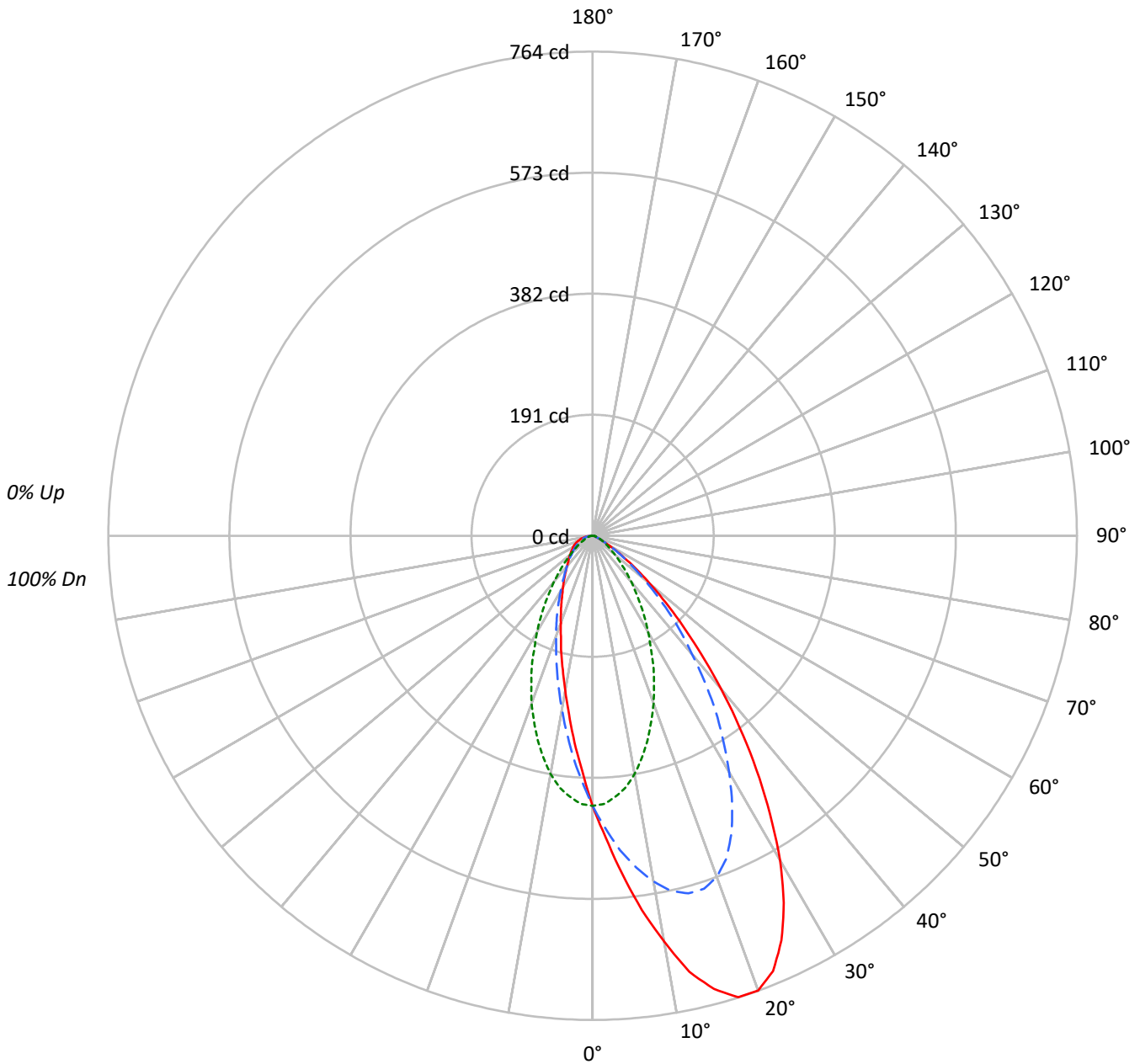
Input Watts (W): 7.3  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P226233

CATALOG NUMBER: LD2B05D010 EU2B05WW8040 2LBSW\*

### Luminous Intensity Polar Plot





TEST NUMBER: P226233

CATALOG NUMBER: LD2B05D010 EU2B05WW8040 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
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°	165087	165087	165087
5°	208138	160702	127224
10°	255698	150170	97662
15°	296948	134098	76553
20°	314719	115953	60347
25°	301181	96932	49663
30°	264470	78317	41730
35°	213072	61756	35985
40°	158924	47885	31906
45°	110051	36154	29088
50°	70926	26816	27659
55°	41667	20327	27148
60°	22234	16656	27811
65°	10540	13198	27588
70°	4870	11325	27634
75°	6435	10775	30081
80°	6469	9592	28775
85°	6222	12888	25332



TEST NUMBER: P226233

CATALOG NUMBER: LD2B05D010 EU2B05WW8040 2LBSW\*

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	40.3	7.0
10°-20°	112.4	19.4
20°-30°	146.6	25.3
30°-40°	127.0	21.9
40°-50°	80.4	13.9
50°-60°	40.2	7.0
60°-70°	18.5	3.2
70°-80°	9.9	1.7
80°-90°	3.2	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°	299.3	51.7
0°-40°	426.3	73.7
0°-60°	546.9	94.5
0°-90°	578.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	578.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	426	426	426	426	426	
5°	535	498	413	350	327	55
15°	740	584	334	218	191	208
25°	705	518	227	131	116	319
35°	451	339	131	79	76	280
45°	201	168	66	52	53	158
55°	62	57	30	34	40	59
65°	12	13	14	24	30	13
75°	4	4	7	14	20	4
85°	1	1	3	4	6	1
90°	0	0	0	0	0	



TEST NUMBER: P226233

CATALOG NUMBER: LD2B05D010 EU2B05WW8040 2LBSW\*

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2
2.5°	476.5	479.3	479.3	480.8	475.0	476.5	476.5	473.6	469.3	466.4	462.1
5°	535.3	535.3	533.9	535.3	531.0	528.1	529.6	523.8	512.4	506.6	498.0
7.5°	595.6	592.7	592.7	591.3	584.1	579.8	578.4	568.3	552.5	541.1	528.1
10°	650.1	650.1	647.3	644.4	634.3	628.6	624.3	608.5	591.3	572.6	554.0
12.5°	704.7	701.8	697.5	691.8	677.4	671.7	664.5	645.8	620.0	598.5	574.1
15°	740.5	742.0	734.8	727.6	711.8	703.2	694.6	671.7	641.5	614.3	584.1
17.5°	763.5	762.1	754.9	746.3	729.1	719.0	709.0	681.7	650.1	617.1	584.1
20°	763.5	763.5	754.9	746.3	727.6	716.2	706.1	677.4	643.0	608.5	572.6
22.5°	743.4	740.5	734.8	726.2	707.5	697.5	686.0	657.3	621.4	588.4	551.1
25°	704.7	704.7	697.5	687.4	671.7	660.2	650.1	621.4	587.0	554.0	518.1
27.5°	653.0	651.6	644.4	637.2	620.0	611.4	601.3	574.1	543.9	513.8	476.5
30°	591.3	588.4	585.5	574.1	562.6	555.4	546.8	522.4	492.3	463.6	430.6
32.5°	521.0	525.3	518.1	510.9	500.9	493.7	486.5	467.9	440.6	414.8	383.2
35°	450.6	453.5	449.2	443.5	433.4	429.1	421.9	406.2	386.1	361.7	338.7
37.5°	380.3	380.3	380.3	376.0	370.3	366.0	361.7	347.3	330.1	311.4	289.9
40°	314.3	318.6	312.9	311.4	307.1	305.7	301.4	291.3	277.0	264.1	244.0
42.5°	254.0	254.0	255.5	252.6	251.2	248.3	245.4	239.7	229.6	218.1	205.2
45°	200.9	202.4	203.8	199.5	199.5	199.5	198.1	192.3	183.7	176.5	167.9
47.5°	156.4	156.4	157.9	156.4	156.4	156.4	153.6	153.6	147.8	140.6	133.5
50°	117.7	119.1	120.6	120.6	120.6	119.1	119.1	116.2	113.4	110.5	103.3
52.5°	89.0	89.0	87.5	89.0	89.0	89.0	89.0	87.5	86.1	83.2	78.9
55°	61.7	61.7	63.1	63.1	63.1	64.6	64.6	64.6	63.1	61.7	57.4
57.5°	43.1	43.1	43.1	44.5	45.9	45.9	45.9	45.9	44.5	43.1	41.6
60°	28.7	28.7	28.7	30.1	30.1	30.1	30.1	31.6	30.1	30.1	28.7
62.5°	18.7	18.7	18.7	18.7	18.7	20.1	20.1	20.1	20.1	20.1	18.7
65°	11.5	11.5	11.5	11.5	11.5	11.5	12.9	12.9	12.9	12.9	12.9
67.5°	7.2	7.2	7.2	7.2	7.2	8.6	8.6	8.6	8.6	8.6	8.6
70°	4.3	4.3	4.3	4.3	5.7	5.7	5.7	5.7	5.7	5.7	5.7
72.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
75°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
77.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4.3	4.3	4.3
80°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.9	2.9	1.4
85°	1.4	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: P226233

CATALOG NUMBER: LD2B05D010 EU2B05WW8040 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2
2.5°	462.1	456.4	453.5	446.3	444.9	439.2	439.2	433.4	426.2	423.4	416.2
5°	492.3	480.8	475.0	462.1	457.8	449.2	444.9	433.4	421.9	413.3	403.3
7.5°	518.1	500.9	489.4	472.2	465.0	452.1	443.5	429.1	413.3	400.4	386.1
10°	538.2	515.2	498.0	475.0	466.4	450.6	437.7	417.6	397.5	381.8	364.5
12.5°	551.1	523.8	499.4	472.2	460.7	443.5	424.8	401.8	378.9	358.8	340.1
15°	556.8	523.8	495.1	462.1	449.2	430.6	409.0	381.8	355.9	334.4	314.3
17.5°	552.5	513.8	483.7	446.3	432.0	410.5	386.1	357.4	330.1	307.1	287.0
20°	538.2	498.0	463.6	424.8	409.0	387.5	360.2	331.5	304.3	281.3	259.8
22.5°	513.8	472.2	436.3	397.5	381.8	360.2	331.5	302.8	275.6	252.6	232.5
25°	483.7	439.2	403.3	366.0	348.7	330.1	301.4	272.7	246.8	226.8	206.7
27.5°	443.5	404.7	368.8	331.5	315.7	298.5	269.8	244.0	218.1	198.1	180.8
30°	400.4	363.1	333.0	297.1	282.7	265.5	241.1	215.3	193.7	175.1	159.3
32.5°	357.4	321.5	292.8	262.6	249.7	232.5	211.0	188.0	167.9	152.1	139.2
35°	312.9	282.7	255.5	226.8	216.7	202.4	182.3	162.2	145.0	130.6	117.7
37.5°	268.4	244.0	219.6	196.6	185.1	173.7	155.0	137.8	122.0	110.5	100.5
40°	228.2	206.7	186.6	165.0	155.0	146.4	130.6	116.2	104.8	94.7	86.1
42.5°	189.4	172.2	155.0	137.8	129.2	122.0	109.1	96.2	86.1	78.9	71.8
45°	155.0	142.1	127.7	111.9	107.6	99.0	89.0	80.4	71.8	66.0	60.3
47.5°	124.9	113.4	101.9	90.4	86.1	80.4	71.8	64.6	58.8	54.5	50.2
50°	97.6	89.0	81.8	71.8	68.9	63.1	57.4	51.7	47.4	44.5	41.6
52.5°	74.6	67.5	61.7	56.0	53.1	50.2	44.5	41.6	38.7	37.3	35.9
55°	54.5	50.2	45.9	41.6	40.2	37.3	34.4	31.6	30.1	30.1	30.1
57.5°	38.7	35.9	33.0	30.1	30.1	28.7	27.3	25.8	24.4	24.4	24.4
60°	27.3	25.8	24.4	23.0	21.5	21.5	20.1	21.5	20.1	21.5	21.5
62.5°	18.7	17.2	17.2	15.8	15.8	15.8	15.8	15.8	17.2	17.2	18.7
65°	11.5	11.5	11.5	11.5	11.5	11.5	12.9	12.9	12.9	14.4	14.4
67.5°	8.6	8.6	8.6	10.0	10.0	10.0	10.0	11.5	11.5	11.5	12.9
70°	5.7	7.2	7.2	7.2	7.2	7.2	8.6	8.6	8.6	10.0	10.0
72.5°	5.7	5.7	5.7	5.7	5.7	5.7	7.2	7.2	7.2	8.6	8.6
75°	4.3	5.7	5.7	5.7	5.7	5.7	5.7	7.2	7.2	7.2	8.6
77.5°	4.3	4.3	4.3	4.3	4.3	4.3	4.3	5.7	5.7	5.7	5.7
80°	2.9	2.9	2.9	4.3	4.3	4.3	4.3	4.3	4.3	4.3	5.7
82.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4.3
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	2.9	1.4	2.9	2.9
87.5°	0.0	0.0	0.0	1.4	0.0	1.4	1.4	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: P226233

CATALOG NUMBER: LD2B05D010 EU2B05WW8040 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2
2.5°	413.3	409.0	410.5	401.8	403.3	397.5	394.7	390.4	387.5	383.2	384.6
5°	396.1	388.9	386.1	376.0	377.4	368.8	363.1	355.9	350.2	343.0	341.6
7.5°	374.6	363.1	358.8	348.7	347.3	335.8	328.7	320.0	312.9	305.7	302.8
10°	350.2	337.3	328.7	318.6	317.2	304.3	295.6	287.0	278.4	271.2	268.4
12.5°	324.3	310.0	300.0	288.5	285.6	274.1	264.1	255.5	246.8	239.7	235.4
15°	297.1	281.3	271.2	259.8	256.9	244.0	235.4	225.3	218.1	211.0	208.1
17.5°	269.8	254.0	242.5	232.5	229.6	216.7	206.7	199.5	190.9	186.6	182.3
20°	242.5	226.8	215.3	206.7	202.4	192.3	182.3	175.1	167.9	163.6	159.3
22.5°	215.3	200.9	190.9	182.3	179.4	169.4	160.7	153.6	149.3	143.5	140.6
25°	190.9	176.5	167.9	159.3	156.4	147.8	142.1	134.9	130.6	126.3	123.4
27.5°	167.9	155.0	146.4	139.2	137.8	130.6	123.4	119.1	114.8	111.9	110.5
30°	145.0	134.9	127.7	122.0	120.6	113.4	107.6	104.8	100.5	99.0	97.6
32.5°	127.7	117.7	111.9	106.2	104.8	99.0	96.2	91.9	89.0	87.5	87.5
35°	109.1	101.9	96.2	93.3	91.9	87.5	83.2	81.8	78.9	77.5	77.5
37.5°	93.3	87.5	83.2	78.9	78.9	76.1	73.2	71.8	70.3	70.3	68.9
40°	80.4	74.6	73.2	70.3	68.9	67.5	66.0	64.6	63.1	63.1	63.1
42.5°	67.5	64.6	61.7	60.3	60.3	58.8	57.4	57.4	56.0	57.4	57.4
45°	57.4	54.5	53.1	51.7	53.1	51.7	51.7	50.2	51.7	51.7	51.7
47.5°	48.8	47.4	45.9	45.9	45.9	45.9	45.9	45.9	45.9	47.4	47.4
50°	41.6	40.2	40.2	40.2	40.2	40.2	41.6	41.6	41.6	43.1	43.1
52.5°	34.4	34.4	34.4	34.4	35.9	35.9	37.3	37.3	38.7	38.7	40.2
55°	30.1	30.1	30.1	30.1	31.6	31.6	33.0	34.4	34.4	35.9	37.3
57.5°	25.8	25.8	27.3	27.3	28.7	28.7	30.1	31.6	31.6	33.0	34.4
60°	21.5	23.0	24.4	24.4	24.4	25.8	27.3	28.7	28.7	30.1	31.6
62.5°	18.7	20.1	21.5	21.5	21.5	23.0	24.4	25.8	25.8	27.3	28.7
65°	15.8	17.2	18.7	18.7	18.7	20.1	21.5	23.0	24.4	24.4	25.8
67.5°	14.4	14.4	15.8	15.8	17.2	18.7	18.7	20.1	21.5	23.0	24.4
70°	11.5	12.9	14.4	14.4	14.4	15.8	17.2	18.7	18.7	20.1	21.5
72.5°	10.0	10.0	11.5	11.5	12.9	14.4	14.4	15.8	17.2	17.2	18.7
75°	8.6	10.0	10.0	10.0	11.5	11.5	12.9	14.4	14.4	15.8	15.8
77.5°	7.2	7.2	8.6	8.6	8.6	10.0	10.0	11.5	11.5	12.9	12.9
80°	5.7	5.7	7.2	7.2	7.2	7.2	8.6	8.6	10.0	10.0	10.0
82.5°	4.3	4.3	4.3	4.3	5.7	5.7	5.7	5.7	7.2	7.2	7.2
85°	2.9	2.9	2.9	2.9	2.9	2.9	4.3	4.3	4.3	4.3	5.7
87.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	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: P226233

CATALOG NUMBER: LD2B05D010 EU2B05WW8040 2LBSW\*

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	426.2	426.2	426.2	426.2	426.2	426.2	426.2	426.2
2.5°	380.3	380.3	378.9	377.4	376.0	374.6	373.1	371.7
5°	337.3	338.7	333.0	331.5	331.5	328.7	330.1	327.2
7.5°	297.1	297.1	292.8	291.3	289.9	287.0	285.6	284.2
10°	261.2	259.8	256.9	255.5	252.6	251.2	251.2	248.3
12.5°	229.6	228.2	225.3	223.9	221.0	219.6	218.1	216.7
15°	202.4	200.9	198.1	196.6	195.2	192.3	192.3	190.9
17.5°	176.5	175.1	173.7	170.8	170.8	167.9	166.5	166.5
20°	156.4	155.0	152.1	150.7	150.7	149.3	149.3	146.4
22.5°	137.8	136.3	134.9	133.5	133.5	132.0	130.6	130.6
25°	122.0	120.6	119.1	119.1	117.7	116.2	116.2	116.2
27.5°	107.6	107.6	106.2	106.2	106.2	104.8	104.8	103.3
30°	96.2	96.2	94.7	94.7	94.7	93.3	94.7	93.3
32.5°	86.1	86.1	86.1	86.1	86.1	84.7	84.7	84.7
35°	77.5	77.5	77.5	77.5	77.5	76.1	77.5	76.1
37.5°	68.9	70.3	68.9	68.9	70.3	68.9	68.9	68.9
40°	63.1	63.1	63.1	63.1	63.1	63.1	63.1	63.1
42.5°	57.4	57.4	57.4	57.4	57.4	57.4	57.4	57.4
45°	51.7	53.1	53.1	53.1	53.1	53.1	53.1	53.1
47.5°	48.8	48.8	48.8	48.8	50.2	48.8	50.2	50.2
50°	44.5	44.5	44.5	45.9	45.9	45.9	45.9	45.9
52.5°	41.6	41.6	41.6	41.6	43.1	43.1	43.1	43.1
55°	37.3	38.7	38.7	38.7	40.2	40.2	40.2	40.2
57.5°	35.9	35.9	35.9	37.3	37.3	37.3	38.7	37.3
60°	33.0	33.0	34.4	34.4	34.4	35.9	35.9	35.9
62.5°	30.1	31.6	31.6	31.6	31.6	33.0	33.0	33.0
65°	27.3	28.7	28.7	28.7	30.1	30.1	30.1	30.1
67.5°	24.4	25.8	25.8	27.3	27.3	27.3	27.3	27.3
70°	21.5	23.0	23.0	23.0	24.4	24.4	24.4	24.4
72.5°	20.1	20.1	20.1	21.5	21.5	21.5	23.0	21.5
75°	17.2	18.7	18.7	18.7	18.7	18.7	20.1	20.1
77.5°	14.4	14.4	14.4	14.4	15.8	15.8	15.8	15.8
80°	11.5	11.5	11.5	11.5	12.9	12.9	12.9	12.9
82.5°	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
85°	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)