

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: P226240

Luminaire Tested: **LD2B05D010 EU2B05WW9050 2LBSW***

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P226240
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 EU2B05WW9050 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: 483.0 lumens
Efficiency: N/A
Efficacy: 66.2 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

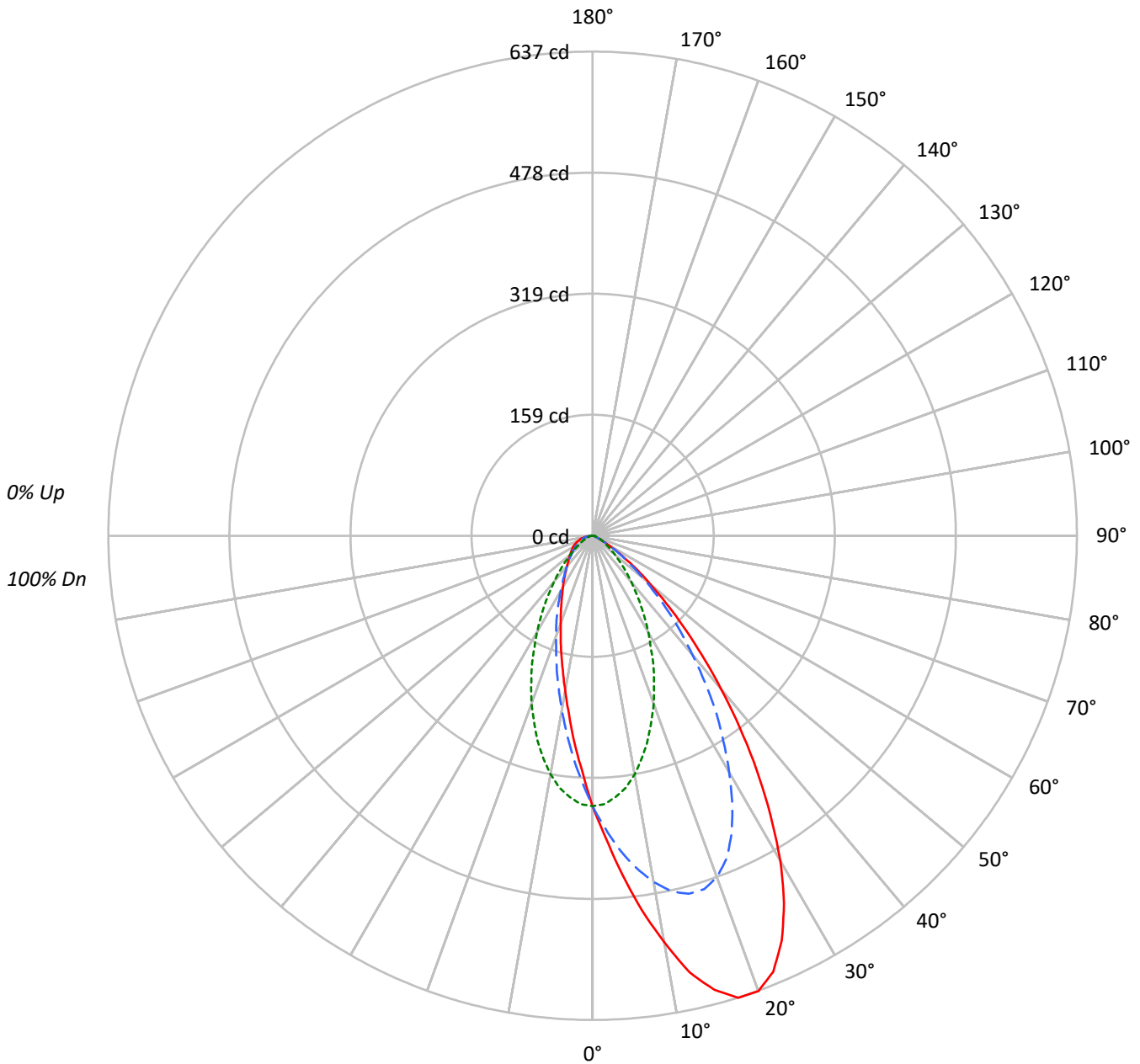
Input Watts (W): 7.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P226240

CATALOG NUMBER: LD2B05D010 EU2B05WW9050 2LBSW*

Luminous Intensity Polar Plot





TEST NUMBER: P226240

CATALOG NUMBER: LD2B05D010 EU2B05WW9050 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			
1	112	109	105	103	109	106	104	101	102	100	98	98	97	95	95	94	92	90			
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81			
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73			
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66			
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60			
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	56	55			
7	76	65	58	53	75	64	58	53	63	57	52	62	56	52	60	56	52	50			
8	72	60	53	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46			
9	68	56	50	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43			
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	137818	137818	137818
5°	173766	134145	106227
10°	213456	125352	81536
15°	247904	111962	63881
20°	262739	96786	50371
25°	251433	80905	41457
30°	220772	65391	34842
35°	177891	51542	30027
40°	132681	39996	26647
45°	91864	30183	24267
50°	59176	22357	23080
55°	34779	17018	22623
60°	18593	13944	23241
65°	8799	10998	23097
70°	4077	9513	23103
75°	5388	8980	25143
80°	5354	8030	24091
85°	5333	10666	21333



TEST NUMBER: P226240

CATALOG NUMBER: LD2B05D010 EU2B05WW9050 2LBSW*

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.6	7.0
10°-20°	93.8	19.4
20°-30°	122.4	25.3
30°-40°	106.0	21.9
40°-50°	67.1	13.9
50°-60°	33.6	7.0
60°-70°	15.5	3.2
70°-80°	8.3	1.7
80°-90°	2.7	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°	249.9	51.7
0°-40°	355.9	73.7
0°-60°	456.5	94.5
0°-90°	483.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	483.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	356	356	356	356	356	
5°	447	416	345	292	273	46
15°	618	488	279	182	159	174
25°	588	432	189	109	97	266
35°	376	283	109	66	64	234
45°	168	140	55	43	44	132
55°	52	48	25	29	34	49
65°	10	11	12	20	25	11
75°	4	4	6	12	17	3
85°	1	1	2	4	5	1
90°	0	0	0	0	0	



TEST NUMBER: P226240

CATALOG NUMBER: LD2B05D010 EU2B05WW9050 2LBSW*

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	397.8	400.2	400.2	401.4	396.6	397.8	397.8	395.4	391.8	389.4	385.8
5°	446.9	446.9	445.7	446.9	443.3	440.9	442.1	437.3	427.7	422.9	415.7
7.5°	497.2	494.8	494.8	493.6	487.6	484.0	482.8	474.4	461.3	451.7	440.9
10°	542.7	542.7	540.3	537.9	529.6	524.8	521.2	508.0	493.6	478.0	462.5
12.5°	588.3	585.9	582.3	577.5	565.5	560.7	554.7	539.1	517.6	499.6	479.2
15°	618.2	619.4	613.4	607.4	594.3	587.1	579.9	560.7	535.5	512.8	487.6
17.5°	637.4	636.2	630.2	623.0	608.6	600.2	591.9	569.1	542.7	515.2	487.6
20°	637.4	637.4	630.2	623.0	607.4	597.8	589.5	565.5	536.7	508.0	478.0
22.5°	620.6	618.2	613.4	606.2	590.7	582.3	572.7	548.7	518.8	491.2	460.1
25°	588.3	588.3	582.3	573.9	560.7	551.1	542.7	518.8	490.0	462.5	432.5
27.5°	545.1	543.9	537.9	532.0	517.6	510.4	502.0	479.2	454.1	428.9	397.8
30°	493.6	491.2	488.8	479.2	469.7	463.7	456.5	436.1	410.9	387.0	359.4
32.5°	434.9	438.5	432.5	426.5	418.1	412.1	406.2	390.6	367.8	346.2	319.9
35°	376.2	378.6	375.0	370.2	361.8	358.2	352.2	339.1	322.3	301.9	282.7
37.5°	317.5	317.5	317.5	313.9	309.1	305.5	301.9	289.9	275.6	260.0	242.0
40°	262.4	266.0	261.2	260.0	256.4	255.2	251.6	243.2	231.2	220.4	203.7
42.5°	212.1	212.1	213.3	210.9	209.7	207.3	204.9	200.1	191.7	182.1	171.3
45°	167.7	168.9	170.1	166.5	166.5	166.5	165.3	160.5	153.4	147.4	140.2
47.5°	130.6	130.6	131.8	130.6	130.6	130.6	128.2	128.2	123.4	117.4	111.4
50°	98.2	99.4	100.6	100.6	100.6	99.4	99.4	97.0	94.6	92.3	86.3
52.5°	74.3	74.3	73.1	74.3	74.3	74.3	74.3	73.1	71.9	69.5	65.9
55°	51.5	51.5	52.7	52.7	52.7	53.9	53.9	53.9	52.7	51.5	47.9
57.5°	35.9	35.9	35.9	37.1	38.3	38.3	38.3	38.3	37.1	35.9	34.7
60°	24.0	24.0	24.0	25.2	25.2	25.2	25.2	26.4	25.2	25.2	24.0
62.5°	15.6	15.6	15.6	15.6	15.6	16.8	16.8	16.8	16.8	16.8	15.6
65°	9.6	9.6	9.6	9.6	9.6	9.6	10.8	10.8	10.8	10.8	10.8
67.5°	6.0	6.0	6.0	6.0	6.0	7.2	7.2	7.2	7.2	7.2	7.2
70°	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8	4.8	4.8	4.8
72.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
75°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
77.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.6	3.6	3.6
80°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	2.4	1.2
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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: P226240

CATALOG NUMBER: LD2B05D010 EU2B05WW9050 2LBSW*

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	385.8	381.0	378.6	372.6	371.4	366.6	366.6	361.8	355.8	353.4	347.4
5°	410.9	401.4	396.6	385.8	382.2	375.0	371.4	361.8	352.2	345.0	336.7
7.5°	432.5	418.1	408.5	394.2	388.2	377.4	370.2	358.2	345.0	334.3	322.3
10°	449.3	430.1	415.7	396.6	389.4	376.2	365.4	348.6	331.9	318.7	304.3
12.5°	460.1	437.3	416.9	394.2	384.6	370.2	354.6	335.5	316.3	299.5	283.9
15°	464.9	437.3	413.3	385.8	375.0	359.4	341.5	318.7	297.1	279.2	262.4
17.5°	461.3	428.9	403.8	372.6	360.6	342.7	322.3	298.3	275.6	256.4	239.6
20°	449.3	415.7	387.0	354.6	341.5	323.5	300.7	276.8	254.0	234.8	216.9
22.5°	428.9	394.2	364.2	331.9	318.7	300.7	276.8	252.8	230.0	210.9	194.1
25°	403.8	366.6	336.7	305.5	291.1	275.6	251.6	227.6	206.1	189.3	172.5
27.5°	370.2	337.9	307.9	276.8	263.6	249.2	225.2	203.7	182.1	165.3	151.0
30°	334.3	303.1	278.0	248.0	236.0	221.6	201.3	179.7	161.7	146.2	133.0
32.5°	298.3	268.4	244.4	219.3	208.5	194.1	176.1	156.9	140.2	127.0	116.2
35°	261.2	236.0	213.3	189.3	180.9	168.9	152.2	135.4	121.0	109.0	98.2
37.5°	224.0	203.7	183.3	164.1	154.6	145.0	129.4	115.0	101.8	92.3	83.9
40°	190.5	172.5	155.8	137.8	129.4	122.2	109.0	97.0	87.5	79.1	71.9
42.5°	158.1	143.8	129.4	115.0	107.8	101.8	91.1	80.3	71.9	65.9	59.9
45°	129.4	118.6	106.6	93.5	89.9	82.7	74.3	67.1	59.9	55.1	50.3
47.5°	104.2	94.6	85.1	75.5	71.9	67.1	59.9	53.9	49.1	45.5	41.9
50°	81.5	74.3	68.3	59.9	57.5	52.7	47.9	43.1	39.5	37.1	34.7
52.5°	62.3	56.3	51.5	46.7	44.3	41.9	37.1	34.7	32.3	31.2	30.0
55°	45.5	41.9	38.3	34.7	33.5	31.2	28.8	26.4	25.2	25.2	25.2
57.5°	32.3	30.0	27.6	25.2	25.2	24.0	22.8	21.6	20.4	20.4	20.4
60°	22.8	21.6	20.4	19.2	18.0	18.0	16.8	18.0	16.8	18.0	18.0
62.5°	15.6	14.4	14.4	13.2	13.2	13.2	13.2	13.2	14.4	14.4	15.6
65°	9.6	9.6	9.6	9.6	9.6	9.6	10.8	10.8	10.8	12.0	12.0
67.5°	7.2	7.2	7.2	8.4	8.4	8.4	8.4	9.6	9.6	9.6	10.8
70°	4.8	6.0	6.0	6.0	6.0	6.0	7.2	7.2	7.2	8.4	8.4
72.5°	4.8	4.8	4.8	4.8	4.8	4.8	6.0	6.0	6.0	7.2	7.2
75°	3.6	4.8	4.8	4.8	4.8	4.8	4.8	6.0	6.0	6.0	7.2
77.5°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8
80°	2.4	2.4	2.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	4.8
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.6
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.4	1.2	2.4	2.4
87.5°	0.0	0.0	0.0	1.2	0.0	1.2	1.2	1.2	1.2	1.2	1.2
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: P226240

CATALOG NUMBER: LD2B05D010 EU2B05WW9050 2LBSW*

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	345.0	341.5	342.7	335.5	336.7	331.9	329.5	325.9	323.5	319.9	321.1
5°	330.7	324.7	322.3	313.9	315.1	307.9	303.1	297.1	292.3	286.3	285.1
7.5°	312.7	303.1	299.5	291.1	289.9	280.4	274.4	267.2	261.2	255.2	252.8
10°	292.3	281.6	274.4	266.0	264.8	254.0	246.8	239.6	232.4	226.4	224.0
12.5°	270.8	258.8	250.4	240.8	238.4	228.8	220.4	213.3	206.1	200.1	196.5
15°	248.0	234.8	226.4	216.9	214.5	203.7	196.5	188.1	182.1	176.1	173.7
17.5°	225.2	212.1	202.5	194.1	191.7	180.9	172.5	166.5	159.3	155.8	152.2
20°	202.5	189.3	179.7	172.5	168.9	160.5	152.2	146.2	140.2	136.6	133.0
22.5°	179.7	167.7	159.3	152.2	149.8	141.4	134.2	128.2	124.6	119.8	117.4
25°	159.3	147.4	140.2	133.0	130.6	123.4	118.6	112.6	109.0	105.4	103.0
27.5°	140.2	129.4	122.2	116.2	115.0	109.0	103.0	99.4	95.8	93.5	92.3
30°	121.0	112.6	106.6	101.8	100.6	94.6	89.9	87.5	83.9	82.7	81.5
32.5°	106.6	98.2	93.5	88.7	87.5	82.7	80.3	76.7	74.3	73.1	73.1
35°	91.1	85.1	80.3	77.9	76.7	73.1	69.5	68.3	65.9	64.7	64.7
37.5°	77.9	73.1	69.5	65.9	65.9	63.5	61.1	59.9	58.7	58.7	57.5
40°	67.1	62.3	61.1	58.7	57.5	56.3	55.1	53.9	52.7	52.7	52.7
42.5°	56.3	53.9	51.5	50.3	50.3	49.1	47.9	47.9	46.7	47.9	47.9
45°	47.9	45.5	44.3	43.1	44.3	43.1	43.1	41.9	43.1	43.1	43.1
47.5°	40.7	39.5	38.3	38.3	38.3	38.3	38.3	38.3	38.3	39.5	39.5
50°	34.7	33.5	33.5	33.5	33.5	33.5	34.7	34.7	34.7	35.9	35.9
52.5°	28.8	28.8	28.8	28.8	30.0	30.0	31.2	31.2	32.3	32.3	33.5
55°	25.2	25.2	25.2	25.2	26.4	26.4	27.6	28.8	28.8	30.0	31.2
57.5°	21.6	21.6	22.8	22.8	24.0	24.0	25.2	26.4	26.4	27.6	28.8
60°	18.0	19.2	20.4	20.4	20.4	21.6	22.8	24.0	24.0	25.2	26.4
62.5°	15.6	16.8	18.0	18.0	18.0	19.2	20.4	21.6	21.6	22.8	24.0
65°	13.2	14.4	15.6	15.6	15.6	16.8	18.0	19.2	20.4	20.4	21.6
67.5°	12.0	12.0	13.2	13.2	14.4	15.6	15.6	16.8	18.0	19.2	20.4
70°	9.6	10.8	12.0	12.0	12.0	13.2	14.4	15.6	15.6	16.8	18.0
72.5°	8.4	8.4	9.6	9.6	10.8	12.0	12.0	13.2	14.4	14.4	15.6
75°	7.2	8.4	8.4	8.4	9.6	9.6	10.8	12.0	12.0	13.2	13.2
77.5°	6.0	6.0	7.2	7.2	7.2	8.4	8.4	9.6	9.6	10.8	10.8
80°	4.8	4.8	6.0	6.0	6.0	6.0	7.2	7.2	8.4	8.4	8.4
82.5°	3.6	3.6	3.6	3.6	4.8	4.8	4.8	4.8	6.0	6.0	6.0
85°	2.4	2.4	2.4	2.4	2.4	3.6	3.6	3.6	3.6	3.6	4.8
87.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
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: P226240

CATALOG NUMBER: LD2B05D010 EU2B05WW9050 2LBSW*

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	355.8	355.8	355.8	355.8	355.8	355.8	355.8	355.8
2.5°	317.5	317.5	316.3	315.1	313.9	312.7	311.5	310.3
5°	281.6	282.7	278.0	276.8	276.8	274.4	275.6	273.2
7.5°	248.0	248.0	244.4	243.2	242.0	239.6	238.4	237.2
10°	218.1	216.9	214.5	213.3	210.9	209.7	209.7	207.3
12.5°	191.7	190.5	188.1	186.9	184.5	183.3	182.1	180.9
15°	168.9	167.7	165.3	164.1	162.9	160.5	160.5	159.3
17.5°	147.4	146.2	145.0	142.6	142.6	140.2	139.0	139.0
20°	130.6	129.4	127.0	125.8	125.8	124.6	124.6	122.2
22.5°	115.0	113.8	112.6	111.4	111.4	110.2	109.0	109.0
25°	101.8	100.6	99.4	99.4	98.2	97.0	97.0	97.0
27.5°	89.9	89.9	88.7	88.7	88.7	87.5	87.5	86.3
30°	80.3	80.3	79.1	79.1	79.1	77.9	79.1	77.9
32.5°	71.9	71.9	71.9	71.9	71.9	70.7	70.7	70.7
35°	64.7	64.7	64.7	64.7	64.7	63.5	64.7	63.5
37.5°	57.5	58.7	57.5	57.5	58.7	57.5	57.5	57.5
40°	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7
42.5°	47.9	47.9	47.9	47.9	47.9	47.9	47.9	47.9
45°	43.1	44.3	44.3	44.3	44.3	44.3	44.3	44.3
47.5°	40.7	40.7	40.7	40.7	41.9	40.7	41.9	41.9
50°	37.1	37.1	37.1	38.3	38.3	38.3	38.3	38.3
52.5°	34.7	34.7	34.7	34.7	35.9	35.9	35.9	35.9
55°	31.2	32.3	32.3	32.3	33.5	33.5	33.5	33.5
57.5°	30.0	30.0	30.0	31.2	31.2	31.2	32.3	31.2
60°	27.6	27.6	28.8	28.8	28.8	30.0	30.0	30.0
62.5°	25.2	26.4	26.4	26.4	26.4	27.6	27.6	27.6
65°	22.8	24.0	24.0	24.0	25.2	25.2	25.2	25.2
67.5°	20.4	21.6	21.6	22.8	22.8	22.8	22.8	22.8
70°	18.0	19.2	19.2	19.2	20.4	20.4	20.4	20.4
72.5°	16.8	16.8	16.8	18.0	18.0	18.0	19.2	18.0
75°	14.4	15.6	15.6	15.6	15.6	15.6	16.8	16.8
77.5°	12.0	12.0	12.0	12.0	13.2	13.2	13.2	13.2
80°	9.6	9.6	9.6	9.6	10.8	10.8	10.8	10.8
82.5°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
85°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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)