

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: P251752

Luminaire Tested: **LD4B15D010 EU4B10208030 4LBLWW1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P251752
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-12)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B15D010 EU4B10208030 4LBLWW1H
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1143.0 lumens
Efficiency: N/A
Efficacy: 79.4 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.03 / 1.12
Luminous Opening: Circular (Dia: 0.38' x H: 0')
CIE Type: Direct

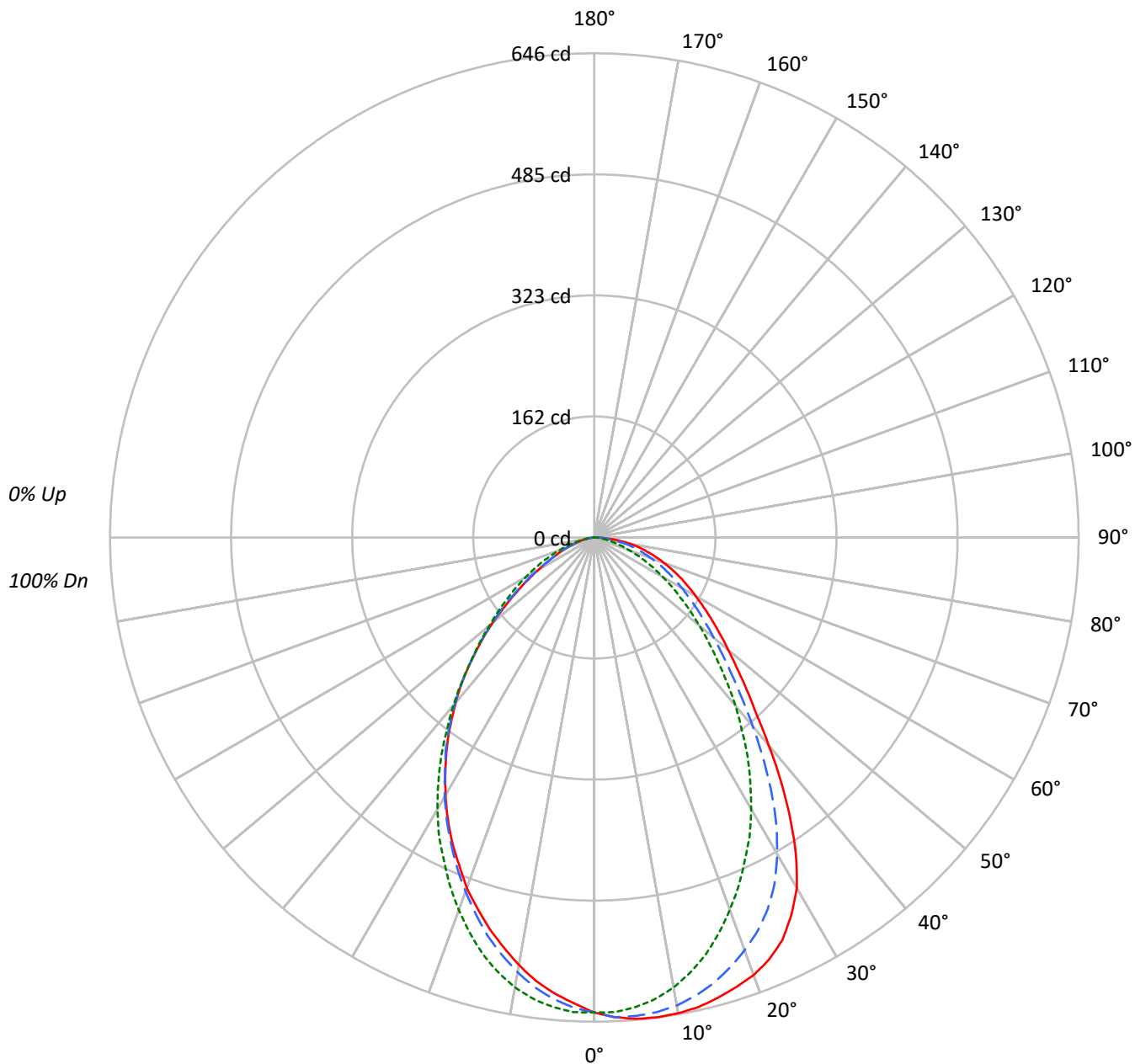
Input Watts (W): 14.39
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88		
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76		
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67		
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59		
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52		
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47		
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42		
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38		
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35		
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	61779	61779	61779
5°	63061	61535	59725
10°	63791	60317	57328
15°	64160	58056	54514
20°	64426	54823	51587
25°	63756	51067	48239
30°	60803	47085	44665
35°	54074	42355	40844
40°	46029	37225	36602
45°	39653	31990	31852
50°	35342	27655	26761
55°	32470	23856	21375
60°	30407	20525	16724
65°	29241	17318	13052
70°	28067	13905	10572
75°	27187	11033	8096
80°	27388	7689	4939
85°	22923	5479	2236



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	5.2
10°-20°	163.1	14.3
20°-30°	228.1	20.0
30°-40°	234.5	20.5
40°-50°	190.3	16.7
50°-60°	134.0	11.7
60°-70°	82.5	7.2
70°-80°	41.2	3.6
80°-90°	9.8	0.9
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°	450.6	39.4
0°-40°	685.1	59.9
0°-60°	1009.5	88.3
0°-90°	1143.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1143.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	634	634	634	634	634	
5°	645	641	629	618	610	61
15°	636	615	575	550	540	180
25°	593	547	475	452	449	271
35°	454	411	356	345	343	283
45°	288	259	232	232	231	224
55°	191	168	140	129	126	172
65°	127	106	75	58	57	125
75°	72	57	29	22	22	77
85°	20	14	5	3	2	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9
2.5°	640.7	641.7	638.8	641.7	637.8	639.8	640.7	638.8	636.8	640.7	640.7
5°	644.6	644.6	641.7	645.6	640.7	641.7	643.7	640.7	637.8	641.7	640.7
7.5°	645.6	645.6	641.7	645.6	640.7	641.7	642.7	639.8	636.8	639.8	638.8
10°	644.6	643.7	640.7	644.6	639.8	639.8	640.7	637.8	632.9	635.9	633.9
12.5°	641.7	641.7	637.8	641.7	634.9	634.9	635.9	631.9	628.0	628.0	626.1
15°	635.9	635.9	631.9	634.9	629.0	629.0	628.0	624.1	619.3	619.3	615.4
17.5°	629.0	629.0	625.1	628.0	621.2	621.2	620.2	614.4	607.6	606.6	601.7
20°	621.2	621.2	616.3	618.3	610.5	610.5	609.5	602.7	594.9	592.9	586.1
22.5°	609.5	609.5	604.6	605.6	597.8	596.8	595.9	588.1	580.3	577.3	568.6
25°	592.9	592.0	588.1	588.1	580.3	578.3	576.4	568.6	560.8	554.9	547.1
27.5°	568.6	569.5	564.7	565.6	555.9	553.9	553.0	543.2	534.4	528.6	520.8
30°	540.3	537.4	532.5	532.5	524.7	523.7	521.7	513.0	503.2	496.4	487.6
32.5°	500.3	499.3	494.4	494.4	485.7	485.7	481.8	473.0	464.2	460.3	451.5
35°	454.5	453.5	449.6	449.6	441.8	442.8	438.9	432.0	423.3	417.4	410.6
37.5°	407.6	406.7	402.8	403.7	396.9	396.9	394.0	387.2	380.3	377.4	368.6
40°	361.8	360.8	356.0	358.9	353.0	351.1	350.1	345.2	337.4	333.5	328.7
42.5°	319.9	320.9	316.0	317.9	313.0	311.1	310.1	306.2	300.4	296.5	291.6
45°	287.7	285.7	283.8	283.8	278.9	277.9	277.0	272.1	268.2	264.3	259.4
47.5°	257.5	255.5	253.6	254.5	250.6	249.7	247.7	243.8	238.9	237.0	232.1
50°	233.1	232.1	229.2	229.2	225.3	224.3	222.4	219.4	214.6	211.6	207.7
52.5°	210.6	210.6	207.7	206.7	203.8	202.8	201.9	198.0	194.1	190.2	186.3
55°	191.1	190.2	188.2	188.2	184.3	183.3	182.4	178.5	174.6	171.6	167.7
57.5°	172.6	172.6	170.7	170.7	167.7	165.8	165.8	161.9	157.0	155.1	150.2
60°	156.0	156.0	154.1	154.1	151.2	151.2	149.2	145.3	142.4	138.5	134.6
62.5°	140.4	141.4	139.5	138.5	135.6	134.6	134.6	131.7	126.8	123.9	120.0
65°	126.8	125.8	124.8	123.9	120.9	120.0	120.0	116.1	113.1	109.2	106.3
67.5°	112.2	112.2	110.2	110.2	108.3	107.3	105.3	102.4	99.5	96.5	93.6
70°	98.5	98.5	97.5	97.5	94.6	93.6	92.6	89.7	86.8	83.9	80.0
72.5°	85.8	84.8	83.9	83.9	81.9	80.9	80.0	77.0	74.1	71.2	68.3
75°	72.2	72.2	71.2	71.2	69.2	68.3	68.3	66.3	62.4	60.5	56.6
77.5°	60.5	60.5	59.5	59.5	57.5	57.5	56.6	53.6	51.7	48.8	46.8
80°	48.8	47.8	47.8	46.8	44.9	44.9	43.9	42.9	40.0	38.0	35.1
82.5°	34.1	34.1	34.1	33.2	32.2	32.2	31.2	29.3	27.3	26.3	23.4
85°	20.5	20.5	19.5	18.5	19.5	18.5	17.6	16.6	15.6	14.6	13.7
87.5°	8.8	8.8	7.8	7.8	7.8	7.8	7.8	6.8	5.9	5.9	4.9
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9
2.5°	634.9	637.8	636.8	635.9	633.9	633.9	633.9	632.9	633.9	633.9	631.9
5°	634.9	636.8	635.9	633.9	631.9	631.9	631.0	629.0	629.0	629.0	625.1
7.5°	631.9	633.9	631.0	629.0	627.1	625.1	625.1	622.2	622.2	621.2	617.3
10°	626.1	627.1	623.2	621.2	618.3	617.3	615.4	611.5	610.5	609.5	605.6
12.5°	617.3	618.3	613.4	609.5	605.6	604.6	602.7	597.8	595.9	593.9	589.0
15°	604.6	604.6	598.8	593.9	590.0	589.0	584.2	579.3	577.3	575.4	568.6
17.5°	590.0	589.0	581.2	576.4	571.5	569.5	564.7	558.8	554.9	553.0	547.1
20°	574.4	571.5	562.7	557.8	552.0	549.1	544.2	536.4	532.5	528.6	522.7
22.5°	555.9	552.0	542.2	535.4	529.6	526.6	519.8	513.0	507.1	503.2	496.4
25°	533.5	528.6	517.8	509.1	504.2	501.3	494.4	486.6	480.8	474.9	469.1
27.5°	507.1	501.3	490.5	481.8	476.9	472.0	467.1	458.4	453.5	448.6	441.8
30°	474.9	468.1	458.4	450.6	444.7	440.8	435.0	427.2	421.3	418.4	411.5
32.5°	439.8	432.0	423.3	415.4	412.5	407.6	402.8	395.0	390.1	387.2	382.3
35°	400.8	395.0	385.2	379.4	374.5	372.5	368.6	360.8	358.9	356.0	350.1
37.5°	359.9	355.0	348.2	343.3	339.4	337.4	333.5	328.7	325.7	322.8	319.9
40°	321.8	317.9	312.1	308.2	303.3	300.4	300.4	294.5	292.6	292.6	289.6
42.5°	284.8	282.8	277.9	272.1	271.1	268.2	267.2	264.3	262.3	261.4	260.4
45°	253.6	250.6	245.8	242.8	239.9	239.9	237.0	234.1	233.1	232.1	231.1
47.5°	226.3	222.4	218.5	215.5	213.6	212.6	209.7	207.7	206.7	206.7	205.8
50°	201.9	198.9	195.0	192.1	190.2	188.2	186.3	184.3	183.3	182.4	182.4
52.5°	181.4	177.5	173.6	170.7	167.7	166.8	164.8	162.9	161.9	160.9	159.9
55°	162.9	159.9	155.1	152.1	149.2	149.2	146.3	143.4	141.4	140.4	139.5
57.5°	145.3	142.4	137.5	134.6	132.6	130.7	128.7	126.8	124.8	122.9	120.9
60°	129.7	126.8	121.9	118.0	117.0	115.1	113.1	109.2	107.3	105.3	103.4
62.5°	115.1	111.2	107.3	103.4	102.4	100.4	97.5	94.6	91.7	89.7	86.8
65°	101.4	98.5	93.6	90.7	87.8	86.8	83.9	80.0	77.0	75.1	72.2
67.5°	88.7	84.8	80.0	77.0	75.1	73.1	70.2	67.3	64.4	61.4	58.5
70°	76.1	73.1	68.3	65.3	63.4	61.4	58.5	54.6	51.7	48.8	46.8
72.5°	64.4	60.5	56.6	53.6	51.7	49.7	46.8	43.9	41.0	39.0	36.1
75°	53.6	49.7	46.8	42.9	41.9	40.0	37.1	34.1	31.2	29.3	27.3
77.5°	42.9	40.0	36.1	34.1	32.2	30.2	28.3	25.4	23.4	20.5	18.5
80°	32.2	29.3	26.3	24.4	22.4	21.5	19.5	17.6	15.6	13.7	12.7
82.5°	21.5	19.5	16.6	15.6	14.6	13.7	11.7	10.7	9.8	8.8	7.8
85°	11.7	10.7	9.8	7.8	7.8	6.8	5.9	5.9	4.9	4.9	3.9
87.5°	4.9	3.9	3.9	2.9	2.9	2.9	2.0	2.0	2.0	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9
2.5°	632.9	629.0	629.0	629.0	626.1	627.1	628.0	629.0	628.0	625.1	628.0
5°	626.1	622.2	622.2	620.2	618.3	618.3	618.3	619.3	618.3	615.4	616.3
7.5°	617.3	612.4	611.5	609.5	607.6	606.6	606.6	606.6	605.6	601.7	603.7
10°	603.7	598.8	596.8	595.9	592.9	592.0	591.0	590.0	589.0	585.1	587.1
12.5°	587.1	583.2	579.3	578.3	575.4	573.4	572.5	572.5	570.5	566.6	568.6
15°	567.6	561.7	558.8	556.9	553.9	552.0	550.0	551.0	550.0	546.1	547.1
17.5°	544.2	538.3	535.4	534.4	530.5	528.6	527.6	527.6	526.6	522.7	523.7
20°	518.8	513.0	511.0	509.1	507.1	505.2	504.2	503.2	502.2	498.3	501.3
22.5°	493.5	486.6	483.7	483.7	479.8	478.8	477.9	478.8	477.9	474.0	475.9
25°	467.1	460.3	458.4	455.4	453.5	452.5	452.5	452.5	451.5	449.6	451.5
27.5°	437.9	433.0	430.1	429.1	427.2	426.2	425.2	426.2	426.2	423.3	425.2
30°	408.6	404.7	402.8	401.8	398.9	397.9	398.9	398.9	398.9	395.9	398.9
32.5°	379.4	376.4	375.5	372.5	370.6	370.6	370.6	371.6	370.6	368.6	371.6
35°	350.1	346.2	345.2	344.3	344.3	342.3	344.3	343.3	345.2	342.3	344.3
37.5°	318.9	316.9	316.0	316.0	314.0	315.0	315.0	315.0	316.9	314.0	316.0
40°	289.6	287.7	287.7	287.7	286.7	286.7	286.7	287.7	288.7	286.7	288.7
42.5°	260.4	259.4	259.4	258.4	257.5	258.4	259.4	259.4	260.4	258.4	259.4
45°	232.1	231.1	232.1	231.1	231.1	230.2	231.1	232.1	232.1	231.1	231.1
47.5°	205.8	205.8	204.8	204.8	204.8	204.8	204.8	204.8	204.8	202.8	204.8
50°	182.4	180.4	181.4	180.4	180.4	179.4	179.4	178.5	177.5	176.5	176.5
52.5°	159.9	158.0	158.0	157.0	156.0	156.0	155.1	154.1	153.1	151.2	151.2
55°	138.5	136.5	135.6	134.6	133.6	132.6	131.7	130.7	128.7	127.8	127.8
57.5°	119.0	117.0	115.1	115.1	113.1	112.2	110.2	108.3	107.3	105.3	105.3
60°	101.4	99.5	96.5	95.6	94.6	92.6	89.7	88.7	87.8	85.8	86.8
62.5°	84.8	81.9	79.0	78.0	77.0	75.1	73.1	71.2	70.2	71.2	71.2
65°	69.2	66.3	64.4	62.4	61.4	59.5	58.5	57.5	57.5	57.5	58.5
67.5°	55.6	52.7	50.7	49.7	47.8	46.8	46.8	46.8	46.8	46.8	46.8
70°	43.9	41.9	40.0	38.0	38.0	37.1	37.1	37.1	37.1	37.1	37.1
72.5°	33.2	31.2	30.2	30.2	29.3	29.3	29.3	29.3	28.3	28.3	29.3
75°	24.4	23.4	22.4	22.4	22.4	21.5	21.5	21.5	21.5	21.5	21.5
77.5°	17.6	16.6	16.6	15.6	15.6	15.6	15.6	15.6	15.6	14.6	14.6
80°	11.7	10.7	10.7	10.7	10.7	9.8	9.8	9.8	9.8	9.8	9.8
82.5°	6.8	6.8	6.8	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
85°	3.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	633.9	633.9	633.9	633.9	633.9	633.9	633.9	633.9
2.5°	622.2	626.1	627.1	624.1	625.1	623.2	624.1	622.2
5°	611.5	614.4	615.4	613.4	613.4	611.5	612.4	610.5
7.5°	597.8	600.7	601.7	599.8	599.8	597.8	597.8	596.8
10°	582.2	583.2	585.1	582.2	583.2	581.2	581.2	579.3
12.5°	562.7	564.7	566.6	563.7	563.7	562.7	562.7	559.8
15°	542.2	544.2	545.2	543.2	543.2	542.2	541.3	540.3
17.5°	520.8	521.7	523.7	520.8	522.7	520.8	520.8	518.8
20°	496.4	499.3	500.3	497.4	498.3	497.4	497.4	497.4
22.5°	473.0	474.9	475.9	474.0	474.9	473.0	474.0	472.0
25°	448.6	449.6	450.6	448.6	450.6	449.6	448.6	448.6
27.5°	423.3	424.2	425.2	423.3	425.2	424.2	425.2	423.3
30°	395.9	397.9	399.8	397.9	398.9	397.9	397.9	396.9
32.5°	368.6	370.6	372.5	370.6	372.5	370.6	371.6	369.6
35°	343.3	344.3	345.2	343.3	344.3	344.3	344.3	343.3
37.5°	315.0	316.9	316.9	316.0	317.9	316.9	316.9	315.0
40°	287.7	288.7	289.6	287.7	288.7	287.7	288.7	287.7
42.5°	259.4	261.4	262.3	260.4	260.4	260.4	259.4	260.4
45°	230.2	232.1	234.1	231.1	232.1	232.1	232.1	231.1
47.5°	203.8	203.8	204.8	203.8	204.8	202.8	204.8	203.8
50°	176.5	176.5	178.5	176.5	176.5	176.5	176.5	176.5
52.5°	150.2	151.2	151.2	149.2	150.2	149.2	150.2	149.2
55°	125.8	125.8	126.8	125.8	125.8	125.8	125.8	125.8
57.5°	104.3	105.3	105.3	104.3	105.3	104.3	104.3	104.3
60°	86.8	86.8	86.8	85.8	86.8	85.8	86.8	85.8
62.5°	70.2	71.2	71.2	70.2	71.2	70.2	70.2	70.2
65°	57.5	57.5	57.5	57.5	57.5	57.5	57.5	56.6
67.5°	45.8	45.8	46.8	45.8	46.8	46.8	46.8	46.8
70°	37.1	37.1	37.1	37.1	37.1	37.1	37.1	37.1
72.5°	28.3	28.3	29.3	28.3	28.3	28.3	28.3	28.3
75°	21.5	21.5	21.5	21.5	21.5	20.5	20.5	21.5
77.5°	14.6	14.6	14.6	14.6	14.6	14.6	14.6	15.6
80°	9.8	9.8	9.8	9.8	8.8	8.8	9.8	8.8
82.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
85°	2.9	2.9	2.0	2.0	2.0	2.0	2.0	2.0
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)