

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: P226239

Luminaire Tested: **LD2B05D010 EU2B05WW9040 2LBSW***

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P226239
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 EU2B05WW9040 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: 470.1 lumens
Efficiency: N/A
Efficacy: 64.4 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

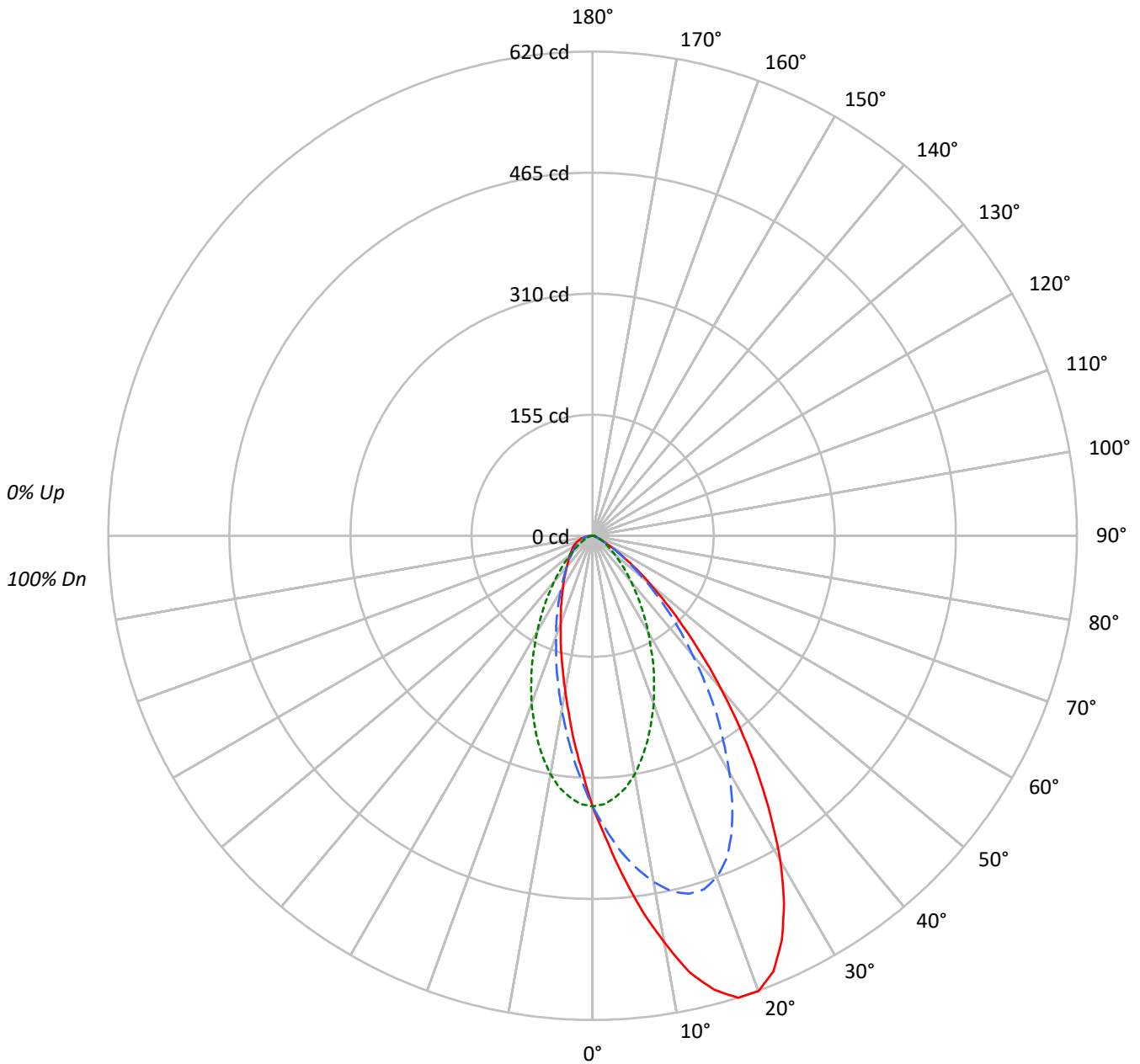
Input Watts (W): 7.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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°	134177	134177	134177
5°	169139	130607	103389
10°	207792	122008	79333
15°	241328	108954	62197
20°	255732	94230	49052
25°	244723	78768	40388
30°	214913	63646	33903
35°	173162	50171	29223
40°	129142	38935	25940
45°	89454	29362	23610
50°	57609	21814	22477
55°	33833	16545	22083
60°	18050	13557	22621
65°	8524	10724	22455
70°	3964	9287	22424
75°	5238	8680	24394
80°	5130	7807	23422
85°	5333	10222	20888



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.7	7.0
10°-20°	91.3	19.4
20°-30°	119.2	25.3
30°-40°	103.2	21.9
40°-50°	65.3	13.9
50°-60°	32.7	7.0
60°-70°	15.1	3.2
70°-80°	8.1	1.7
80°-90°	2.6	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°	243.2	51.7
0°-40°	346.4	73.7
0°-60°	444.4	94.5
0°-90°	470.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	470.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	346	346	346	346	346	
5°	435	405	336	284	266	44
15°	602	475	272	177	155	169
25°	573	421	184	106	94	259
35°	366	275	106	64	62	228
45°	163	136	54	42	43	128
55°	50	47	24	28	33	48
65°	9	10	12	20	24	11
75°	4	4	6	12	16	3
85°	1	1	2	4	5	1
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°	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4
2.5°	387.2	389.5	389.5	390.7	386.0	387.2	387.2	384.8	381.3	379.0	375.5
5°	435.0	435.0	433.8	435.0	431.5	429.2	430.3	425.7	416.3	411.7	404.7
7.5°	484.0	481.6	481.6	480.5	474.6	471.1	470.0	461.8	449.0	439.7	429.2
10°	528.3	528.3	525.9	523.6	515.5	510.8	507.3	494.5	480.5	465.3	450.1
12.5°	572.6	570.3	566.8	562.1	550.4	545.8	539.9	524.8	503.8	486.3	466.5
15°	601.8	602.9	597.1	591.3	578.4	571.4	564.4	545.8	521.3	499.1	474.6
17.5°	620.4	619.2	613.4	606.4	592.4	584.3	576.1	553.9	528.3	501.5	474.6
20°	620.4	620.4	613.4	606.4	591.3	581.9	573.8	550.4	522.5	494.5	465.3
22.5°	604.1	601.8	597.1	590.1	574.9	566.8	557.4	534.1	505.0	478.1	447.8
25°	572.6	572.6	566.8	558.6	545.8	536.4	528.3	505.0	477.0	450.1	421.0
27.5°	530.6	529.4	523.6	517.8	503.8	496.8	488.6	466.5	442.0	417.5	387.2
30°	480.5	478.1	475.8	466.5	457.1	451.3	444.3	424.5	400.0	376.7	349.9
32.5°	423.3	426.8	421.0	415.2	407.0	401.2	395.3	380.2	358.0	337.0	311.4
35°	366.2	368.5	365.0	360.4	352.2	348.7	342.9	330.0	313.7	293.9	275.2
37.5°	309.0	309.0	309.0	305.5	300.9	297.4	293.9	282.2	268.2	253.1	235.6
40°	255.4	258.9	254.2	253.1	249.6	248.4	244.9	236.7	225.1	214.6	198.3
42.5°	206.4	206.4	207.6	205.2	204.1	201.7	199.4	194.8	186.6	177.3	166.8
45°	163.3	164.4	165.6	162.1	162.1	162.1	160.9	156.3	149.3	143.4	136.4
47.5°	127.1	127.1	128.3	127.1	127.1	127.1	124.8	124.8	120.1	114.3	108.5
50°	95.6	96.8	98.0	98.0	98.0	96.8	96.8	94.5	92.1	89.8	84.0
52.5°	72.3	72.3	71.1	72.3	72.3	72.3	72.3	71.1	70.0	67.6	64.1
55°	50.1	50.1	51.3	51.3	51.3	52.5	52.5	52.5	51.3	50.1	46.6
57.5°	35.0	35.0	35.0	36.2	37.3	37.3	37.3	37.3	36.2	35.0	33.8
60°	23.3	23.3	23.3	24.5	24.5	24.5	24.5	25.7	24.5	24.5	23.3
62.5°	15.2	15.2	15.2	15.2	15.2	16.3	16.3	16.3	16.3	16.3	15.2
65°	9.3	9.3	9.3	9.3	9.3	9.3	10.5	10.5	10.5	10.5	10.5
67.5°	5.8	5.8	5.8	5.8	5.8	7.0	7.0	7.0	7.0	7.0	7.0
70°	3.5	3.5	3.5	3.5	4.7	4.7	4.7	4.7	4.7	4.7	4.7
72.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
75°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
77.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.5	3.5	3.5
80°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
82.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3	2.3	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



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4
2.5°	375.5	370.8	368.5	362.7	361.5	356.9	356.9	352.2	346.4	344.0	338.2
5°	400.0	390.7	386.0	375.5	372.0	365.0	361.5	352.2	342.9	335.9	327.7
7.5°	421.0	407.0	397.7	383.7	377.8	367.3	360.4	348.7	335.9	325.4	313.7
10°	437.3	418.7	404.7	386.0	379.0	366.2	355.7	339.4	323.0	310.2	296.2
12.5°	447.8	425.7	405.8	383.7	374.3	360.4	345.2	326.5	307.9	291.5	276.4
15°	452.5	425.7	402.3	375.5	365.0	349.9	332.4	310.2	289.2	271.7	255.4
17.5°	449.0	417.5	393.0	362.7	351.0	333.5	313.7	290.4	268.2	249.6	233.2
20°	437.3	404.7	376.7	345.2	332.4	314.9	292.7	269.4	247.2	228.6	211.1
22.5°	417.5	383.7	354.5	323.0	310.2	292.7	269.4	246.1	223.9	205.2	188.9
25°	393.0	356.9	327.7	297.4	283.4	268.2	244.9	221.6	200.6	184.3	167.9
27.5°	360.4	328.9	299.7	269.4	256.6	242.6	219.2	198.3	177.3	160.9	146.9
30°	325.4	295.0	270.6	241.4	229.7	215.7	195.9	174.9	157.4	142.3	129.4
32.5°	290.4	261.2	237.9	213.4	202.9	188.9	171.4	152.8	136.4	123.6	113.1
35°	254.2	229.7	207.6	184.3	176.1	164.4	148.1	131.8	117.8	106.1	95.6
37.5°	218.1	198.3	178.4	159.8	150.4	141.1	125.9	112.0	99.1	89.8	81.6
40°	185.4	167.9	151.6	134.1	125.9	119.0	106.1	94.5	85.1	77.0	70.0
42.5°	153.9	139.9	125.9	112.0	105.0	99.1	88.6	78.1	70.0	64.1	58.3
45°	125.9	115.5	103.8	91.0	87.5	80.5	72.3	65.3	58.3	53.6	49.0
47.5°	101.5	92.1	82.8	73.5	70.0	65.3	58.3	52.5	47.8	44.3	40.8
50°	79.3	72.3	66.5	58.3	56.0	51.3	46.6	42.0	38.5	36.2	33.8
52.5°	60.6	54.8	50.1	45.5	43.1	40.8	36.2	33.8	31.5	30.3	29.2
55°	44.3	40.8	37.3	33.8	32.7	30.3	28.0	25.7	24.5	24.5	24.5
57.5°	31.5	29.2	26.8	24.5	24.5	23.3	22.2	21.0	19.8	19.8	19.8
60°	22.2	21.0	19.8	18.7	17.5	17.5	16.3	17.5	16.3	17.5	17.5
62.5°	15.2	14.0	14.0	12.8	12.8	12.8	12.8	12.8	14.0	14.0	15.2
65°	9.3	9.3	9.3	9.3	9.3	9.3	10.5	10.5	10.5	11.7	11.7
67.5°	7.0	7.0	7.0	8.2	8.2	8.2	8.2	9.3	9.3	9.3	10.5
70°	4.7	5.8	5.8	5.8	5.8	5.8	7.0	7.0	7.0	8.2	8.2
72.5°	4.7	4.7	4.7	4.7	4.7	4.7	5.8	5.8	5.8	7.0	7.0
75°	3.5	4.7	4.7	4.7	4.7	4.7	4.7	5.8	5.8	5.8	7.0
77.5°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.7	4.7	4.7	4.7
80°	2.3	2.3	2.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.7
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	3.5
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	2.3	1.2	2.3	2.3
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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4
2.5°	335.9	332.4	333.5	326.5	327.7	323.0	320.7	317.2	314.9	311.4	312.5
5°	321.9	316.0	313.7	305.5	306.7	299.7	295.0	289.2	284.5	278.7	277.6
7.5°	304.4	295.0	291.5	283.4	282.2	272.9	267.1	260.1	254.2	248.4	246.1
10°	284.5	274.1	267.1	258.9	257.7	247.2	240.2	233.2	226.2	220.4	218.1
12.5°	263.6	251.9	243.7	234.4	232.1	222.7	214.6	207.6	200.6	194.8	191.3
15°	241.4	228.6	220.4	211.1	208.7	198.3	191.3	183.1	177.3	171.4	169.1
17.5°	219.2	206.4	197.1	188.9	186.6	176.1	167.9	162.1	155.1	151.6	148.1
20°	197.1	184.3	174.9	167.9	164.4	156.3	148.1	142.3	136.4	132.9	129.4
22.5°	174.9	163.3	155.1	148.1	145.8	137.6	130.6	124.8	121.3	116.6	114.3
25°	155.1	143.4	136.4	129.4	127.1	120.1	115.5	109.6	106.1	102.6	100.3
27.5°	136.4	125.9	119.0	113.1	112.0	106.1	100.3	96.8	93.3	91.0	89.8
30°	117.8	109.6	103.8	99.1	98.0	92.1	87.5	85.1	81.6	80.5	79.3
32.5°	103.8	95.6	91.0	86.3	85.1	80.5	78.1	74.6	72.3	71.1	71.1
35°	88.6	82.8	78.1	75.8	74.6	71.1	67.6	66.5	64.1	63.0	63.0
37.5°	75.8	71.1	67.6	64.1	64.1	61.8	59.5	58.3	57.1	57.1	56.0
40°	65.3	60.6	59.5	57.1	56.0	54.8	53.6	52.5	51.3	51.3	51.3
42.5°	54.8	52.5	50.1	49.0	49.0	47.8	46.6	46.6	45.5	46.6	46.6
45°	46.6	44.3	43.1	42.0	43.1	42.0	42.0	40.8	42.0	42.0	42.0
47.5°	39.7	38.5	37.3	37.3	37.3	37.3	37.3	37.3	37.3	38.5	38.5
50°	33.8	32.7	32.7	32.7	32.7	32.7	33.8	33.8	33.8	35.0	35.0
52.5°	28.0	28.0	28.0	28.0	29.2	29.2	30.3	30.3	31.5	31.5	32.7
55°	24.5	24.5	24.5	24.5	25.7	25.7	26.8	28.0	28.0	29.2	30.3
57.5°	21.0	21.0	22.2	22.2	23.3	23.3	24.5	25.7	25.7	26.8	28.0
60°	17.5	18.7	19.8	19.8	19.8	21.0	22.2	23.3	23.3	24.5	25.7
62.5°	15.2	16.3	17.5	17.5	17.5	18.7	19.8	21.0	21.0	22.2	23.3
65°	12.8	14.0	15.2	15.2	15.2	16.3	17.5	18.7	19.8	19.8	21.0
67.5°	11.7	11.7	12.8	12.8	14.0	15.2	15.2	16.3	17.5	18.7	19.8
70°	9.3	10.5	11.7	11.7	11.7	12.8	14.0	15.2	15.2	16.3	17.5
72.5°	8.2	8.2	9.3	9.3	10.5	11.7	11.7	12.8	14.0	14.0	15.2
75°	7.0	8.2	8.2	8.2	9.3	9.3	10.5	11.7	11.7	12.8	12.8
77.5°	5.8	5.8	7.0	7.0	7.0	8.2	8.2	9.3	9.3	10.5	10.5
80°	4.7	4.7	5.8	5.8	5.8	5.8	7.0	7.0	8.2	8.2	8.2
82.5°	3.5	3.5	3.5	3.5	4.7	4.7	4.7	4.7	5.8	5.8	5.8
85°	2.3	2.3	2.3	2.3	2.3	3.5	3.5	3.5	3.5	3.5	4.7
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



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CATALOG NUMBER: LD2B05D010 EU2B05WW9040 2LBSW*

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	346.4	346.4	346.4	346.4	346.4	346.4	346.4	346.4
2.5°	309.0	309.0	307.9	306.7	305.5	304.4	303.2	302.0
5°	274.1	275.2	270.6	269.4	269.4	267.1	268.2	265.9
7.5°	241.4	241.4	237.9	236.7	235.6	233.2	232.1	230.9
10°	212.2	211.1	208.7	207.6	205.2	204.1	204.1	201.7
12.5°	186.6	185.4	183.1	181.9	179.6	178.4	177.3	176.1
15°	164.4	163.3	160.9	159.8	158.6	156.3	156.3	155.1
17.5°	143.4	142.3	141.1	138.8	138.8	136.4	135.3	135.3
20°	127.1	125.9	123.6	122.4	122.4	121.3	121.3	119.0
22.5°	112.0	110.8	109.6	108.5	108.5	107.3	106.1	106.1
25°	99.1	98.0	96.8	96.8	95.6	94.5	94.5	94.5
27.5°	87.5	87.5	86.3	86.3	86.3	85.1	85.1	84.0
30°	78.1	78.1	77.0	77.0	77.0	75.8	77.0	75.8
32.5°	70.0	70.0	70.0	70.0	70.0	68.8	68.8	68.8
35°	63.0	63.0	63.0	63.0	63.0	61.8	63.0	61.8
37.5°	56.0	57.1	56.0	56.0	57.1	56.0	56.0	56.0
40°	51.3	51.3	51.3	51.3	51.3	51.3	51.3	51.3
42.5°	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6
45°	42.0	43.1	43.1	43.1	43.1	43.1	43.1	43.1
47.5°	39.7	39.7	39.7	39.7	40.8	39.7	40.8	40.8
50°	36.2	36.2	36.2	37.3	37.3	37.3	37.3	37.3
52.5°	33.8	33.8	33.8	33.8	35.0	35.0	35.0	35.0
55°	30.3	31.5	31.5	31.5	32.7	32.7	32.7	32.7
57.5°	29.2	29.2	29.2	30.3	30.3	30.3	31.5	30.3
60°	26.8	26.8	28.0	28.0	28.0	29.2	29.2	29.2
62.5°	24.5	25.7	25.7	25.7	25.7	26.8	26.8	26.8
65°	22.2	23.3	23.3	23.3	24.5	24.5	24.5	24.5
67.5°	19.8	21.0	21.0	22.2	22.2	22.2	22.2	22.2
70°	17.5	18.7	18.7	18.7	19.8	19.8	19.8	19.8
72.5°	16.3	16.3	16.3	17.5	17.5	17.5	18.7	17.5
75°	14.0	15.2	15.2	15.2	15.2	15.2	16.3	16.3
77.5°	11.7	11.7	11.7	11.7	12.8	12.8	12.8	12.8
80°	9.3	9.3	9.3	9.3	10.5	10.5	10.5	10.5
82.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
85°	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
87.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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)