

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: P226280

Luminaire Tested: **LD2B20D010 EU2B20WW9727 2LBSW***

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P226280
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: LD2B20D010 EU2B20WW9727 2LBSW*
Description: 2000 Lumen, 2inch Portfolio LED Downlight
WALL WASH OPTIC
WALL WASH LENSED TRIM
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 926.5 lumens
Efficiency: N/A
Efficacy: 44.3 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

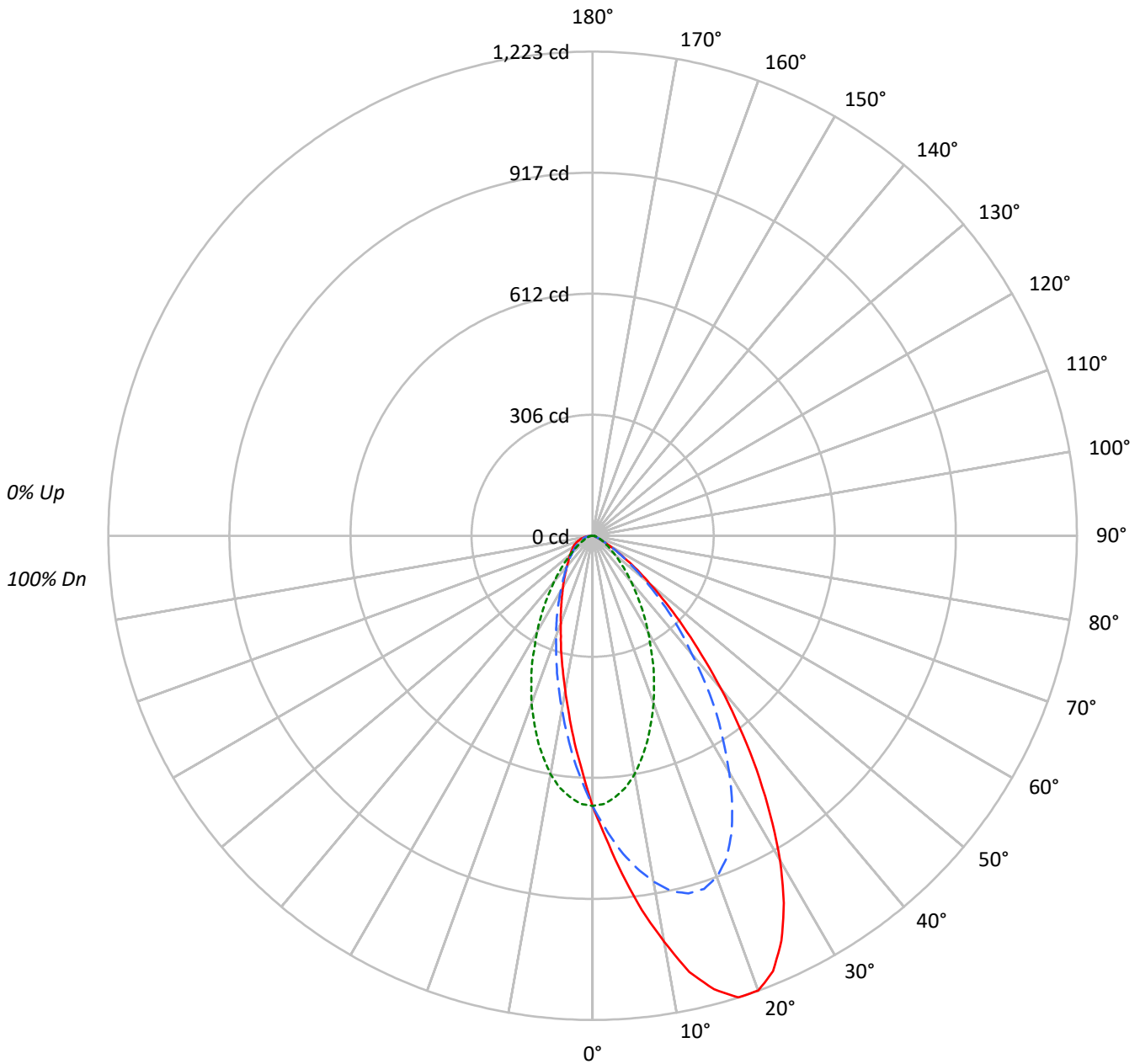
Input Watts (W): 20.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	264364	264364	264364
5°	333301	257364	203745
10°	409487	240437	156385
15°	475518	214741	122589
20°	503962	185657	96621
25°	482266	155185	79537
30°	423474	125414	66822
35°	341217	98875	57595
40°	254491	76706	51121
45°	176224	57901	46562
50°	113530	42905	44291
55°	66721	32618	43423
60°	35636	26727	44545
65°	16864	21080	44269
70°	7814	18234	44282
75°	10326	17211	48190
80°	10261	15391	46174
85°	10222	20444	40888



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.5	7.0
10°-20°	180.0	19.4
20°-30°	234.8	25.3
30°-40°	203.3	21.9
40°-50°	128.7	13.9
50°-60°	64.5	7.0
60°-70°	29.7	3.2
70°-80°	15.9	1.7
80°-90°	5.1	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°	479.3	51.7
0°-40°	682.6	73.7
0°-60°	875.7	94.5
0°-90°	926.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	926.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	682	682	682	682	682	
5°	857	798	662	561	524	87
15°	1186	935	536	349	306	334
25°	1128	830	363	209	186	511
35°	722	542	209	126	122	448
45°	322	269	106	83	85	253
55°	99	92	48	55	64	95
65°	18	21	23	39	48	21
75°	7	7	12	23	32	6
85°	2	2	5	7	9	2
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°	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5
2.5°	763.0	767.6	767.6	769.9	760.7	763.0	763.0	758.4	751.5	746.9	740.0
5°	857.2	857.2	854.9	857.2	850.3	845.7	848.0	838.8	820.4	811.2	797.5
7.5°	953.7	949.1	949.1	946.8	935.3	928.5	926.2	910.1	884.8	866.4	845.7
10°	1041.1	1041.1	1036.5	1031.9	1015.8	1006.6	999.7	974.4	946.8	917.0	887.1
12.5°	1128.4	1123.8	1116.9	1107.7	1084.7	1075.5	1064.0	1034.2	992.8	958.3	919.3
15°	1185.8	1188.1	1176.7	1165.2	1139.9	1126.1	1112.3	1075.5	1027.3	983.6	935.3
17.5°	1222.6	1220.3	1208.8	1195.0	1167.5	1151.4	1135.3	1091.6	1041.1	988.2	935.3
20°	1222.6	1222.6	1208.8	1195.0	1165.2	1146.8	1130.7	1084.7	1029.6	974.4	917.0
22.5°	1190.4	1185.8	1176.7	1162.9	1133.0	1116.9	1098.5	1052.6	995.1	942.2	882.5
25°	1128.4	1128.4	1116.9	1100.8	1075.5	1057.1	1041.1	995.1	939.9	887.1	829.6
27.5°	1045.7	1043.4	1031.9	1020.4	992.8	979.0	962.9	919.3	871.0	822.7	763.0
30°	946.8	942.2	937.6	919.3	900.9	889.4	875.6	836.5	788.3	742.3	689.4
32.5°	834.2	841.1	829.6	818.1	802.1	790.6	779.1	749.2	705.5	664.2	613.6
35°	721.6	726.2	719.3	710.1	694.0	687.1	675.7	650.4	618.2	579.1	542.4
37.5°	609.0	609.0	609.0	602.1	592.9	586.0	579.1	556.2	528.6	498.7	464.2
40°	503.3	510.2	501.0	498.7	491.8	489.5	482.6	466.5	443.5	422.9	390.7
42.5°	406.8	406.8	409.1	404.5	402.2	397.6	393.0	383.8	367.7	349.3	328.6
45°	321.7	324.0	326.3	319.4	319.4	319.4	317.1	308.0	294.2	282.7	268.9
47.5°	250.5	250.5	252.8	250.5	250.5	250.5	245.9	245.9	236.7	225.2	213.7
50°	188.4	190.7	193.0	193.0	193.0	190.7	190.7	186.1	181.6	177.0	165.5
52.5°	142.5	142.5	140.2	142.5	142.5	142.5	142.5	140.2	137.9	133.3	126.4
55°	98.8	98.8	101.1	101.1	101.1	103.4	103.4	103.4	101.1	98.8	91.9
57.5°	68.9	68.9	68.9	71.2	73.5	73.5	73.5	73.5	71.2	68.9	66.6
60°	46.0	46.0	46.0	48.3	48.3	48.3	48.3	50.6	48.3	48.3	46.0
62.5°	29.9	29.9	29.9	29.9	29.9	32.2	32.2	32.2	32.2	32.2	29.9
65°	18.4	18.4	18.4	18.4	18.4	18.4	20.7	20.7	20.7	20.7	20.7
67.5°	11.5	11.5	11.5	11.5	11.5	13.8	13.8	13.8	13.8	13.8	13.8
70°	6.9	6.9	6.9	6.9	9.2	9.2	9.2	9.2	9.2	9.2	9.2
72.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
75°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
77.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	6.9	6.9	6.9
80°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
82.5°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	4.6	4.6	2.3
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
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°	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5
2.5°	740.0	730.8	726.2	714.7	712.4	703.2	703.2	694.0	682.5	678.0	666.5
5°	788.3	769.9	760.7	740.0	733.1	719.3	712.4	694.0	675.7	661.9	645.8
7.5°	829.6	802.1	783.7	756.1	744.6	723.9	710.1	687.1	661.9	641.2	618.2
10°	861.8	825.0	797.5	760.7	746.9	721.6	700.9	668.8	636.6	611.3	583.7
12.5°	882.5	838.8	799.8	756.1	737.7	710.1	680.3	643.5	606.7	574.5	544.7
15°	891.7	838.8	792.9	740.0	719.3	689.4	655.0	611.3	569.9	535.5	503.3
17.5°	884.8	822.7	774.5	714.7	691.7	657.3	618.2	572.2	528.6	491.8	459.6
20°	861.8	797.5	742.3	680.3	655.0	620.5	576.8	530.9	487.2	450.4	416.0
22.5°	822.7	756.1	698.6	636.6	611.3	576.8	530.9	484.9	441.2	404.5	372.3
25°	774.5	703.2	645.8	586.0	558.4	528.6	482.6	436.6	395.3	363.1	330.9
27.5°	710.1	648.1	590.6	530.9	505.6	478.0	432.1	390.7	349.3	317.1	289.6
30°	641.2	581.4	533.2	475.7	452.7	425.2	386.1	344.7	310.2	280.4	255.1
32.5°	572.2	514.8	468.8	420.6	399.9	372.3	337.8	301.1	268.9	243.6	222.9
35°	501.0	452.7	409.1	363.1	347.0	324.0	291.9	259.7	232.1	209.1	188.4
37.5°	429.8	390.7	351.6	314.8	296.5	278.1	248.2	220.6	195.3	177.0	160.9
40°	365.4	330.9	298.8	264.3	248.2	234.4	209.1	186.1	167.8	151.7	137.9
42.5°	303.4	275.8	248.2	220.6	206.8	195.3	174.7	154.0	137.9	126.4	114.9
45°	248.2	227.5	204.5	179.3	172.4	158.6	142.5	128.7	114.9	105.7	96.5
47.5°	199.9	181.6	163.2	144.8	137.9	128.7	114.9	103.4	94.2	87.3	80.4
50°	156.3	142.5	131.0	114.9	110.3	101.1	91.9	82.7	75.8	71.2	66.6
52.5°	119.5	108.0	98.8	89.6	85.0	80.4	71.2	66.6	62.0	59.8	57.5
55°	87.3	80.4	73.5	66.6	64.3	59.8	55.2	50.6	48.3	48.3	48.3
57.5°	62.0	57.5	52.9	48.3	48.3	46.0	43.7	41.4	39.1	39.1	39.1
60°	43.7	41.4	39.1	36.8	34.5	34.5	32.2	34.5	32.2	34.5	34.5
62.5°	29.9	27.6	27.6	25.3	25.3	25.3	25.3	25.3	27.6	27.6	29.9
65°	18.4	18.4	18.4	18.4	18.4	18.4	20.7	20.7	20.7	23.0	23.0
67.5°	13.8	13.8	13.8	16.1	16.1	16.1	16.1	18.4	18.4	18.4	20.7
70°	9.2	11.5	11.5	11.5	11.5	11.5	13.8	13.8	13.8	16.1	16.1
72.5°	9.2	9.2	9.2	9.2	9.2	9.2	11.5	11.5	11.5	13.8	13.8
75°	6.9	9.2	9.2	9.2	9.2	9.2	9.2	11.5	11.5	11.5	13.8
77.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	9.2	9.2	9.2	9.2
80°	4.6	4.6	4.6	6.9	6.9	6.9	6.9	6.9	6.9	6.9	9.2
82.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	6.9
85°	2.3	2.3	2.3	2.3	2.3	2.3	2.3	4.6	2.3	4.6	4.6
87.5°	0.0	0.0	0.0	2.3	0.0	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	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°	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5
2.5°	661.9	655.0	657.3	643.5	645.8	636.6	632.0	625.1	620.5	613.6	615.9
5°	634.3	622.8	618.2	602.1	604.4	590.6	581.4	569.9	560.7	549.3	547.0
7.5°	599.8	581.4	574.5	558.4	556.2	537.8	526.3	512.5	501.0	489.5	484.9
10°	560.7	540.1	526.3	510.2	507.9	487.2	473.4	459.6	445.8	434.3	429.8
12.5°	519.4	496.4	480.3	461.9	457.3	438.9	422.9	409.1	395.3	383.8	376.9
15°	475.7	450.4	434.3	416.0	411.4	390.7	376.9	360.8	349.3	337.8	333.2
17.5°	432.1	406.8	388.4	372.3	367.7	347.0	330.9	319.4	305.7	298.8	291.9
20°	388.4	363.1	344.7	330.9	324.0	308.0	291.9	280.4	268.9	262.0	255.1
22.5°	344.7	321.7	305.7	291.9	287.3	271.2	257.4	245.9	239.0	229.8	225.2
25°	305.7	282.7	268.9	255.1	250.5	236.7	227.5	216.0	209.1	202.2	197.6
27.5°	268.9	248.2	234.4	222.9	220.6	209.1	197.6	190.7	183.9	179.3	177.0
30°	232.1	216.0	204.5	195.3	193.0	181.6	172.4	167.8	160.9	158.6	156.3
32.5°	204.5	188.4	179.3	170.1	167.8	158.6	154.0	147.1	142.5	140.2	140.2
35°	174.7	163.2	154.0	149.4	147.1	140.2	133.3	131.0	126.4	124.1	124.1
37.5°	149.4	140.2	133.3	126.4	126.4	121.8	117.2	114.9	112.6	112.6	110.3
40°	128.7	119.5	117.2	112.6	110.3	108.0	105.7	103.4	101.1	101.1	101.1
42.5°	108.0	103.4	98.8	96.5	96.5	94.2	91.9	91.9	89.6	91.9	91.9
45°	91.9	87.3	85.0	82.7	85.0	82.7	82.7	80.4	82.7	82.7	82.7
47.5°	78.1	75.8	73.5	73.5	73.5	73.5	73.5	73.5	73.5	75.8	75.8
50°	66.6	64.3	64.3	64.3	64.3	64.3	66.6	66.6	66.6	68.9	68.9
52.5°	55.2	55.2	55.2	55.2	57.5	57.5	59.8	59.8	62.0	62.0	64.3
55°	48.3	48.3	48.3	48.3	50.6	50.6	52.9	55.2	55.2	57.5	59.8
57.5°	41.4	41.4	43.7	43.7	46.0	46.0	48.3	50.6	50.6	52.9	55.2
60°	34.5	36.8	39.1	39.1	39.1	41.4	43.7	46.0	46.0	48.3	50.6
62.5°	29.9	32.2	34.5	34.5	34.5	36.8	39.1	41.4	41.4	43.7	46.0
65°	25.3	27.6	29.9	29.9	29.9	32.2	34.5	36.8	39.1	39.1	41.4
67.5°	23.0	23.0	25.3	25.3	27.6	29.9	29.9	32.2	34.5	36.8	39.1
70°	18.4	20.7	23.0	23.0	23.0	25.3	27.6	29.9	29.9	32.2	34.5
72.5°	16.1	16.1	18.4	18.4	20.7	23.0	23.0	25.3	27.6	27.6	29.9
75°	13.8	16.1	16.1	16.1	18.4	18.4	20.7	23.0	23.0	25.3	25.3
77.5°	11.5	11.5	13.8	13.8	13.8	16.1	16.1	18.4	18.4	20.7	20.7
80°	9.2	9.2	11.5	11.5	11.5	11.5	13.8	13.8	16.1	16.1	16.1
82.5°	6.9	6.9	6.9	6.9	9.2	9.2	9.2	9.2	11.5	11.5	11.5
85°	4.6	4.6	4.6	4.6	4.6	6.9	6.9	6.9	6.9	6.9	9.2
87.5°	2.3	2.3	2.3	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	0.0	0.0	0.0



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CATALOG NUMBER: LD2B20D010 EU2B20WW9727 2LBSW*

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	682.5	682.5	682.5	682.5	682.5	682.5	682.5	682.5
2.5°	609.0	609.0	606.7	604.4	602.1	599.8	597.5	595.2
5°	540.1	542.4	533.2	530.9	530.9	526.3	528.6	524.0
7.5°	475.7	475.7	468.8	466.5	464.2	459.6	457.3	455.0
10°	418.3	416.0	411.4	409.1	404.5	402.2	402.2	397.6
12.5°	367.7	365.4	360.8	358.5	353.9	351.6	349.3	347.0
15°	324.0	321.7	317.1	314.8	312.5	308.0	308.0	305.7
17.5°	282.7	280.4	278.1	273.5	273.5	268.9	266.6	266.6
20°	250.5	248.2	243.6	241.3	241.3	239.0	239.0	234.4
22.5°	220.6	218.3	216.0	213.7	213.7	211.4	209.1	209.1
25°	195.3	193.0	190.7	190.7	188.4	186.1	186.1	186.1
27.5°	172.4	172.4	170.1	170.1	170.1	167.8	167.8	165.5
30°	154.0	154.0	151.7	151.7	151.7	149.4	151.7	149.4
32.5°	137.9	137.9	137.9	137.9	137.9	135.6	135.6	135.6
35°	124.1	124.1	124.1	124.1	124.1	121.8	124.1	121.8
37.5°	110.3	112.6	110.3	110.3	112.6	110.3	110.3	110.3
40°	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1
42.5°	91.9	91.9	91.9	91.9	91.9	91.9	91.9	91.9
45°	82.7	85.0	85.0	85.0	85.0	85.0	85.0	85.0
47.5°	78.1	78.1	78.1	78.1	80.4	78.1	80.4	80.4
50°	71.2	71.2	71.2	73.5	73.5	73.5	73.5	73.5
52.5°	66.6	66.6	66.6	66.6	68.9	68.9	68.9	68.9
55°	59.8	62.0	62.0	62.0	64.3	64.3	64.3	64.3
57.5°	57.5	57.5	57.5	59.8	59.8	59.8	62.0	59.8
60°	52.9	52.9	55.2	55.2	55.2	57.5	57.5	57.5
62.5°	48.3	50.6	50.6	50.6	50.6	52.9	52.9	52.9
65°	43.7	46.0	46.0	46.0	48.3	48.3	48.3	48.3
67.5°	39.1	41.4	41.4	43.7	43.7	43.7	43.7	43.7
70°	34.5	36.8	36.8	36.8	39.1	39.1	39.1	39.1
72.5°	32.2	32.2	32.2	34.5	34.5	34.5	36.8	34.5
75°	27.6	29.9	29.9	29.9	29.9	29.9	32.2	32.2
77.5°	23.0	23.0	23.0	23.0	25.3	25.3	25.3	25.3
80°	18.4	18.4	18.4	18.4	20.7	20.7	20.7	20.7
82.5°	13.8	13.8	13.8	13.8	13.8	13.8	13.8	13.8
85°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
87.5°	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
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)