

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: P226276

Luminaire Tested: **LD2B20D010 EU2B20WW9030 2LBSW***

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P226276
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 EU2B20WW9030 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: 1074.2 lumens
Efficiency: N/A
Efficacy: 51.4 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

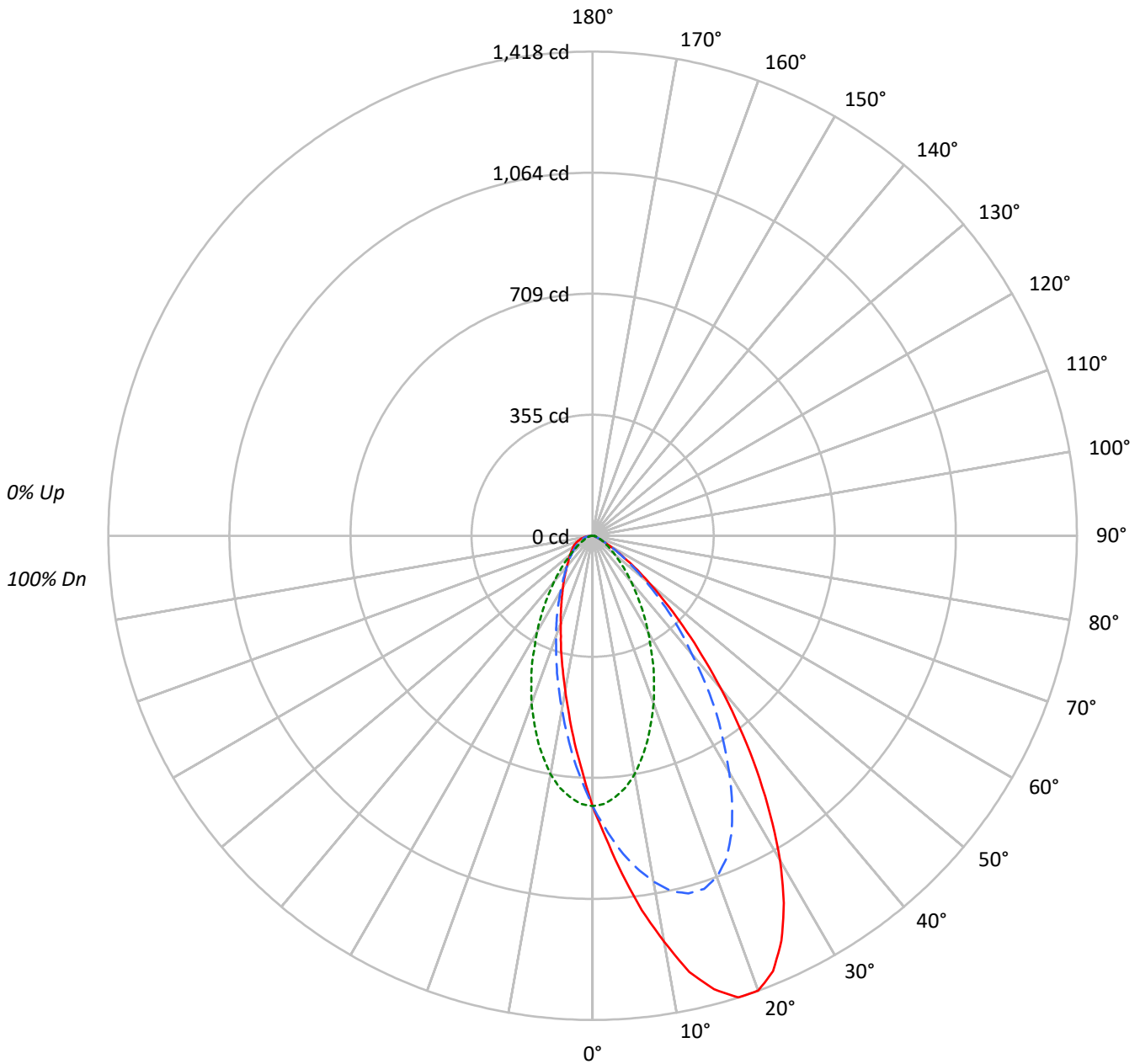
Input Watts (W): 20.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	306546	306546	306546
5°	386454	298385	236250
10°	474778	278786	181321
15°	551389	248987	142118
20°	584342	215295	112037
25°	559196	179931	92231
30°	491056	145407	77467
35°	395644	114669	66768
40°	295094	88943	59262
45°	204380	67159	54012
50°	131669	49775	51402
55°	77391	37818	50379
60°	41291	30988	51594
65°	19522	24380	51326
70°	9060	21178	51303
75°	11973	19905	55823
80°	11822	17845	53535
85°	12000	23555	47554



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.8	7.0
10°-20°	208.7	19.4
20°-30°	272.3	25.3
30°-40°	235.7	21.9
40°-50°	149.2	13.9
50°-60°	74.7	7.0
60°-70°	34.4	3.2
70°-80°	18.4	1.7
80°-90°	6.0	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°	555.8	51.7
0°-40°	791.5	73.7
0°-60°	1015.4	94.5
0°-90°	1074.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1074.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	791	791	791	791	791	
5°	994	925	767	650	608	101
15°	1375	1084	621	405	354	387
25°	1308	962	421	242	216	593
35°	837	629	242	147	141	520
45°	373	312	123	96	99	294
55°	115	107	56	64	75	110
65°	21	24	27	45	56	24
75°	8	8	13	27	37	7
85°	3	3	5	8	11	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°	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4
2.5°	884.7	890.0	890.0	892.7	882.0	884.7	884.7	879.4	871.4	866.0	858.0
5°	993.9	993.9	991.3	993.9	985.9	980.6	983.3	972.6	951.3	940.6	924.7
7.5°	1105.9	1100.5	1100.5	1097.9	1084.5	1076.5	1073.9	1055.2	1025.9	1004.6	980.6
10°	1207.1	1207.1	1201.8	1196.5	1177.8	1167.1	1159.2	1129.8	1097.9	1063.2	1028.6
12.5°	1308.4	1303.0	1295.1	1284.4	1257.7	1247.1	1233.8	1199.1	1151.2	1111.2	1065.9
15°	1375.0	1377.7	1364.3	1351.0	1321.7	1305.7	1289.7	1247.1	1191.1	1140.5	1084.5
17.5°	1417.6	1415.0	1401.6	1385.7	1353.7	1335.0	1316.4	1265.7	1207.1	1145.8	1084.5
20°	1417.6	1417.6	1401.6	1385.7	1351.0	1329.7	1311.0	1257.7	1193.8	1129.8	1063.2
22.5°	1380.3	1375.0	1364.3	1348.3	1313.7	1295.1	1273.7	1220.4	1153.8	1092.5	1023.3
25°	1308.4	1308.4	1295.1	1276.4	1247.1	1225.8	1207.1	1153.8	1089.9	1028.6	962.0
27.5°	1212.4	1209.8	1196.5	1183.1	1151.2	1135.2	1116.5	1065.9	1009.9	954.0	884.7
30°	1097.9	1092.5	1087.2	1065.9	1044.6	1031.2	1015.3	970.0	914.0	860.7	799.4
32.5°	967.3	975.3	962.0	948.6	930.0	916.7	903.3	868.7	818.1	770.1	711.5
35°	836.7	842.0	834.1	823.4	804.7	796.7	783.4	754.1	716.8	671.5	628.9
37.5°	706.1	706.1	706.1	698.2	687.5	679.5	671.5	644.9	612.9	578.2	538.3
40°	583.6	591.6	580.9	578.2	570.2	567.6	559.6	540.9	514.3	490.3	453.0
42.5°	471.7	471.7	474.3	469.0	466.3	461.0	455.7	445.0	426.4	405.0	381.1
45°	373.1	375.7	378.4	370.4	370.4	370.4	367.7	357.1	341.1	327.8	311.8
47.5°	290.5	290.5	293.1	290.5	290.5	290.5	285.1	285.1	274.5	261.1	247.8
50°	218.5	221.2	223.8	223.8	223.8	221.2	221.2	215.8	210.5	205.2	191.9
52.5°	165.2	165.2	162.5	165.2	165.2	165.2	165.2	162.5	159.9	154.6	146.6
55°	114.6	114.6	117.2	117.2	117.2	119.9	119.9	119.9	117.2	114.6	106.6
57.5°	79.9	79.9	79.9	82.6	85.3	85.3	85.3	85.3	82.6	79.9	77.3
60°	53.3	53.3	53.3	56.0	56.0	56.0	56.0	58.6	56.0	56.0	53.3
62.5°	34.6	34.6	34.6	34.6	34.6	37.3	37.3	37.3	37.3	37.3	34.6
65°	21.3	21.3	21.3	21.3	21.3	21.3	24.0	24.0	24.0	24.0	24.0
67.5°	13.3	13.3	13.3	13.3	13.3	16.0	16.0	16.0	16.0	16.0	16.0
70°	8.0	8.0	8.0	8.0	10.7	10.7	10.7	10.7	10.7	10.7	10.7
72.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
75°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
77.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	8.0	8.0	8.0
80°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
82.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	5.3	5.3	2.7
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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°	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4
2.5°	858.0	847.4	842.0	828.7	826.1	815.4	815.4	804.7	791.4	786.1	772.8
5°	914.0	892.7	882.0	858.0	850.0	834.1	826.1	804.7	783.4	767.4	748.8
7.5°	962.0	930.0	908.7	876.7	863.4	839.4	823.4	796.7	767.4	743.5	716.8
10°	999.3	956.6	924.7	882.0	866.0	836.7	812.7	775.4	738.1	708.8	676.8
12.5°	1023.3	972.6	927.3	876.7	855.4	823.4	788.8	746.1	703.5	666.2	631.5
15°	1033.9	972.6	919.3	858.0	834.1	799.4	759.4	708.8	660.8	620.9	583.6
17.5°	1025.9	954.0	898.0	828.7	802.1	762.1	716.8	663.5	612.9	570.2	532.9
20°	999.3	924.7	860.7	788.8	759.4	719.5	668.8	615.5	564.9	522.3	482.3
22.5°	954.0	876.7	810.1	738.1	708.8	668.8	615.5	562.3	511.6	469.0	431.7
25°	898.0	815.4	748.8	679.5	647.5	612.9	559.6	506.3	458.3	421.0	383.7
27.5°	823.4	751.4	684.8	615.5	586.2	554.3	501.0	453.0	405.0	367.7	335.8
30°	743.5	674.2	618.2	551.6	524.9	493.0	447.7	399.7	359.7	325.1	295.8
32.5°	663.5	596.9	543.6	487.6	463.7	431.7	391.7	349.1	311.8	282.5	258.5
35°	580.9	524.9	474.3	421.0	402.4	375.7	338.4	301.1	269.1	242.5	218.5
37.5°	498.3	453.0	407.7	365.1	343.7	322.4	287.8	255.8	226.5	205.2	186.5
40°	423.7	383.7	346.4	306.4	287.8	271.8	242.5	215.8	194.5	175.9	159.9
42.5°	351.7	319.8	287.8	255.8	239.8	226.5	202.5	178.5	159.9	146.6	133.2
45°	287.8	263.8	237.2	207.8	199.9	183.9	165.2	149.2	133.2	122.6	111.9
47.5°	231.8	210.5	189.2	167.9	159.9	149.2	133.2	119.9	109.3	101.3	93.3
50°	181.2	165.2	151.9	133.2	127.9	117.2	106.6	95.9	87.9	82.6	77.3
52.5°	138.6	125.2	114.6	103.9	98.6	93.3	82.6	77.3	71.9	69.3	66.6
55°	101.3	93.3	85.3	77.3	74.6	69.3	64.0	58.6	56.0	56.0	56.0
57.5°	71.9	66.6	61.3	56.0	56.0	53.3	50.6	48.0	45.3	45.3	45.3
60°	50.6	48.0	45.3	42.6	40.0	40.0	37.3	40.0	37.3	40.0	40.0
62.5°	34.6	32.0	32.0	29.3	29.3	29.3	29.3	29.3	32.0	32.0	34.6
65°	21.3	21.3	21.3	21.3	21.3	21.3	24.0	24.0	24.0	26.6	26.6
67.5°	16.0	16.0	16.0	18.7	18.7	18.7	18.7	21.3	21.3	21.3	24.0
70°	10.7	13.3	13.3	13.3	13.3	13.3	16.0	16.0	16.0	18.7	18.7
72.5°	10.7	10.7	10.7	10.7	10.7	10.7	13.3	13.3	13.3	16.0	16.0
75°	8.0	10.7	10.7	10.7	10.7	10.7	10.7	13.3	13.3	13.3	16.0
77.5°	8.0	8.0	8.0	8.0	8.0	8.0	8.0	10.7	10.7	10.7	10.7
80°	5.3	5.3	5.3	8.0	8.0	8.0	8.0	8.0	8.0	8.0	10.7
82.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	8.0
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	5.3	2.7	5.3	5.3
87.5°	0.0	0.0	0.0	2.7	0.0	2.7	2.7	2.7	2.7	2.7	2.7
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°	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4
2.5°	767.4	759.4	762.1	746.1	748.8	738.1	732.8	724.8	719.5	711.5	714.1
5°	735.5	722.1	716.8	698.2	700.8	684.8	674.2	660.8	650.2	636.9	634.2
7.5°	695.5	674.2	666.2	647.5	644.9	623.5	610.2	594.2	580.9	567.6	562.3
10°	650.2	626.2	610.2	591.6	588.9	564.9	548.9	532.9	517.0	503.6	498.3
12.5°	602.2	575.6	556.9	535.6	530.3	509.0	490.3	474.3	458.3	445.0	437.0
15°	551.6	522.3	503.6	482.3	477.0	453.0	437.0	418.4	405.0	391.7	386.4
17.5°	501.0	471.7	450.3	431.7	426.4	402.4	383.7	370.4	354.4	346.4	338.4
20°	450.3	421.0	399.7	383.7	375.7	357.1	338.4	325.1	311.8	303.8	295.8
22.5°	399.7	373.1	354.4	338.4	333.1	314.4	298.4	285.1	277.1	266.5	261.1
25°	354.4	327.8	311.8	295.8	290.5	274.5	263.8	250.5	242.5	234.5	229.2
27.5°	311.8	287.8	271.8	258.5	255.8	242.5	229.2	221.2	213.2	207.8	205.2
30°	269.1	250.5	237.2	226.5	223.8	210.5	199.9	194.5	186.5	183.9	181.2
32.5°	237.2	218.5	207.8	197.2	194.5	183.9	178.5	170.5	165.2	162.5	162.5
35°	202.5	189.2	178.5	173.2	170.5	162.5	154.6	151.9	146.6	143.9	143.9
37.5°	173.2	162.5	154.6	146.6	146.6	141.2	135.9	133.2	130.6	130.6	127.9
40°	149.2	138.6	135.9	130.6	127.9	125.2	122.6	119.9	117.2	117.2	117.2
42.5°	125.2	119.9	114.6	111.9	111.9	109.3	106.6	106.6	103.9	106.6	106.6
45°	106.6	101.3	98.6	95.9	98.6	95.9	95.9	93.3	95.9	95.9	95.9
47.5°	90.6	87.9	85.3	85.3	85.3	85.3	85.3	85.3	85.3	87.9	87.9
50°	77.3	74.6	74.6	74.6	74.6	74.6	77.3	77.3	77.3	79.9	79.9
52.5°	64.0	64.0	64.0	64.0	66.6	66.6	69.3	69.3	71.9	71.9	74.6
55°	56.0	56.0	56.0	56.0	58.6	58.6	61.3	64.0	64.0	66.6	69.3
57.5°	48.0	48.0	50.6	50.6	53.3	53.3	56.0	58.6	58.6	61.3	64.0
60°	40.0	42.6	45.3	45.3	45.3	48.0	50.6	53.3	53.3	56.0	58.6
62.5°	34.6	37.3	40.0	40.0	40.0	42.6	45.3	48.0	48.0	50.6	53.3
65°	29.3	32.0	34.6	34.6	34.6	37.3	40.0	42.6	45.3	45.3	48.0
67.5°	26.6	26.6	29.3	29.3	32.0	34.6	34.6	37.3	40.0	42.6	45.3
70°	21.3	24.0	26.6	26.6	26.6	29.3	32.0	34.6	34.6	37.3	40.0
72.5°	18.7	18.7	21.3	21.3	24.0	26.6	26.6	29.3	32.0	32.0	34.6
75°	16.0	18.7	18.7	18.7	21.3	21.3	24.0	26.6	26.6	29.3	29.3
77.5°	13.3	13.3	16.0	16.0	16.0	18.7	18.7	21.3	21.3	24.0	24.0
80°	10.7	10.7	13.3	13.3	13.3	13.3	16.0	16.0	18.7	18.7	18.7
82.5°	8.0	8.0	8.0	8.0	10.7	10.7	10.7	10.7	13.3	13.3	13.3
85°	5.3	5.3	5.3	5.3	5.3	8.0	8.0	8.0	8.0	8.0	10.7
87.5°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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°	791.4	791.4	791.4	791.4	791.4	791.4	791.4	791.4
2.5°	706.1	706.1	703.5	700.8	698.2	695.5	692.8	690.2
5°	626.2	628.9	618.2	615.5	615.5	610.2	612.9	607.6
7.5°	551.6	551.6	543.6	540.9	538.3	532.9	530.3	527.6
10°	485.0	482.3	477.0	474.3	469.0	466.3	466.3	461.0
12.5°	426.4	423.7	418.4	415.7	410.4	407.7	405.0	402.4
15°	375.7	373.1	367.7	365.1	362.4	357.1	357.1	354.4
17.5°	327.8	325.1	322.4	317.1	317.1	311.8	309.1	309.1
20°	290.5	287.8	282.5	279.8	279.8	277.1	277.1	271.8
22.5°	255.8	253.1	250.5	247.8	247.8	245.2	242.5	242.5
25°	226.5	223.8	221.2	221.2	218.5	215.8	215.8	215.8
27.5°	199.9	199.9	197.2	197.2	197.2	194.5	194.5	191.9
30°	178.5	178.5	175.9	175.9	175.9	173.2	175.9	173.2
32.5°	159.9	159.9	159.9	159.9	159.9	157.2	157.2	157.2
35°	143.9	143.9	143.9	143.9	143.9	141.2	143.9	141.2
37.5°	127.9	130.6	127.9	127.9	130.6	127.9	127.9	127.9
40°	117.2	117.2	117.2	117.2	117.2	117.2	117.2	117.2
42.5°	106.6	106.6	106.6	106.6	106.6	106.6	106.6	106.6
45°	95.9	98.6	98.6	98.6	98.6	98.6	98.6	98.6
47.5°	90.6	90.6	90.6	90.6	93.3	90.6	93.3	93.3
50°	82.6	82.6	82.6	85.3	85.3	85.3	85.3	85.3
52.5°	77.3	77.3	77.3	77.3	79.9	79.9	79.9	79.9
55°	69.3	71.9	71.9	71.9	74.6	74.6	74.6	74.6
57.5°	66.6	66.6	66.6	69.3	69.3	69.3	71.9	69.3
60°	61.3	61.3	64.0	64.0	64.0	66.6	66.6	66.6
62.5°	56.0	58.6	58.6	58.6	58.6	61.3	61.3	61.3
65°	50.6	53.3	53.3	53.3	56.0	56.0	56.0	56.0
67.5°	45.3	48.0	48.0	50.6	50.6	50.6	50.6	50.6
70°	40.0	42.6	42.6	42.6	45.3	45.3	45.3	45.3
72.5°	37.3	37.3	37.3	40.0	40.0	40.0	42.6	40.0
75°	32.0	34.6	34.6	34.6	34.6	34.6	37.3	37.3
77.5°	26.6	26.6	26.6	26.6	29.3	29.3	29.3	29.3
80°	21.3	21.3	21.3	21.3	24.0	24.0	24.0	24.0
82.5°	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
85°	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
87.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
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)