

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: P226281

Luminaire Tested: **LD2B20D010 EU2B20WW9730 2LBSW***

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P226281
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 EU2B20WW9730 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: 986.0 lumens
Efficiency: N/A
Efficacy: 47.2 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

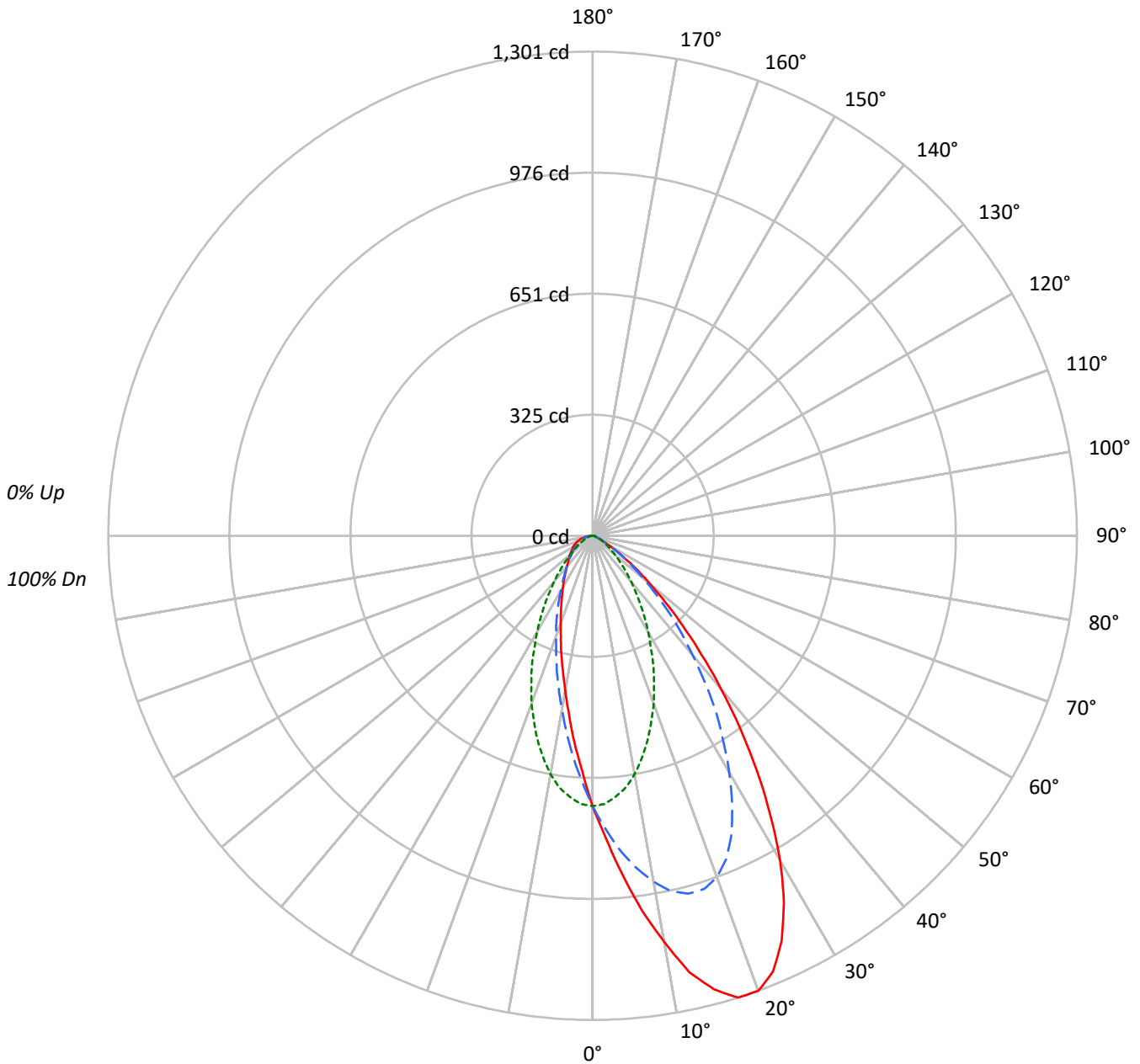
Input Watts (W): 20.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	281368	281368	281368
5°	354726	273889	216848
10°	435800	255895	166414
15°	506115	228536	130449
20°	536361	197611	102845
25°	513251	165186	84666
30°	450713	133465	71116
35°	363158	105259	61283
40°	270874	81611	54407
45°	187563	61626	49575
50°	120882	45677	47184
55°	71043	34711	46259
60°	37882	28431	47334
65°	17964	22455	47110
70°	8267	19366	47113
75°	10925	18258	51183
80°	10930	16284	49074
85°	10666	21777	43554



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.6	7.0
10°-20°	191.6	19.4
20°-30°	249.9	25.3
30°-40°	216.4	21.9
40°-50°	137.0	13.9
50°-60°	68.6	7.0
60°-70°	31.6	3.2
70°-80°	16.9	1.7
80°-90°	5.4	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°	510.1	51.7
0°-40°	726.5	73.7
0°-60°	932.1	94.5
0°-90°	986.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	986.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	726	726	726	726	726	
5°	912	849	704	597	558	93
15°	1262	996	570	372	325	355
25°	1201	883	386	223	198	544
35°	768	577	223	134	130	477
45°	342	286	112	88	90	269
55°	105	98	51	59	68	101
65°	20	22	24	42	51	22
75°	7	7	12	24	34	7
85°	2	2	5	7	10	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°	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4
2.5°	812.0	816.9	816.9	819.4	809.6	812.0	812.0	807.1	799.8	794.9	787.6
5°	912.3	912.3	909.9	912.3	905.0	900.1	902.5	892.8	873.2	863.4	848.7
7.5°	1015.0	1010.2	1010.2	1007.7	995.5	988.1	985.7	968.6	941.7	922.1	900.1
10°	1108.0	1108.0	1103.1	1098.2	1081.1	1071.3	1064.0	1037.1	1007.7	975.9	944.1
12.5°	1200.9	1196.0	1188.7	1178.9	1154.5	1144.7	1132.5	1100.7	1056.6	1019.9	978.4
15°	1262.1	1264.5	1252.3	1240.1	1213.2	1198.5	1183.8	1144.7	1093.3	1046.8	995.5
17.5°	1301.2	1298.8	1286.5	1271.9	1242.5	1225.4	1208.3	1161.8	1108.0	1051.7	995.5
20°	1301.2	1301.2	1286.5	1271.9	1240.1	1220.5	1203.4	1154.5	1095.8	1037.1	975.9
22.5°	1267.0	1262.1	1252.3	1237.6	1205.8	1188.7	1169.1	1120.2	1059.1	1002.8	939.2
25°	1200.9	1200.9	1188.7	1171.6	1144.7	1125.1	1108.0	1059.1	1000.4	944.1	883.0
27.5°	1112.9	1110.4	1098.2	1086.0	1056.6	1042.0	1024.8	978.4	927.0	875.6	812.0
30°	1007.7	1002.8	997.9	978.4	958.8	946.6	931.9	890.3	838.9	790.0	733.8
32.5°	887.9	895.2	883.0	870.7	853.6	841.4	829.2	797.4	750.9	706.9	653.1
35°	768.0	772.9	765.6	755.8	738.7	731.3	719.1	692.2	657.9	616.4	577.2
37.5°	648.2	648.2	648.2	640.8	631.0	623.7	616.4	591.9	562.6	530.8	494.1
40°	535.7	543.0	533.2	530.8	523.4	521.0	513.6	496.5	472.1	450.0	415.8
42.5°	432.9	432.9	435.4	430.5	428.0	423.1	418.2	408.5	391.3	371.8	349.8
45°	342.4	344.9	347.3	340.0	340.0	340.0	337.5	327.8	313.1	300.8	286.2
47.5°	266.6	266.6	269.0	266.6	266.6	266.6	261.7	261.7	251.9	239.7	227.5
50°	200.6	203.0	205.5	205.5	205.5	203.0	203.0	198.1	193.2	188.3	176.1
52.5°	151.6	151.6	149.2	151.6	151.6	151.6	151.6	149.2	146.8	141.9	134.5
55°	105.2	105.2	107.6	107.6	107.6	110.1	110.1	110.1	107.6	105.2	97.8
57.5°	73.4	73.4	73.4	75.8	78.3	78.3	78.3	78.3	75.8	73.4	70.9
60°	48.9	48.9	48.9	51.4	51.4	51.4	51.4	53.8	51.4	51.4	48.9
62.5°	31.8	31.8	31.8	31.8	31.8	34.2	34.2	34.2	34.2	34.2	31.8
65°	19.6	19.6	19.6	19.6	19.6	19.6	22.0	22.0	22.0	22.0	22.0
67.5°	12.2	12.2	12.2	12.2	12.2	14.7	14.7	14.7	14.7	14.7	14.7
70°	7.3	7.3	7.3	7.3	9.8	9.8	9.8	9.8	9.8	9.8	9.8
72.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
75°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	7.3	7.3	7.3
80°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
82.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	4.9	4.9	2.4
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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°	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4
2.5°	787.6	777.8	772.9	760.7	758.2	748.4	748.4	738.7	726.4	721.5	709.3
5°	838.9	819.4	809.6	787.6	780.2	765.6	758.2	738.7	719.1	704.4	687.3
7.5°	883.0	853.6	834.1	804.7	792.5	770.5	755.8	731.3	704.4	682.4	657.9
10°	917.2	878.1	848.7	809.6	794.9	768.0	746.0	711.8	677.5	650.6	621.3
12.5°	939.2	892.8	851.2	804.7	785.1	755.8	724.0	684.9	645.7	611.5	579.7
15°	949.0	892.8	843.8	787.6	765.6	733.8	697.1	650.6	606.6	569.9	535.7
17.5°	941.7	875.6	824.3	760.7	736.2	699.5	657.9	609.0	562.6	523.4	489.2
20°	917.2	848.7	790.0	724.0	697.1	660.4	613.9	565.0	518.5	479.4	442.7
22.5°	875.6	804.7	743.6	677.5	650.6	613.9	565.0	516.1	469.6	430.5	396.2
25°	824.3	748.4	687.3	623.7	594.4	562.6	513.6	464.7	420.7	386.5	352.2
27.5°	755.8	689.7	628.6	565.0	538.1	508.7	459.8	415.8	371.8	337.5	308.2
30°	682.4	618.8	567.4	506.3	481.8	452.5	410.9	366.9	330.2	298.4	271.5
32.5°	609.0	547.9	499.0	447.6	425.6	396.2	359.5	320.4	286.2	259.3	237.3
35°	533.2	481.8	435.4	386.5	369.3	344.9	310.6	276.4	247.0	222.6	200.6
37.5°	457.4	415.8	374.2	335.1	315.5	296.0	264.2	234.8	207.9	188.3	171.2
40°	388.9	352.2	318.0	281.3	264.2	249.5	222.6	198.1	178.6	161.4	146.8
42.5°	322.9	293.5	264.2	234.8	220.1	207.9	185.9	163.9	146.8	134.5	122.3
45°	264.2	242.1	217.7	190.8	183.4	168.8	151.6	137.0	122.3	112.5	102.7
47.5°	212.8	193.2	173.7	154.1	146.8	137.0	122.3	110.1	100.3	92.9	85.6
50°	166.3	151.6	139.4	122.3	117.4	107.6	97.8	88.1	80.7	75.8	70.9
52.5°	127.2	115.0	105.2	95.4	90.5	85.6	75.8	70.9	66.0	63.6	61.1
55°	92.9	85.6	78.3	70.9	68.5	63.6	58.7	53.8	51.4	51.4	51.4
57.5°	66.0	61.1	56.3	51.4	51.4	48.9	46.5	44.0	41.6	41.6	41.6
60°	46.5	44.0	41.6	39.1	36.7	36.7	34.2	36.7	34.2	36.7	36.7
62.5°	31.8	29.4	29.4	26.9	26.9	26.9	26.9	26.9	29.4	29.4	31.8
65°	19.6	19.6	19.6	19.6	19.6	19.6	22.0	22.0	22.0	24.5	24.5
67.5°	14.7	14.7	14.7	17.1	17.1	17.1	17.1	19.6	19.6	19.6	22.0
70°	9.8	12.2	12.2	12.2	12.2	12.2	14.7	14.7	14.7	17.1	17.1
72.5°	9.8	9.8	9.8	9.8	9.8	9.8	12.2	12.2	12.2	14.7	14.7
75°	7.3	9.8	9.8	9.8	9.8	9.8	9.8	12.2	12.2	12.2	14.7
77.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	9.8	9.8	9.8	9.8
80°	4.9	4.9	4.9	7.3	7.3	7.3	7.3	7.3	7.3	7.3	9.8
82.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	7.3
85°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	4.9	2.4	4.9	4.9
87.5°	0.0	0.0	0.0	2.4	0.0	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	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°	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4
2.5°	704.4	697.1	699.5	684.9	687.3	677.5	672.6	665.3	660.4	653.1	655.5
5°	675.1	662.8	657.9	640.8	643.3	628.6	618.8	606.6	596.8	584.6	582.1
7.5°	638.4	618.8	611.5	594.4	591.9	572.3	560.1	545.4	533.2	521.0	516.1
10°	596.8	574.8	560.1	543.0	540.5	518.5	503.9	489.2	474.5	462.3	457.4
12.5°	552.8	528.3	511.2	491.6	486.7	467.2	450.0	435.4	420.7	408.5	401.1
15°	506.3	479.4	462.3	442.7	437.8	415.8	401.1	384.0	371.8	359.5	354.7
17.5°	459.8	432.9	413.4	396.2	391.3	369.3	352.2	340.0	325.3	318.0	310.6
20°	413.4	386.5	366.9	352.2	344.9	327.8	310.6	298.4	286.2	278.8	271.5
22.5°	366.9	342.4	325.3	310.6	305.7	288.6	273.9	261.7	254.4	244.6	239.7
25°	325.3	300.8	286.2	271.5	266.6	251.9	242.1	229.9	222.6	215.2	210.3
27.5°	286.2	264.2	249.5	237.3	234.8	222.6	210.3	203.0	195.7	190.8	188.3
30°	247.0	229.9	217.7	207.9	205.5	193.2	183.4	178.6	171.2	168.8	166.3
32.5°	217.7	200.6	190.8	181.0	178.6	168.8	163.9	156.5	151.6	149.2	149.2
35°	185.9	173.7	163.9	159.0	156.5	149.2	141.9	139.4	134.5	132.1	132.1
37.5°	159.0	149.2	141.9	134.5	134.5	129.6	124.7	122.3	119.8	119.8	117.4
40°	137.0	127.2	124.7	119.8	117.4	115.0	112.5	110.1	107.6	107.6	107.6
42.5°	115.0	110.1	105.2	102.7	102.7	100.3	97.8	97.8	95.4	97.8	97.8
45°	97.8	92.9	90.5	88.1	90.5	88.1	88.1	85.6	88.1	88.1	88.1
47.5°	83.2	80.7	78.3	78.3	78.3	78.3	78.3	78.3	78.3	80.7	80.7
50°	70.9	68.5	68.5	68.5	68.5	68.5	70.9	70.9	70.9	73.4	73.4
52.5°	58.7	58.7	58.7	58.7	61.1	61.1	63.6	63.6	66.0	66.0	68.5
55°	51.4	51.4	51.4	51.4	53.8	53.8	56.3	58.7	58.7	61.1	63.6
57.5°	44.0	44.0	46.5	46.5	48.9	48.9	51.4	53.8	53.8	56.3	58.7
60°	36.7	39.1	41.6	41.6	41.6	44.0	46.5	48.9	48.9	51.4	53.8
62.5°	31.8	34.2	36.7	36.7	36.7	39.1	41.6	44.0	44.0	46.5	48.9
65°	26.9	29.4	31.8	31.8	31.8	34.2	36.7	39.1	41.6	41.6	44.0
67.5°	24.5	24.5	26.9	26.9	29.4	31.8	31.8	34.2	36.7	39.1	41.6
70°	19.6	22.0	24.5	24.5	24.5	26.9	29.4	31.8	31.8	34.2	36.7
72.5°	17.1	17.1	19.6	19.6	22.0	24.5	24.5	26.9	29.4	29.4	31.8
75°	14.7	17.1	17.1	17.1	19.6	19.6	22.0	24.5	24.5	26.9	26.9
77.5°	12.2	12.2	14.7	14.7	14.7	17.1	17.1	19.6	19.6	22.0	22.0
80°	9.8	9.8	12.2	12.2	12.2	12.2	14.7	14.7	17.1	17.1	17.1
82.5°	7.3	7.3	7.3	7.3	9.8	9.8	9.8	9.8	12.2	12.2	12.2
85°	4.9	4.9	4.9	4.9	4.9	7.3	7.3	7.3	7.3	7.3	9.8
87.5°	2.4	2.4	2.4	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	0.0	0.0	0.0



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CATALOG NUMBER: LD2B20D010 EU2B20WW9730 2LBSW*

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	726.4	726.4	726.4	726.4	726.4	726.4	726.4	726.4
2.5°	648.2	648.2	645.7	643.3	640.8	638.4	635.9	633.5
5°	574.8	577.2	567.4	565.0	565.0	560.1	562.6	557.7
7.5°	506.3	506.3	499.0	496.5	494.1	489.2	486.7	484.3
10°	445.2	442.7	437.8	435.4	430.5	428.0	428.0	423.1
12.5°	391.3	388.9	384.0	381.6	376.7	374.2	371.8	369.3
15°	344.9	342.4	337.5	335.1	332.6	327.8	327.8	325.3
17.5°	300.8	298.4	296.0	291.1	291.1	286.2	283.7	283.7
20°	266.6	264.2	259.3	256.8	256.8	254.4	254.4	249.5
22.5°	234.8	232.4	229.9	227.5	227.5	225.0	222.6	222.6
25°	207.9	205.5	203.0	203.0	200.6	198.1	198.1	198.1
27.5°	183.4	183.4	181.0	181.0	181.0	178.6	178.6	176.1
30°	163.9	163.9	161.4	161.4	161.4	159.0	161.4	159.0
32.5°	146.8	146.8	146.8	146.8	146.8	144.3	144.3	144.3
35°	132.1	132.1	132.1	132.1	132.1	129.6	132.1	129.6
37.5°	117.4	119.8	117.4	117.4	119.8	117.4	117.4	117.4
40°	107.6	107.6	107.6	107.6	107.6	107.6	107.6	107.6
42.5°	97.8	97.8	97.8	97.8	97.8	97.8	97.8	97.8
45°	88.1	90.5	90.5	90.5	90.5	90.5	90.5	90.5
47.5°	83.2	83.2	83.2	83.2	85.6	83.2	85.6	85.6
50°	75.8	75.8	75.8	78.3	78.3	78.3	78.3	78.3
52.5°	70.9	70.9	70.9	70.9	73.4	73.4	73.4	73.4
55°	63.6	66.0	66.0	66.0	68.5	68.5	68.5	68.5
57.5°	61.1	61.1	61.1	63.6	63.6	63.6	66.0	63.6
60°	56.3	56.3	58.7	58.7	58.7	61.1	61.1	61.1
62.5°	51.4	53.8	53.8	53.8	53.8	56.3	56.3	56.3
65°	46.5	48.9	48.9	48.9	51.4	51.4	51.4	51.4
67.5°	41.6	44.0	44.0	46.5	46.5	46.5	46.5	46.5
70°	36.7	39.1	39.1	39.1	41.6	41.6	41.6	41.6
72.5°	34.2	34.2	34.2	36.7	36.7	36.7	39.1	36.7
75°	29.4	31.8	31.8	31.8	31.8	31.8	34.2	34.2
77.5°	24.5	24.5	24.5	24.5	26.9	26.9	26.9	26.9
80°	19.6	19.6	19.6	19.6	22.0	22.0	22.0	22.0
82.5°	14.7	14.7	14.7	14.7	14.7	14.7	14.7	14.7
85°	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8
87.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
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)