

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: P251782

Luminaire Tested: **LD4B30D010 EU4B30509024 4LBLWW1H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P251782
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: LD4B30D010 EU4B30509024 4LBLWW1H
Description: PORTFOLIO 4 INCH LENS WALLWASH RECESSED DOWNLIGHT, WITH HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2400K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1613.0 lumens
Efficiency: N/A
Efficacy: 57.6 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

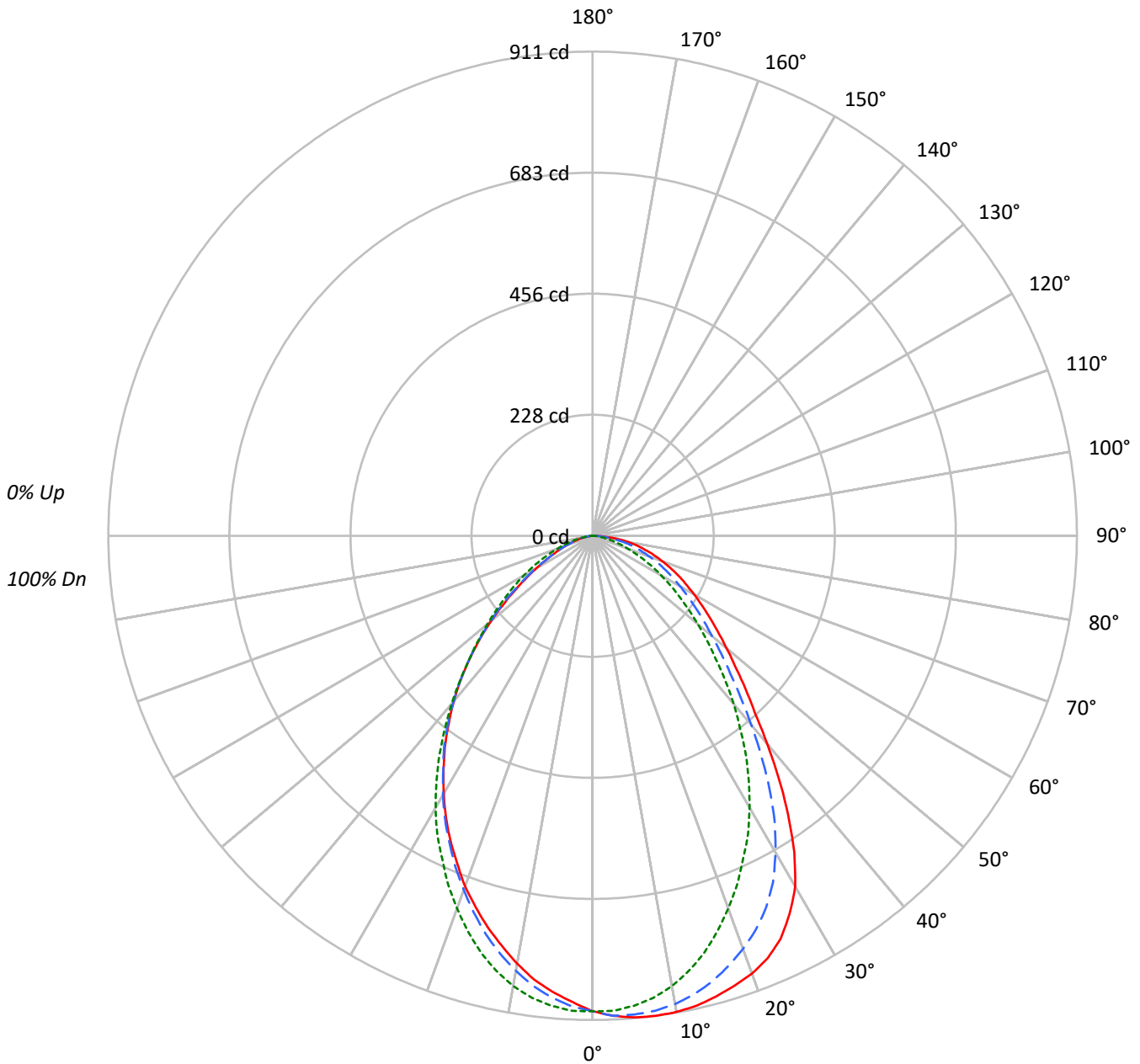
Input Watts (W): 28
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P251782

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1H

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	87186	87186	87186
5°	88996	86844	84281
10°	90025	85127	80901
15°	90534	81928	76923
20°	90925	77359	72796
25°	89984	72069	68079
30°	85797	66441	63031
35°	76298	59761	57631
40°	64960	52530	51652
45°	55958	45138	44959
50°	49867	39026	37768
55°	45826	33677	30160
60°	42921	28965	23604
65°	41255	24444	18402
70°	39608	19604	14903
75°	38333	15551	11409
80°	38613	10832	6959
85°	32316	7716	3131



TEST NUMBER: P251782

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1H

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.7	5.2
10°-20°	230.2	14.3
20°-30°	322.0	20.0
30°-40°	330.9	20.5
40°-50°	268.6	16.7
50°-60°	189.1	11.7
60°-70°	116.4	7.2
70°-80°	58.2	3.6
80°-90°	13.8	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°	635.9	39.4
0°-40°	966.9	59.9
0°-60°	1424.6	88.3
0°-90°	1613.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1613.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	895	895	895	895	895	
5°	910	904	888	872	862	87
15°	897	868	812	776	762	253
25°	837	772	670	637	633	383
35°	641	579	502	487	484	399
45°	406	366	328	328	326	316
55°	270	237	198	182	178	242
65°	179	150	106	81	80	177
75°	102	80	41	30	30	109
85°	29	19	7	4	3	34
90°	0	0	0	0	0	



TEST NUMBER: P251782

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1H

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6
2.5°	904.2	905.6	901.4	905.6	900.1	902.8	904.2	901.4	898.7	904.2	904.2
5°	909.7	909.7	905.6	911.1	904.2	905.6	908.3	904.2	900.1	905.6	904.2
7.5°	911.1	911.1	905.6	911.1	904.2	905.6	906.9	902.8	898.7	902.8	901.4
10°	909.7	908.3	904.2	909.7	902.8	902.8	904.2	900.1	893.2	897.3	894.6
12.5°	905.6	905.6	900.1	905.6	895.9	895.9	897.3	891.8	886.3	886.3	883.5
15°	897.3	897.3	891.8	895.9	887.7	887.7	886.3	880.8	873.9	873.9	868.4
17.5°	887.7	887.7	882.2	886.3	876.7	876.7	875.3	867.0	857.4	856.0	849.1
20°	876.7	876.7	869.8	872.5	861.5	861.5	860.2	850.5	839.5	836.8	827.1
22.5°	860.2	860.2	853.3	854.6	843.6	842.3	840.9	829.9	818.9	814.7	802.4
25°	836.8	835.4	829.9	829.9	818.9	816.1	813.4	802.4	791.3	783.1	772.1
27.5°	802.4	803.7	796.8	798.2	784.5	781.7	780.3	766.6	754.2	745.9	734.9
30°	762.4	758.3	751.4	751.4	740.4	739.0	736.3	723.9	710.1	700.5	688.1
32.5°	706.0	704.6	697.8	697.8	685.4	685.4	679.9	667.5	655.1	649.6	637.2
35°	641.3	640.0	634.4	634.4	623.4	624.8	619.3	609.7	597.3	589.0	579.4
37.5°	575.3	573.9	568.4	569.8	560.1	560.1	556.0	546.4	536.7	532.6	520.2
40°	510.6	509.2	502.3	506.5	498.2	495.4	494.1	487.2	476.2	470.7	463.8
42.5°	451.4	452.8	445.9	448.7	441.8	439.0	437.6	432.1	423.9	418.4	411.5
45°	406.0	403.2	400.5	400.5	393.6	392.2	390.9	384.0	378.5	373.0	366.1
47.5°	363.3	360.6	357.8	359.2	353.7	352.3	349.6	344.1	337.2	334.4	327.5
50°	328.9	327.5	323.4	323.4	317.9	316.5	313.8	309.7	302.8	298.6	293.1
52.5°	297.3	297.3	293.1	291.8	287.6	286.3	284.9	279.4	273.9	268.4	262.9
55°	269.7	268.4	265.6	265.6	260.1	258.7	257.4	251.9	246.3	242.2	236.7
57.5°	243.6	243.6	240.8	240.8	236.7	234.0	234.0	228.5	221.6	218.8	211.9
60°	220.2	220.2	217.4	217.4	213.3	213.3	210.6	205.1	200.9	195.4	189.9
62.5°	198.2	199.6	196.8	195.4	191.3	189.9	189.9	185.8	178.9	174.8	169.3
65°	178.9	177.5	176.2	174.8	170.7	169.3	169.3	163.8	159.6	154.1	150.0
67.5°	158.3	158.3	155.5	155.5	152.8	151.4	148.6	144.5	140.4	136.2	132.1
70°	139.0	139.0	137.6	137.6	133.5	132.1	130.7	126.6	122.5	118.4	112.9
72.5°	121.1	119.7	118.4	118.4	115.6	114.2	112.9	108.7	104.6	100.5	96.3
75°	101.8	101.8	100.5	100.5	97.7	96.3	96.3	93.6	88.1	85.3	79.8
77.5°	85.3	85.3	84.0	84.0	81.2	81.2	79.8	75.7	72.9	68.8	66.1
80°	68.8	67.4	67.4	66.1	63.3	63.3	61.9	60.6	56.4	53.7	49.5
82.5°	48.2	48.2	48.2	46.8	45.4	45.4	44.0	41.3	38.5	37.2	33.0
85°	28.9	28.9	27.5	26.1	27.5	26.1	24.8	23.4	22.0	20.6	19.3
87.5°	12.4	12.4	11.0	11.0	11.0	11.0	11.0	9.6	8.3	8.3	6.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P251782

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1H

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6
2.5°	895.9	900.1	898.7	897.3	894.6	894.6	894.6	893.2	894.6	894.6	891.8
5°	895.9	898.7	897.3	894.6	891.8	891.8	890.4	887.7	887.7	887.7	882.2
7.5°	891.8	894.6	890.4	887.7	884.9	882.2	882.2	878.0	878.0	876.7	871.2
10°	883.5	884.9	879.4	876.7	872.5	871.2	868.4	862.9	861.5	860.2	854.6
12.5°	871.2	872.5	865.7	860.2	854.6	853.3	850.5	843.6	840.9	838.1	831.3
15°	853.3	853.3	845.0	838.1	832.6	831.3	824.4	817.5	814.7	812.0	802.4
17.5°	832.6	831.3	820.2	813.4	806.5	803.7	796.8	788.6	783.1	780.3	772.1
20°	810.6	806.5	794.1	787.2	779.0	774.8	767.9	756.9	751.4	745.9	737.7
22.5°	784.5	779.0	765.2	755.6	747.3	743.2	733.5	723.9	715.6	710.1	700.5
25°	752.8	745.9	730.8	718.4	711.5	707.4	697.8	686.7	678.5	670.2	662.0
27.5°	715.6	707.4	692.3	679.9	673.0	666.1	659.2	646.8	640.0	633.1	623.4
30°	670.2	660.6	646.8	635.8	627.6	622.1	613.8	602.8	594.5	590.4	580.8
32.5°	620.7	609.7	597.3	586.3	582.2	575.3	568.4	557.4	550.5	546.4	539.5
35°	565.6	557.4	543.6	535.4	528.5	525.7	520.2	509.2	506.5	502.3	494.1
37.5°	507.8	501.0	491.3	484.4	478.9	476.2	470.7	463.8	459.7	455.5	451.4
40°	454.2	448.7	440.4	434.9	428.0	423.9	423.9	415.6	412.9	412.9	408.7
42.5°	401.9	399.1	392.2	384.0	382.6	378.5	377.1	373.0	370.2	368.8	367.5
45°	357.8	353.7	346.8	342.7	338.6	338.6	334.4	330.3	328.9	327.5	326.2
47.5°	319.3	313.8	308.3	304.1	301.4	300.0	295.9	293.1	291.8	291.8	290.4
50°	284.9	280.8	275.2	271.1	268.4	265.6	262.9	260.1	258.7	257.4	257.4
52.5°	256.0	250.5	245.0	240.8	236.7	235.3	232.6	229.8	228.5	227.1	225.7
55°	229.8	225.7	218.8	214.7	210.6	210.6	206.4	202.3	199.6	198.2	196.8
57.5°	205.1	200.9	194.1	189.9	187.2	184.4	181.7	178.9	176.2	173.4	170.7
60°	183.0	178.9	172.0	166.5	165.1	162.4	159.6	154.1	151.4	148.6	145.9
62.5°	162.4	156.9	151.4	145.9	144.5	141.8	137.6	133.5	129.4	126.6	122.5
65°	143.1	139.0	132.1	128.0	123.9	122.5	118.4	112.9	108.7	106.0	101.8
67.5°	125.2	119.7	112.9	108.7	106.0	103.2	99.1	95.0	90.8	86.7	82.6
70°	107.3	103.2	96.3	92.2	89.5	86.7	82.6	77.1	72.9	68.8	66.1
72.5°	90.8	85.3	79.8	75.7	72.9	70.2	66.1	61.9	57.8	55.0	50.9
75°	75.7	70.2	66.1	60.6	59.2	56.4	52.3	48.2	44.0	41.3	38.5
77.5°	60.6	56.4	50.9	48.2	45.4	42.7	39.9	35.8	33.0	28.9	26.1
80°	45.4	41.3	37.2	34.4	31.7	30.3	27.5	24.8	22.0	19.3	17.9
82.5°	30.3	27.5	23.4	22.0	20.6	19.3	16.5	15.1	13.8	12.4	11.0
85°	16.5	15.1	13.8	11.0	11.0	9.6	8.3	8.3	6.9	6.9	5.5
87.5°	6.9	5.5	5.5	4.1	4.1	4.1	2.8	2.8	2.8	1.4	1.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P251782

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1H

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6
2.5°	893.2	887.7	887.7	887.7	883.5	884.9	886.3	887.7	886.3	882.2	886.3
5°	883.5	878.0	878.0	875.3	872.5	872.5	872.5	873.9	872.5	868.4	869.8
7.5°	871.2	864.3	862.9	860.2	857.4	856.0	856.0	856.0	854.6	849.1	851.9
10°	851.9	845.0	842.3	840.9	836.8	835.4	834.0	832.6	831.3	825.7	828.5
12.5°	828.5	823.0	817.5	816.1	812.0	809.2	807.9	807.9	805.1	799.6	802.4
15°	801.0	792.7	788.6	785.8	781.7	779.0	776.2	777.6	776.2	770.7	772.1
17.5°	767.9	759.7	755.6	754.2	748.7	745.9	744.5	744.5	743.2	737.7	739.0
20°	732.2	723.9	721.2	718.4	715.6	712.9	711.5	710.1	708.8	703.3	707.4
22.5°	696.4	686.7	682.6	682.6	677.1	675.7	674.4	675.7	674.4	668.9	671.6
25°	659.2	649.6	646.8	642.7	640.0	638.6	638.6	638.6	637.2	634.4	637.2
27.5°	617.9	611.1	606.9	605.5	602.8	601.4	600.0	601.4	601.4	597.3	600.0
30°	576.6	571.1	568.4	567.0	562.9	561.5	562.9	562.9	562.9	558.8	562.9
32.5°	535.4	531.2	529.9	525.7	523.0	523.0	523.0	524.3	523.0	520.2	524.3
35°	494.1	488.6	487.2	485.8	485.8	483.1	485.8	484.4	487.2	483.1	485.8
37.5°	450.0	447.3	445.9	445.9	443.2	444.5	444.5	444.5	447.3	443.2	445.9
40°	408.7	406.0	406.0	406.0	404.6	404.6	404.6	406.0	407.4	404.6	407.4
42.5°	367.5	366.1	366.1	364.7	363.3	364.7	366.1	366.1	367.5	364.7	366.1
45°	327.5	326.2	327.5	326.2	326.2	324.8	326.2	327.5	327.5	326.2	326.2
47.5°	290.4	290.4	289.0	289.0	289.0	289.0	289.0	289.0	289.0	286.3	289.0
50°	257.4	254.6	256.0	254.6	254.6	253.2	253.2	251.9	250.5	249.1	249.1
52.5°	225.7	223.0	223.0	221.6	220.2	220.2	218.8	217.4	216.1	213.3	213.3
55°	195.4	192.7	191.3	189.9	188.5	187.2	185.8	184.4	181.7	180.3	180.3
57.5°	167.9	165.1	162.4	162.4	159.6	158.3	155.5	152.8	151.4	148.6	148.6
60°	143.1	140.4	136.2	134.9	133.5	130.7	126.6	125.2	123.9	121.1	122.5
62.5°	119.7	115.6	111.5	110.1	108.7	106.0	103.2	100.5	99.1	100.5	100.5
65°	97.7	93.6	90.8	88.1	86.7	84.0	82.6	81.2	81.2	81.2	82.6
67.5°	78.4	74.3	71.6	70.2	67.4	66.1	66.1	66.1	66.1	66.1	66.1
70°	61.9	59.2	56.4	53.7	53.7	52.3	52.3	52.3	52.3	52.3	52.3
72.5°	46.8	44.0	42.7	42.7	41.3	41.3	41.3	41.3	39.9	39.9	41.3
75°	34.4	33.0	31.7	31.7	31.7	30.3	30.3	30.3	30.3	30.3	30.3
77.5°	24.8	23.4	23.4	22.0	22.0	22.0	22.0	22.0	22.0	20.6	20.6
80°	16.5	15.1	15.1	15.1	15.1	13.8	13.8	13.8	13.8	13.8	13.8
82.5°	9.6	9.6	9.6	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
85°	5.5	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
87.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	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



TEST NUMBER: P251782

CATALOG NUMBER: LD4B30D010 EU4B30509024 4LBLWW1H

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	894.6	894.6	894.6	894.6	894.6	894.6	894.6	894.6
2.5°	878.0	883.5	884.9	880.8	882.2	879.4	880.8	878.0
5°	862.9	867.0	868.4	865.7	865.7	862.9	864.3	861.5
7.5°	843.6	847.8	849.1	846.4	846.4	843.6	843.6	842.3
10°	821.6	823.0	825.7	821.6	823.0	820.2	820.2	817.5
12.5°	794.1	796.8	799.6	795.5	795.5	794.1	794.1	790.0
15°	765.2	767.9	769.3	766.6	766.6	765.2	763.8	762.4
17.5°	734.9	736.3	739.0	734.9	737.7	734.9	734.9	732.2
20°	700.5	704.6	706.0	701.9	703.3	701.9	701.9	701.9
22.5°	667.5	670.2	671.6	668.9	670.2	667.5	668.9	666.1
25°	633.1	634.4	635.8	633.1	635.8	634.4	633.1	633.1
27.5°	597.3	598.7	600.0	597.3	600.0	598.7	600.0	597.3
30°	558.8	561.5	564.3	561.5	562.9	561.5	561.5	560.1
32.5°	520.2	523.0	525.7	523.0	525.7	523.0	524.3	521.6
35°	484.4	485.8	487.2	484.4	485.8	485.8	485.8	484.4
37.5°	444.5	447.3	447.3	445.9	448.7	447.3	447.3	444.5
40°	406.0	407.4	408.7	406.0	407.4	406.0	407.4	406.0
42.5°	366.1	368.8	370.2	367.5	367.5	367.5	366.1	367.5
45°	324.8	327.5	330.3	326.2	327.5	327.5	327.5	326.2
47.5°	287.6	287.6	289.0	287.6	289.0	286.3	289.0	287.6
50°	249.1	249.1	251.9	249.1	249.1	249.1	249.1	249.1
52.5°	211.9	213.3	213.3	210.6	211.9	210.6	211.9	210.6
55°	177.5	177.5	178.9	177.5	177.5	177.5	177.5	177.5
57.5°	147.3	148.6	148.6	147.3	148.6	147.3	147.3	147.3
60°	122.5	122.5	122.5	121.1	122.5	121.1	122.5	121.1
62.5°	99.1	100.5	100.5	99.1	100.5	99.1	99.1	99.1
65°	81.2	81.2	81.2	81.2	81.2	81.2	81.2	79.8
67.5°	64.7	64.7	66.1	64.7	66.1	66.1	66.1	66.1
70°	52.3	52.3	52.3	52.3	52.3	52.3	52.3	52.3
72.5°	39.9	39.9	41.3	39.9	39.9	39.9	39.9	39.9
75°	30.3	30.3	30.3	30.3	30.3	28.9	28.9	30.3
77.5°	20.6	20.6	20.6	20.6	20.6	20.6	20.6	22.0
80°	13.8	13.8	13.8	13.8	12.4	12.4	13.8	12.4
82.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
85°	4.1	4.1	2.8	2.8	2.8	2.8	2.8	2.8
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)