

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P563791

Luminaire Tested: **LD4C15D010 EX4C15D2W 4LBSQLWWH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P563791
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C15D010 EX4C15D2W 4LBSQLWWH
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

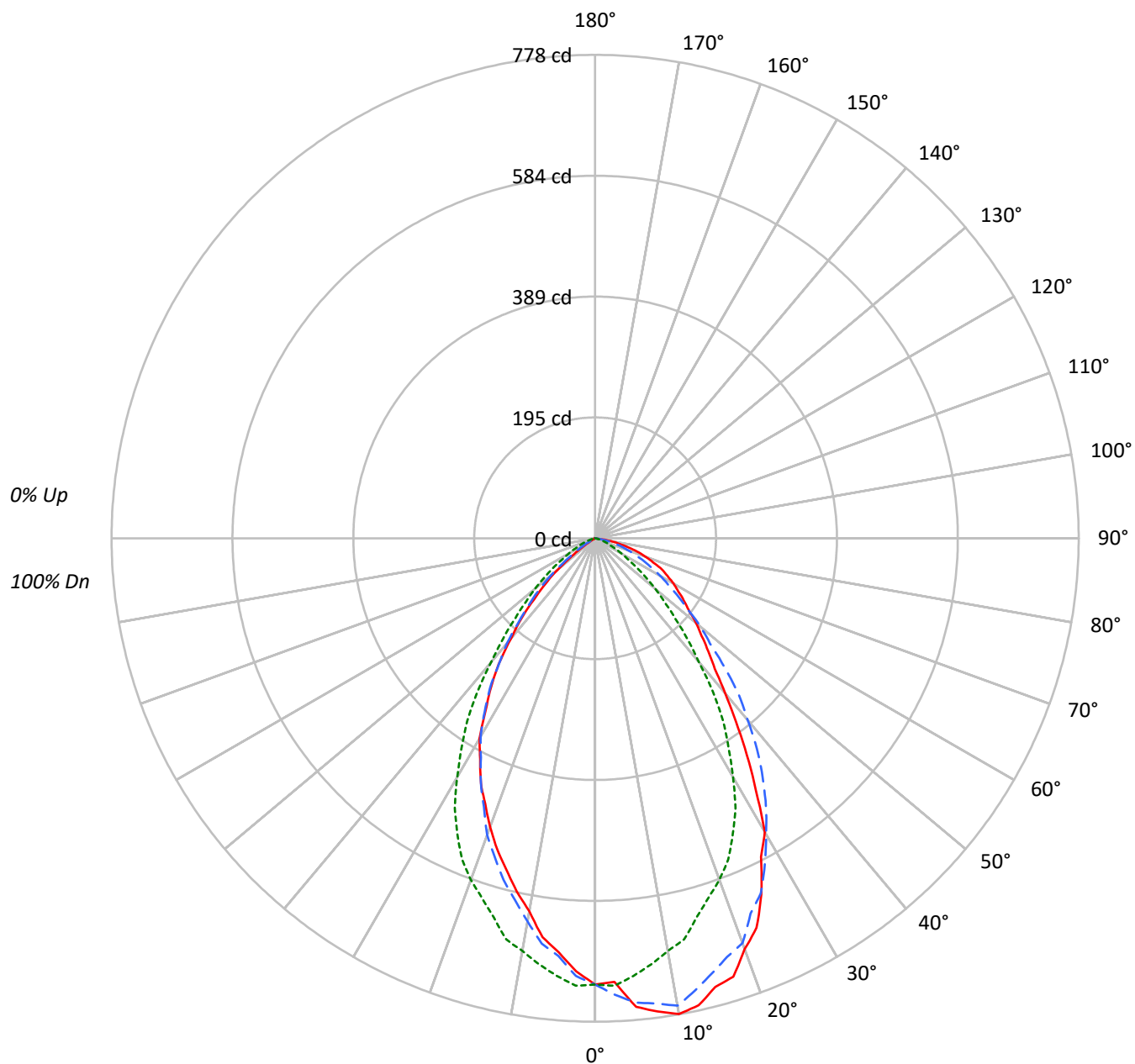
Lumens per Lamp: N/A
Luminaire Lumens: 1029.4 lumens
Efficiency: N/A
Efficacy: 65.2 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 15.8
Input Voltage (V):
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

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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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	112	108	105	102	109	106	103	101	102	100	98		98	96	95		95
2	104	98	93	89	102	96	92	88	93	89	86		90	87	84		87
3	97	89	83	78	95	88	82	77	85	80	76		82	78	75		80
4	91	81	74	69	89	80	74	69	78	72	68		76	71	67		74
5	85	75	67	62	83	74	67	62	72	66	61		70	65	60		68
6	80	69	61	56	78	68	61	56	66	60	55		65	59	55		63
7	75	63	56	51	73	63	56	51	61	55	50		60	54	50		59
8	70	59	52	47	69	58	51	46	57	51	46		56	50	46		55
9	66	55	48	43	65	54	47	43	53	47	43		52	46	42		51
10	62	51	44	40	61	51	44	40	50	44	39		49	43	39		48

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	69289	69289	69289
5°	73311	68478	64807
10°	76177	66056	59727
15°	74660	63052	55131
20°	72236	60038	50755
25°	67381	55830	46301
30°	60822	49413	41447
35°	50108	42299	34383
40°	40898	32648	26476
45°	35137	24794	19036
50°	31793	18869	12024
55°	29254	13626	4340
60°	28098	9302	675
65°	27123	6301	205
70°	24290	4373	254
75°	19908	2237	0
80°	12447	945	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.3	6.5
10°-20°	181.3	17.6
20°-30°	242.1	23.5
30°-40°	229.8	22.3
40°-50°	158.8	15.4
50°-60°	87.8	8.5
60°-70°	43.6	4.2
70°-80°	17.2	1.7
80°-90°	1.6	0.2
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°	490.6	47.7
0°-40°	720.4	70.0
0°-60°	967.0	93.9
0°-90°	1029.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1029.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	718	718	718	718	718	
5°	757	750	707	675	669	72
15°	747	725	631	569	552	211
25°	633	630	524	435	435	289
35°	425	470	359	295	292	266
45°	258	295	182	149	140	201
55°	174	164	81	41	26	157
65°	119	86	28	1	1	115
75°	53	33	6	0	0	57
85°	0	1	0	0	0	5
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°	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1
2.5°	714.7	734.5	736.2	734.5	737.1	736.2	740.5	736.2	741.4	733.7	735.3
5°	756.9	749.2	765.5	756.9	756.9	756.1	753.4	752.6	756.1	744.9	750.0
7.5°	768.1	779.3	793.9	775.8	776.7	776.7	771.5	769.8	769.8	749.2	755.2
10°	777.5	770.6	778.5	771.5	777.5	776.7	780.2	768.9	776.7	764.6	763.8
12.5°	769.8	767.3	777.5	766.4	762.9	763.8	759.5	756.9	759.5	745.7	744.9
15°	747.4	750.0	765.5	753.4	751.7	750.0	744.9	736.2	743.2	724.1	725.1
17.5°	739.7	735.3	738.0	727.6	730.2	728.5	727.6	719.9	718.1	706.1	706.1
20°	703.5	713.0	713.0	706.1	706.1	705.2	694.0	701.0	693.2	689.8	693.2
22.5°	678.6	679.4	679.4	673.4	674.2	670.8	664.7	660.5	664.7	660.5	653.6
25°	632.9	634.6	645.0	633.7	632.1	635.4	630.4	627.7	626.9	616.5	630.4
27.5°	577.8	595.0	594.1	589.9	595.0	588.1	585.6	586.4	589.0	588.1	591.6
30°	545.9	548.5	551.1	547.7	548.5	545.9	545.9	546.7	553.7	551.1	550.2
32.5°	481.3	490.0	496.9	496.9	497.7	500.3	499.4	517.6	521.8	513.2	511.5
35°	425.4	431.4	437.4	438.3	449.5	450.3	451.2	456.4	468.4	471.1	470.1
37.5°	372.0	378.0	379.7	387.5	393.6	399.6	406.5	413.3	423.7	432.2	427.9
40°	324.7	327.2	331.5	335.0	347.0	347.0	350.4	364.3	375.4	382.4	381.5
42.5°	285.0	285.8	289.3	295.4	306.6	303.9	306.6	316.0	332.3	333.2	342.7
45°	257.5	256.6	259.2	260.0	266.9	270.4	272.1	279.0	292.8	294.5	295.4
47.5°	232.5	231.6	236.0	237.7	240.3	243.7	243.7	244.5	249.7	254.0	250.6
50°	211.8	211.8	211.8	213.5	217.9	217.0	217.9	221.3	223.9	222.2	221.3
52.5°	189.4	192.9	195.5	196.3	197.2	197.2	198.0	196.3	195.5	192.9	187.7
55°	173.9	177.4	177.4	177.4	177.4	180.9	176.6	177.4	177.4	170.5	163.7
57.5°	158.5	161.9	164.5	161.0	164.5	161.0	159.3	158.5	156.8	149.8	139.5
60°	145.6	147.3	146.4	145.6	147.3	144.6	142.9	139.5	137.7	128.3	121.5
62.5°	130.9	131.7	132.6	130.9	129.2	128.3	124.8	119.7	116.3	108.5	102.4
65°	118.8	116.3	115.4	114.5	112.8	110.3	107.6	101.6	99.0	92.2	86.1
67.5°	100.7	99.9	101.6	99.0	94.7	94.7	92.2	87.0	81.0	76.7	70.6
70°	86.1	85.2	83.5	81.0	80.1	76.7	76.7	70.6	68.9	61.1	55.9
72.5°	70.6	70.6	68.1	65.4	62.9	61.1	60.3	55.9	53.4	49.1	44.8
75°	53.4	53.4	52.5	49.9	48.2	46.5	45.7	42.2	39.6	35.3	32.8
77.5°	37.8	37.8	34.5	32.8	33.6	31.8	30.1	29.3	28.4	25.8	22.4
80°	22.4	21.6	18.9	19.8	18.9	18.9	18.1	17.2	15.5	13.7	12.0
82.5°	6.0	6.9	6.9	6.9	7.7	6.0	6.0	6.0	6.9	6.9	4.3
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
87.5°	0.9	1.7	3.5	3.5	3.5	3.5	3.5	2.6	2.6	2.6	1.7
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1
2.5°	726.8	725.9	726.8	720.7	734.5	724.1	722.4	720.7	726.8	720.7	712.1
5°	742.3	733.7	731.1	728.5	736.2	724.1	721.6	722.4	718.1	707.0	707.8
7.5°	747.4	739.7	732.0	715.6	722.4	719.9	713.0	707.8	701.0	691.5	689.8
10°	749.2	740.5	729.3	724.1	713.9	710.4	707.8	699.2	690.6	674.2	669.9
12.5°	744.0	733.7	719.9	715.6	707.8	696.6	690.6	681.9	674.2	661.3	651.8
15°	721.6	713.0	708.7	694.0	690.6	683.7	671.7	659.7	648.4	631.2	626.0
17.5°	695.8	692.3	688.0	676.8	675.9	669.1	657.9	647.5	632.9	606.3	597.6
20°	669.1	669.1	655.3	651.0	659.7	645.8	637.2	627.7	597.6	584.7	569.2
22.5°	649.3	639.8	632.1	625.2	626.0	617.4	605.3	586.4	575.2	559.7	541.7
25°	610.5	614.0	596.8	594.1	596.8	577.0	571.0	555.4	539.0	524.4	510.6
27.5°	586.4	577.0	565.8	556.3	556.3	548.5	531.3	527.8	502.9	489.1	471.9
30°	550.2	543.4	533.8	520.1	518.4	512.4	498.6	490.0	464.1	443.5	433.9
32.5°	504.6	502.0	494.3	478.8	473.6	466.7	449.5	434.9	422.9	399.6	388.4
35°	471.9	462.4	446.0	433.1	428.9	416.7	403.0	392.6	379.7	359.1	344.4
37.5°	422.9	413.3	397.8	382.4	382.4	370.3	351.3	341.0	323.0	310.9	298.8
40°	379.7	367.7	352.2	334.2	331.5	314.3	306.6	289.3	278.1	259.2	257.5
42.5°	331.5	320.3	306.6	292.8	282.5	273.8	254.0	241.1	229.1	219.6	217.0
45°	287.6	272.9	260.9	243.7	233.3	223.1	210.2	201.5	192.0	181.7	175.7
47.5°	249.7	237.7	220.4	205.0	194.6	189.4	174.8	165.3	157.6	150.7	146.4
50°	211.0	196.3	186.9	169.7	167.9	155.8	143.8	136.1	131.7	125.7	119.7
52.5°	181.7	167.9	155.0	142.1	135.2	130.9	119.7	111.9	105.9	101.6	98.2
55°	153.3	141.2	130.9	118.0	113.6	107.6	94.7	93.0	87.0	81.0	76.7
57.5°	131.7	120.5	108.5	99.9	92.2	87.9	77.5	70.6	67.1	62.0	57.7
60°	111.9	99.9	90.4	80.1	76.7	70.6	62.9	56.9	52.5	48.2	43.9
62.5°	93.9	83.5	73.2	64.6	59.4	55.9	49.9	44.8	40.5	37.0	33.6
65°	77.5	68.1	59.4	50.8	48.2	43.9	39.6	35.3	31.8	27.6	24.1
67.5°	63.7	55.1	46.5	40.5	37.8	36.2	31.0	26.7	24.1	21.6	18.1
70°	49.9	43.9	37.0	31.8	29.3	26.7	23.3	20.6	17.2	15.5	12.9
72.5°	38.8	33.6	27.6	23.3	21.6	19.8	16.4	13.7	12.0	10.3	8.6
75°	27.6	23.3	19.8	15.5	14.6	13.7	11.2	9.5	7.7	6.0	5.2
77.5°	18.9	15.5	12.0	10.3	9.5	7.7	6.9	5.2	4.3	3.5	2.6
80°	10.3	7.7	6.0	5.2	4.3	3.5	3.5	2.6	1.7	1.7	0.9
82.5°	3.5	2.6	1.7	0.9	0.9	0.9	0.9	0.9	0.9	0.0	0.9
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1
2.5°	717.3	707.8	710.4	710.4	708.7	708.7	707.0	704.4	705.2	700.0	688.8
5°	709.5	697.5	695.8	697.5	690.6	688.8	685.5	690.6	675.1	681.1	674.2
7.5°	687.1	675.9	673.4	679.4	670.8	665.7	664.7	671.7	657.9	651.0	643.3
10°	662.2	657.9	650.1	645.8	643.3	644.1	637.2	628.6	626.0	624.3	617.4
12.5°	639.8	630.4	623.4	618.3	616.5	616.5	605.3	603.6	595.9	594.1	583.9
15°	613.1	601.9	597.6	590.7	584.7	588.1	575.2	571.8	569.2	558.0	559.7
17.5°	589.9	577.8	567.5	563.1	558.0	552.8	540.7	543.4	537.3	537.3	521.8
20°	559.7	546.7	539.0	530.5	530.5	523.6	514.9	515.8	508.0	500.3	486.5
22.5°	527.8	514.1	504.6	501.2	492.5	490.8	480.5	477.9	467.6	468.4	456.4
25°	494.3	480.5	467.6	468.4	460.7	457.2	451.2	439.1	434.9	429.7	426.2
27.5°	454.7	445.2	433.9	433.1	418.5	419.3	411.7	408.2	397.8	400.4	392.6
30°	418.5	404.7	394.4	391.8	385.7	384.1	372.0	366.8	368.5	361.6	357.3
32.5°	381.5	360.8	356.5	351.3	347.9	343.6	335.0	338.4	330.7	332.3	325.5
35°	332.3	323.8	312.6	312.6	309.1	305.7	299.7	303.1	295.4	291.9	285.0
37.5°	291.0	283.3	272.1	275.6	269.6	264.4	259.2	260.0	253.2	252.3	245.3
40°	246.3	242.0	234.3	234.3	229.9	229.9	227.3	224.7	220.4	215.2	207.5
42.5°	204.1	200.6	197.2	198.0	192.0	197.2	190.3	194.6	180.9	179.9	174.8
45°	173.0	165.3	166.2	162.8	159.3	161.0	155.0	156.8	149.0	147.3	142.1
47.5°	140.4	137.7	132.6	130.9	130.9	128.3	125.7	124.8	121.5	117.1	110.3
50°	115.4	105.9	104.2	101.6	99.9	99.9	96.4	91.2	92.2	87.9	81.0
52.5°	90.4	82.7	79.2	78.3	75.0	73.2	68.9	65.4	62.9	61.1	56.9
55°	69.8	62.9	58.6	58.6	53.4	53.4	47.4	44.8	41.3	37.8	35.3
57.5°	52.5	49.1	44.8	41.3	39.6	35.3	31.8	27.6	24.9	19.8	16.4
60°	39.6	36.2	31.8	29.3	27.6	23.3	18.9	15.5	9.5	7.7	6.9
62.5°	29.3	25.8	21.6	19.8	18.1	14.6	10.3	5.2	2.6	2.6	2.6
65°	21.6	17.2	13.7	12.0	10.3	7.7	3.5	1.7	0.9	0.9	0.9
67.5°	14.6	11.2	7.7	6.9	5.2	2.6	0.9	0.9	0.9	0.9	0.9
70°	9.5	6.9	3.5	2.6	1.7	0.9	0.9	0.9	0.9	0.9	0.9
72.5°	6.0	3.5	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	3.5	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9
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: P563791

CATALOG NUMBER: LD4C15D010 EX4C15D2W 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	718.1	718.1	718.1	718.1	718.1	718.1	718.1	718.1
2.5°	701.0	694.8	698.3	690.6	694.0	700.0	695.8	697.5
5°	676.8	673.4	669.1	657.9	666.5	673.4	669.9	669.1
7.5°	651.0	638.9	645.0	641.5	639.8	646.6	638.9	647.5
10°	624.3	615.7	614.8	608.8	608.8	614.0	614.8	609.6
12.5°	584.7	580.4	580.4	579.5	578.7	583.9	584.7	582.1
15°	556.3	554.6	550.2	549.4	544.2	551.9	552.8	551.9
17.5°	521.8	522.6	518.4	518.4	521.8	524.4	517.6	524.4
20°	498.6	494.3	492.5	484.8	489.1	493.4	493.4	494.3
22.5°	465.0	458.1	460.7	456.4	453.8	459.8	459.8	462.4
25°	427.1	427.1	428.9	426.2	427.9	431.4	428.9	434.9
27.5°	390.9	394.4	394.4	390.9	392.6	403.0	407.3	400.4
30°	357.3	358.3	360.8	359.1	364.3	367.7	366.8	372.0
32.5°	319.5	323.8	325.5	323.0	324.7	332.3	328.0	327.2
35°	290.2	282.5	281.6	282.5	285.8	287.6	285.8	291.9
37.5°	248.0	245.3	242.0	242.8	245.3	248.9	250.6	254.9
40°	207.5	204.1	204.1	203.2	200.6	210.2	210.2	210.2
42.5°	172.2	171.3	167.0	167.0	170.5	173.0	171.3	177.4
45°	141.2	137.7	135.2	135.2	137.7	137.7	140.4	139.5
47.5°	111.1	107.6	108.5	105.9	108.5	111.9	107.6	108.5
50°	83.5	83.5	81.8	83.5	82.7	83.5	81.8	80.1
52.5°	56.9	64.6	65.4	62.0	54.2	47.4	43.0	46.5
55°	32.8	29.3	29.3	28.4	26.7	25.8	23.3	25.8
57.5°	16.4	14.6	14.6	14.6	13.7	12.9	11.2	11.2
60°	6.9	6.0	6.0	5.2	4.3	3.5	2.6	3.5
62.5°	2.6	1.7	1.7	1.7	1.7	1.7	1.7	1.7
65°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
67.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
70°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)