

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: P#

Luminaire Tested: **LD4C08D010 EX4C089030 4LBSQLWWH**

Issue Date: 2/18/2022

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P#
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: LD4C08D010 EX4C089030 4LBSQLWWH
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

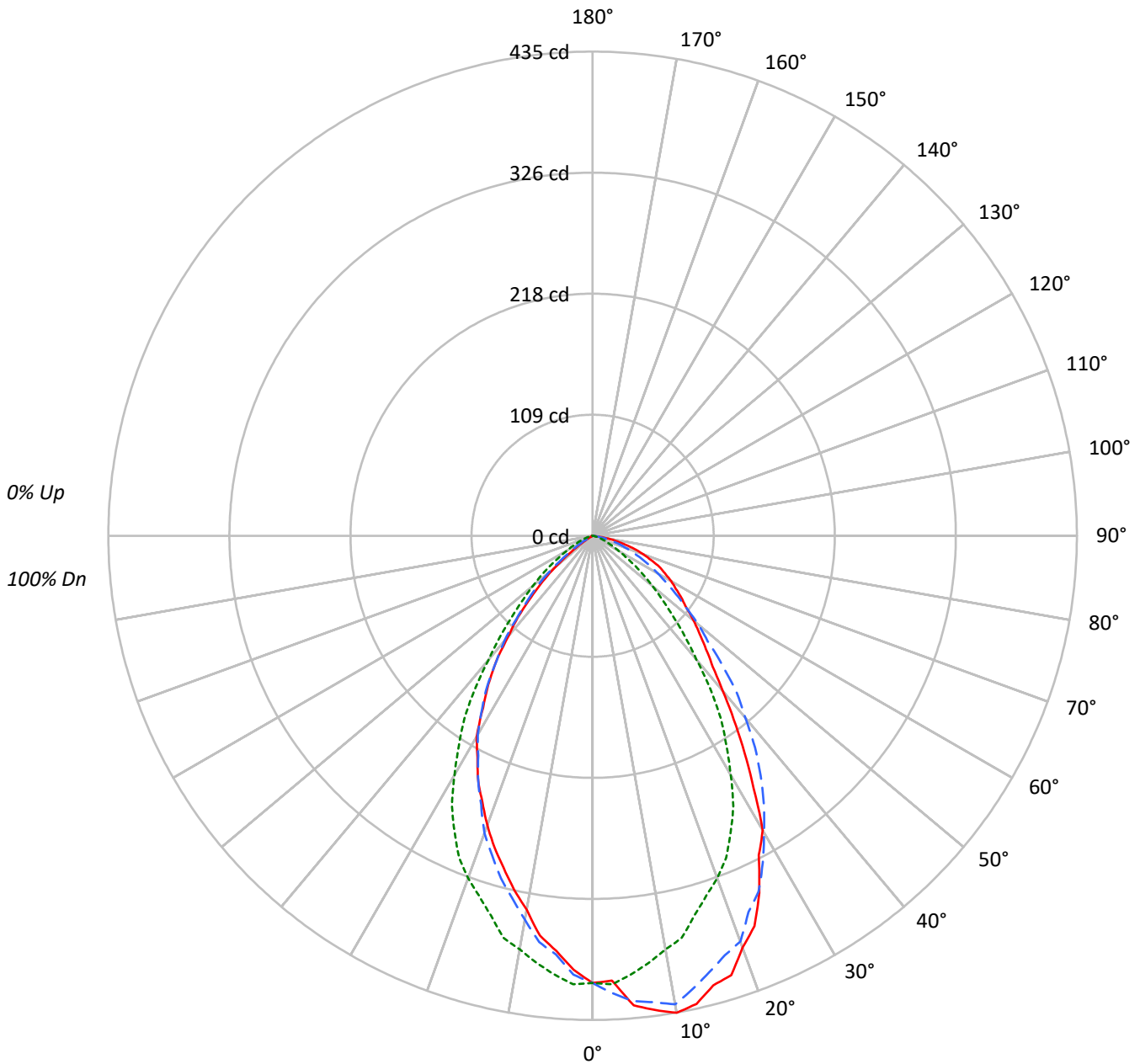
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 576.0 lumens
Efficiency: N/A
Efficacy: 58.2 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): 9.9
Input Voltage (V):
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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	38769	38769	38769
5°	41019	38317	36263
10°	42630	36967	33420
15°	41775	35282	30847
20°	40426	33597	28402
25°	37699	31236	25903
30°	34038	27642	23197
35°	28034	23664	19235
40°	22886	18264	14813
45°	19663	13878	10657
50°	17788	10568	6725
55°	16368	7621	2439
60°	15708	5210	367
65°	15183	3516	114
70°	13598	2454	141
75°	11147	1268	0
80°	6946	556	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.6	6.5
10°-20°	101.4	17.6
20°-30°	135.4	23.5
30°-40°	128.6	22.3
40°-50°	88.9	15.4
50°-60°	49.1	8.5
60°-70°	24.4	4.2
70°-80°	9.6	1.7
80°-90°	0.9	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°	274.5	47.7
0°-40°	403.1	70.0
0°-60°	541.1	93.9
0°-90°	576.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	576.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	402	402	402	402	402	
5°	424	420	396	378	374	41
15°	418	406	353	318	309	118
25°	354	353	293	243	243	161
35°	238	263	201	165	163	149
45°	144	165	102	83	78	112
55°	97	92	45	23	14	88
65°	66	48	15	0	0	65
75°	30	18	3	0	0	32
85°	0	0	0	0	0	3
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°	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8
2.5°	399.9	411.0	411.9	411.0	412.4	411.9	414.4	411.9	414.9	410.5	411.5
5°	423.5	419.2	428.3	423.5	423.5	423.0	421.6	421.1	423.0	416.8	419.7
7.5°	429.8	436.1	444.2	434.1	434.6	434.6	431.7	430.8	430.8	419.2	422.6
10°	435.1	431.2	435.6	431.7	435.1	434.6	436.5	430.3	434.6	427.9	427.4
12.5°	430.8	429.3	435.1	428.8	426.9	427.4	425.0	423.5	425.0	417.3	416.8
15°	418.2	419.7	428.3	421.6	420.6	419.7	416.8	411.9	415.8	405.2	405.7
17.5°	413.9	411.5	412.9	407.1	408.6	407.6	407.1	402.8	401.8	395.1	395.1
20°	393.7	398.9	398.9	395.1	395.1	394.6	388.4	392.2	387.9	385.9	387.9
22.5°	379.7	380.2	380.2	376.8	377.3	375.3	372.0	369.6	372.0	369.6	365.7
25°	354.1	355.1	360.9	354.6	353.7	355.6	352.7	351.2	350.8	345.0	352.7
27.5°	323.3	332.9	332.5	330.0	332.9	329.1	327.6	328.1	329.6	329.1	331.0
30°	305.5	306.9	308.4	306.4	306.9	305.5	305.5	306.0	309.8	308.4	307.9
32.5°	269.3	274.1	278.0	278.0	278.5	279.9	279.5	289.6	292.0	287.2	286.2
35°	238.0	241.4	244.8	245.2	251.5	252.0	252.5	255.4	262.1	263.6	263.1
37.5°	208.2	211.5	212.5	216.8	220.2	223.6	227.4	231.3	237.1	241.9	239.5
40°	181.7	183.1	185.5	187.4	194.2	194.2	196.1	203.8	210.1	213.9	213.4
42.5°	159.5	160.0	161.9	165.3	171.5	170.1	171.5	176.8	186.0	186.5	191.8
45°	144.1	143.6	145.0	145.5	149.4	151.3	152.3	156.1	163.8	164.8	165.3
47.5°	130.1	129.6	132.0	133.0	134.4	136.3	136.3	136.8	139.7	142.1	140.2
50°	118.5	118.5	118.5	119.5	121.9	121.4	121.9	123.8	125.3	124.3	123.8
52.5°	106.0	107.9	109.4	109.9	110.3	110.3	110.8	109.9	109.4	107.9	105.0
55°	97.3	99.3	99.3	99.3	99.3	101.2	98.8	99.3	99.3	95.4	91.6
57.5°	88.7	90.6	92.0	90.1	92.0	90.1	89.1	88.7	87.7	83.8	78.1
60°	81.4	82.4	81.9	81.4	82.4	80.9	80.0	78.1	77.1	71.8	67.9
62.5°	73.2	73.7	74.2	73.2	72.3	71.8	69.9	67.0	65.0	60.7	57.3
65°	66.5	65.0	64.6	64.1	63.1	61.7	60.2	56.9	55.4	51.6	48.2
67.5°	56.4	55.9	56.9	55.4	53.0	53.0	51.6	48.7	45.3	42.9	39.5
70°	48.2	47.7	46.7	45.3	44.8	42.9	42.9	39.5	38.5	34.2	31.3
72.5°	39.5	39.5	38.1	36.6	35.2	34.2	33.7	31.3	29.9	27.5	25.0
75°	29.9	29.9	29.4	27.9	27.0	26.0	25.5	23.6	22.2	19.8	18.3
77.5°	21.2	21.2	19.3	18.3	18.8	17.8	16.9	16.4	15.9	14.5	12.5
80°	12.5	12.0	10.6	11.1	10.6	10.6	10.1	9.6	8.7	7.7	6.7
82.5°	3.4	3.9	3.9	3.9	4.3	3.4	3.4	3.4	3.9	3.9	2.4
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
87.5°	0.5	1.0	1.9	1.9	1.9	1.9	1.9	1.5	1.5	1.5	1.0
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°	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8
2.5°	406.7	406.2	406.7	403.3	411.0	405.2	404.2	403.3	406.7	403.3	398.5
5°	415.3	410.5	409.1	407.6	411.9	405.2	403.8	404.2	401.8	395.6	396.1
7.5°	418.2	413.9	409.6	400.4	404.2	402.8	398.9	396.1	392.2	386.9	385.9
10°	419.2	414.4	408.1	405.2	399.4	397.5	396.1	391.2	386.4	377.3	374.9
12.5°	416.3	410.5	402.8	400.4	396.1	389.8	386.4	381.6	377.3	370.0	364.7
15°	403.8	398.9	396.5	388.4	386.4	382.6	375.8	369.1	362.8	353.2	350.3
17.5°	389.3	387.4	385.0	378.7	378.2	374.4	368.1	362.3	354.1	339.2	334.4
20°	374.4	374.4	366.7	364.3	369.1	361.4	356.5	351.2	334.4	327.2	318.5
22.5°	363.3	358.0	353.7	349.8	350.3	345.5	338.7	328.1	321.8	313.2	303.1
25°	341.6	343.5	333.9	332.5	333.9	322.8	319.5	310.8	301.6	293.4	285.7
27.5°	328.1	322.8	316.6	311.3	311.3	306.9	297.3	295.4	281.4	273.7	264.0
30°	307.9	304.0	298.7	291.0	290.1	286.7	279.0	274.1	259.7	248.1	242.8
32.5°	282.3	280.9	276.6	267.9	265.0	261.1	251.5	243.3	236.6	223.6	217.3
35°	264.0	258.7	249.6	242.4	239.9	233.2	225.5	219.7	212.5	200.9	192.7
37.5°	236.6	231.3	222.6	213.9	213.9	207.2	196.6	190.8	180.7	173.9	167.2
40°	212.5	205.7	197.1	187.0	185.5	175.9	171.5	161.9	155.6	145.0	144.1
42.5°	185.5	179.2	171.5	163.8	158.0	153.2	142.1	134.9	128.2	122.9	121.4
45°	160.9	152.7	146.0	136.3	130.6	124.8	117.6	112.8	107.4	101.7	98.3
47.5°	139.7	133.0	123.3	114.7	108.9	106.0	97.8	92.5	88.2	84.3	81.9
50°	118.1	109.9	104.6	94.9	93.9	87.2	80.5	76.1	73.7	70.4	67.0
52.5°	101.7	93.9	86.7	79.5	75.6	73.2	67.0	62.6	59.3	56.9	54.9
55°	85.8	79.0	73.2	66.0	63.6	60.2	53.0	52.0	48.7	45.3	42.9
57.5°	73.7	67.4	60.7	55.9	51.6	49.2	43.4	39.5	37.6	34.7	32.3
60°	62.6	55.9	50.6	44.8	42.9	39.5	35.2	31.8	29.4	27.0	24.6
62.5°	52.5	46.7	41.0	36.1	33.2	31.3	27.9	25.0	22.7	20.7	18.8
65°	43.4	38.1	33.2	28.4	27.0	24.6	22.2	19.8	17.8	15.4	13.5
67.5°	35.7	30.8	26.0	22.7	21.2	20.2	17.3	14.9	13.5	12.0	10.1
70°	27.9	24.6	20.7	17.8	16.4	14.9	13.0	11.6	9.6	8.7	7.2
72.5°	21.7	18.8	15.4	13.0	12.0	11.1	9.2	7.7	6.7	5.8	4.8
75°	15.4	13.0	11.1	8.7	8.2	7.7	6.3	5.3	4.3	3.4	2.9
77.5°	10.6	8.7	6.7	5.8	5.3	4.3	3.9	2.9	2.4	1.9	1.5
80°	5.8	4.3	3.4	2.9	2.4	1.9	1.9	1.5	1.0	1.0	0.5
82.5°	1.9	1.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5
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°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	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°	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8
2.5°	401.4	396.1	397.5	397.5	396.5	396.5	395.6	394.1	394.6	391.7	385.5
5°	397.0	390.3	389.3	390.3	386.4	385.5	383.5	386.4	377.7	381.1	377.3
7.5°	384.5	378.2	376.8	380.2	375.3	372.4	372.0	375.8	368.1	364.3	359.9
10°	370.5	368.1	363.8	361.4	359.9	360.4	356.5	351.7	350.3	349.3	345.5
12.5°	358.0	352.7	348.8	346.0	345.0	345.0	338.7	337.8	333.4	332.5	326.7
15°	343.0	336.8	334.4	330.5	327.2	329.1	321.8	319.9	318.5	312.2	313.2
17.5°	330.0	323.3	317.5	315.1	312.2	309.3	302.6	304.0	300.7	300.7	292.0
20°	313.2	306.0	301.6	296.8	296.8	292.9	288.1	288.6	284.3	279.9	272.2
22.5°	295.4	287.6	282.3	280.4	275.6	274.6	268.9	267.4	261.6	262.1	255.4
25°	276.6	268.9	261.6	262.1	257.8	255.9	252.5	245.7	243.3	240.4	238.5
27.5°	254.4	249.1	242.8	242.4	234.2	234.6	230.3	228.4	222.6	224.0	219.7
30°	234.2	226.5	220.7	219.2	215.9	214.9	208.2	205.2	206.2	202.4	200.0
32.5°	213.4	201.9	199.5	196.6	194.7	192.2	187.4	189.4	185.0	186.0	182.1
35°	186.0	181.2	174.9	174.9	173.0	171.0	167.7	169.6	165.3	163.3	159.5
37.5°	162.9	158.5	152.3	154.2	150.8	147.9	145.0	145.5	141.7	141.2	137.3
40°	137.8	135.4	131.1	131.1	128.6	128.6	127.2	125.8	123.3	120.5	116.1
42.5°	114.2	112.3	110.3	110.8	107.4	110.3	106.5	108.9	101.2	100.7	97.8
45°	96.8	92.5	93.0	91.1	89.1	90.1	86.7	87.7	83.4	82.4	79.5
47.5°	78.5	77.1	74.2	73.2	73.2	71.8	70.4	69.9	67.9	65.5	61.7
50°	64.6	59.3	58.3	56.9	55.9	55.9	54.0	51.1	51.6	49.2	45.3
52.5°	50.6	46.2	44.3	43.9	41.9	41.0	38.5	36.6	35.2	34.2	31.8
55°	39.0	35.2	32.8	32.8	29.9	29.9	26.5	25.0	23.1	21.2	19.8
57.5°	29.4	27.5	25.0	23.1	22.2	19.8	17.8	15.4	14.0	11.1	9.2
60°	22.2	20.2	17.8	16.4	15.4	13.0	10.6	8.7	5.3	4.3	3.9
62.5°	16.4	14.5	12.0	11.1	10.1	8.2	5.8	2.9	1.5	1.5	1.5
65°	12.0	9.6	7.7	6.7	5.8	4.3	1.9	1.0	0.5	0.5	0.5
67.5°	8.2	6.3	4.3	3.9	2.9	1.5	0.5	0.5	0.5	0.5	0.5
70°	5.3	3.9	1.9	1.5	1.0	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	3.4	1.9	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.9	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.5	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	0.5	0.5	0.5
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°	401.8	401.8	401.8	401.8	401.8	401.8	401.8	401.8
2.5°	392.2	388.8	390.8	386.4	388.4	391.7	389.3	390.3
5°	378.7	376.8	374.4	368.1	372.9	376.8	374.9	374.4
7.5°	364.3	357.5	360.9	359.0	358.0	361.8	357.5	362.3
10°	349.3	344.5	344.0	340.7	340.7	343.5	344.0	341.1
12.5°	327.2	324.8	324.8	324.3	323.8	326.7	327.2	325.7
15°	311.3	310.3	307.9	307.4	304.5	308.8	309.3	308.8
17.5°	292.0	292.5	290.1	290.1	292.0	293.4	289.6	293.4
20°	279.0	276.6	275.6	271.3	273.7	276.1	276.1	276.6
22.5°	260.2	256.3	257.8	255.4	253.9	257.3	257.3	258.7
25°	239.0	239.0	239.9	238.5	239.5	241.4	239.9	243.3
27.5°	218.7	220.7	220.7	218.7	219.7	225.5	227.9	224.0
30°	200.0	200.4	201.9	200.9	203.8	205.7	205.2	208.2
32.5°	178.8	181.2	182.1	180.7	181.7	186.0	183.6	183.1
35°	162.4	158.0	157.6	158.0	160.0	160.9	160.0	163.3
37.5°	138.8	137.3	135.4	135.9	137.3	139.3	140.2	142.6
40°	116.1	114.2	114.2	113.7	112.3	117.6	117.6	117.6
42.5°	96.4	95.9	93.5	93.5	95.4	96.8	95.9	99.3
45°	79.0	77.1	75.6	75.6	77.1	77.1	78.5	78.1
47.5°	62.2	60.2	60.7	59.3	60.7	62.6	60.2	60.7
50°	46.7	46.7	45.8	46.7	46.2	46.7	45.8	44.8
52.5°	31.8	36.1	36.6	34.7	30.4	26.5	24.1	26.0
55°	18.3	16.4	16.4	15.9	14.9	14.5	13.0	14.5
57.5°	9.2	8.2	8.2	8.2	7.7	7.2	6.3	6.3
60°	3.9	3.4	3.4	2.9	2.4	1.9	1.5	1.9
62.5°	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
65°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
67.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)