

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 EX4C089027 4LBSQLWWLI**

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 EX4C089027 4LBSQLWWLI
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 2700K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

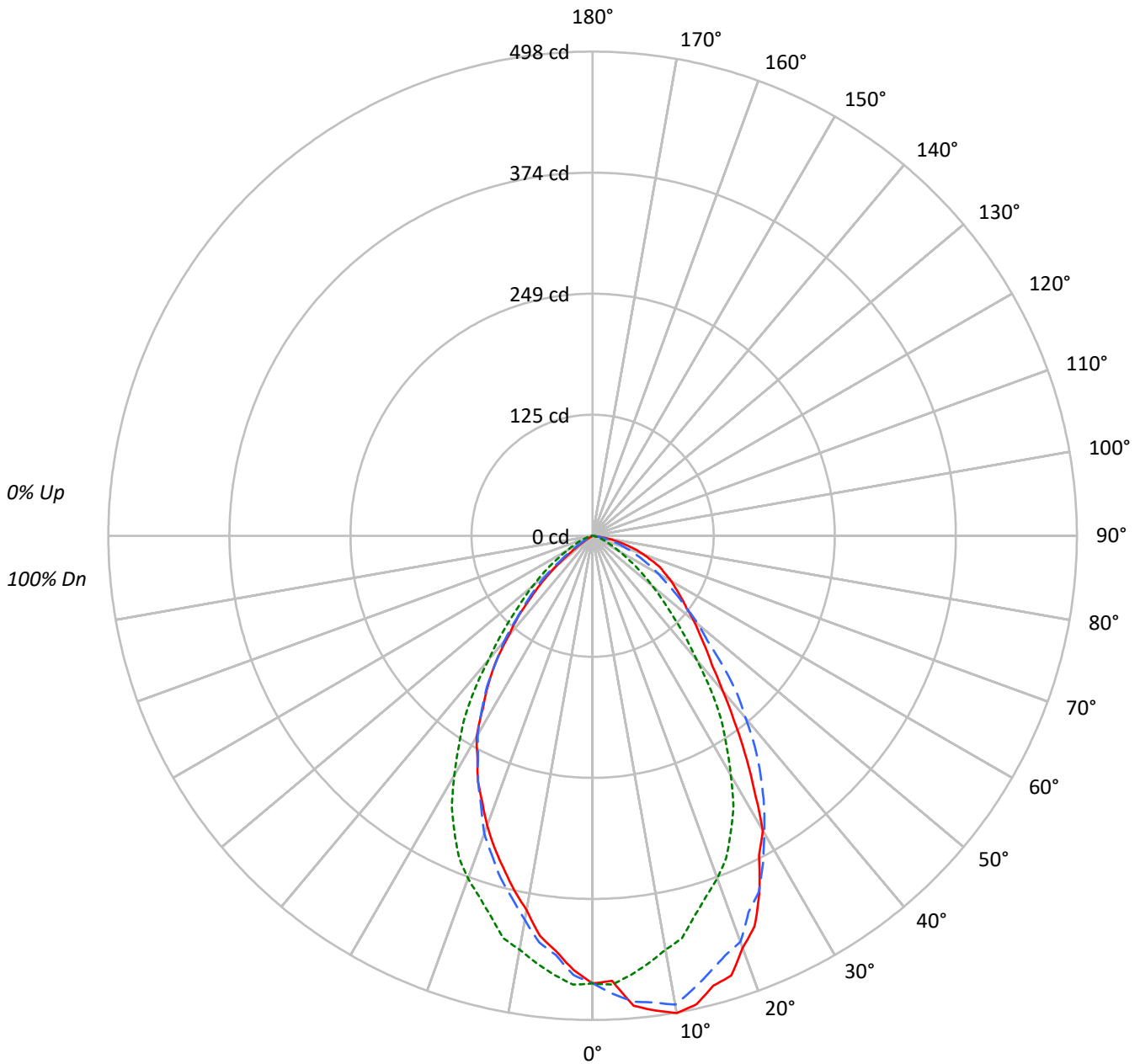
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 660.0 lumens
Efficiency: N/A
Efficacy: 66.7 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 (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									
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°	44423	44423	44423
5°	47005	43905	41552
10°	48842	42356	38299
15°	47869	40427	35352
20°	46320	38495	32540
25°	43203	35793	29682
30°	38996	31676	26573
35°	32122	27116	22051
40°	26212	20934	16966
45°	22529	15897	12199
50°	20385	12099	7701
55°	18757	8731	2793
60°	18005	5963	425
65°	17397	4041	137
70°	15573	2793	169
75°	12750	1454	0
80°	8001	611	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.1	6.5
10°-20°	116.2	17.6
20°-30°	155.2	23.5
30°-40°	147.3	22.3
40°-50°	101.8	15.4
50°-60°	56.3	8.5
60°-70°	28.0	4.2
70°-80°	11.0	1.7
80°-90°	1.1	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°	314.6	47.7
0°-40°	461.9	70.0
0°-60°	620.0	93.9
0°-90°	660.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	660.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	460	460	460	460	460	
5°	485	481	453	433	429	46
15°	479	465	405	365	354	136
25°	406	404	336	279	279	185
35°	273	301	230	189	187	171
45°	165	189	116	96	89	129
55°	112	105	52	26	17	100
65°	76	55	18	1	1	74
75°	34	21	4	0	0	36
85°	0	1	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°	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4
2.5°	458.2	470.9	472.0	470.9	472.6	472.0	474.8	472.0	475.4	470.4	471.5
5°	485.3	480.3	490.8	485.3	485.3	484.7	483.1	482.5	484.7	477.6	480.9
7.5°	492.5	499.6	509.0	497.4	498.0	498.0	494.7	493.6	493.6	480.3	484.2
10°	498.5	494.1	499.1	494.7	498.5	498.0	500.2	493.0	498.0	490.3	489.7
12.5°	493.6	491.9	498.5	491.4	489.2	489.7	486.9	485.3	486.9	478.1	477.6
15°	479.2	480.9	490.8	483.1	482.0	480.9	477.6	472.0	476.5	464.3	464.9
17.5°	474.3	471.5	473.1	466.5	468.2	467.1	466.5	461.6	460.4	452.7	452.7
20°	451.1	457.1	457.1	452.7	452.7	452.2	445.0	449.4	444.4	442.2	444.4
22.5°	435.0	435.6	435.6	431.7	432.3	430.1	426.2	423.4	426.2	423.4	419.0
25°	405.8	406.9	413.5	406.3	405.2	407.4	404.1	402.5	401.9	395.3	404.1
27.5°	370.5	381.5	380.9	378.2	381.5	377.1	375.4	376.0	377.6	377.1	379.3
30°	350.0	351.7	353.3	351.1	351.7	350.0	350.0	350.6	355.0	353.3	352.8
32.5°	308.6	314.1	318.6	318.6	319.1	320.8	320.2	331.8	334.6	329.1	327.9
35°	272.7	276.6	280.5	281.0	288.2	288.7	289.3	292.6	300.3	302.0	301.4
37.5°	238.5	242.4	243.5	248.4	252.3	256.2	260.6	265.0	271.6	277.1	274.4
40°	208.1	209.8	212.6	214.8	222.5	222.5	224.7	233.5	240.7	245.1	244.6
42.5°	182.7	183.3	185.5	189.4	196.5	194.9	196.5	202.6	213.1	213.7	219.7
45°	165.1	164.5	166.2	166.7	171.2	173.4	174.5	178.9	187.7	188.8	189.4
47.5°	149.1	148.5	151.3	152.4	154.0	156.2	156.2	156.8	160.1	162.9	160.7
50°	135.8	135.8	135.8	136.9	139.7	139.1	139.7	141.9	143.5	142.4	141.9
52.5°	121.5	123.7	125.3	125.9	126.4	126.4	127.0	125.9	125.3	123.7	120.3
55°	111.5	113.7	113.7	113.7	113.7	115.9	113.2	113.7	113.7	109.3	104.9
57.5°	101.6	103.8	105.4	103.2	105.4	103.2	102.1	101.6	100.5	96.1	89.4
60°	93.3	94.4	93.9	93.3	94.4	92.7	91.6	89.4	88.3	82.3	77.8
62.5°	83.9	84.5	85.0	83.9	82.8	82.3	80.1	76.7	74.5	69.6	65.7
65°	76.2	74.5	74.0	73.4	72.3	70.7	69.0	65.1	63.5	59.1	55.2
67.5°	64.6	64.0	65.1	63.5	60.7	60.7	59.1	55.8	51.9	49.1	45.3
70°	55.2	54.7	53.6	51.9	51.3	49.1	49.1	45.3	44.2	39.2	35.9
72.5°	45.3	45.3	43.6	42.0	40.3	39.2	38.7	35.9	34.2	31.5	28.7
75°	34.2	34.2	33.7	32.0	30.9	29.8	29.3	27.1	25.4	22.6	21.0
77.5°	24.3	24.3	22.1	21.0	21.5	20.4	19.3	18.8	18.2	16.6	14.4
80°	14.4	13.8	12.2	12.7	12.2	12.2	11.6	11.0	9.9	8.8	7.7
82.5°	3.9	4.4	4.4	4.4	5.0	3.9	3.9	3.9	4.4	4.4	2.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
87.5°	0.6	1.1	2.2	2.2	2.2	2.2	2.2	1.7	1.7	1.7	1.1
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°	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4
2.5°	466.0	465.4	466.0	462.1	470.9	464.3	463.2	462.1	466.0	462.1	456.6
5°	475.9	470.4	468.7	467.1	472.0	464.3	462.7	463.2	460.4	453.3	453.8
7.5°	479.2	474.3	469.3	458.8	463.2	461.6	457.1	453.8	449.4	443.3	442.2
10°	480.3	474.8	467.6	464.3	457.7	455.5	453.8	448.3	442.8	432.3	429.5
12.5°	477.0	470.4	461.6	458.8	453.8	446.6	442.8	437.2	432.3	424.0	417.9
15°	462.7	457.1	454.4	445.0	442.8	438.3	430.6	422.9	415.7	404.7	401.4
17.5°	446.1	443.9	441.1	433.9	433.4	429.0	421.8	415.2	405.8	388.7	383.1
20°	429.0	429.0	420.1	417.4	422.9	414.1	408.5	402.5	383.1	374.9	364.9
22.5°	416.3	410.2	405.2	400.8	401.4	395.8	388.1	376.0	368.8	358.9	347.3
25°	391.4	393.6	382.6	380.9	382.6	369.9	366.0	356.1	345.6	336.2	327.4
27.5°	376.0	369.9	362.7	356.7	356.7	351.7	340.6	338.4	322.4	313.6	302.5
30°	352.8	348.4	342.3	333.5	332.4	328.5	319.7	314.1	297.6	284.3	278.2
32.5°	323.5	321.9	316.9	307.0	303.7	299.2	288.2	278.8	271.1	256.2	249.0
35°	302.5	296.5	286.0	277.7	274.9	267.2	258.4	251.7	243.5	230.2	220.8
37.5°	271.1	265.0	255.1	245.1	245.1	237.4	225.3	218.6	207.0	199.3	191.6
40°	243.5	235.7	225.8	214.2	212.6	201.5	196.5	185.5	178.3	166.2	165.1
42.5°	212.6	205.4	196.5	187.7	181.1	175.6	162.9	154.6	146.9	140.8	139.1
45°	184.4	175.0	167.3	156.2	149.6	143.0	134.7	129.2	123.1	116.5	112.6
47.5°	160.1	152.4	141.3	131.4	124.8	121.5	112.1	106.0	101.0	96.6	93.9
50°	135.3	125.9	119.8	108.8	107.7	99.9	92.2	87.2	84.5	80.6	76.7
52.5°	116.5	107.7	99.4	91.1	86.7	83.9	76.7	71.8	67.9	65.1	62.9
55°	98.3	90.5	83.9	75.6	72.9	69.0	60.7	59.6	55.8	51.9	49.1
57.5°	84.5	77.3	69.6	64.0	59.1	56.3	49.7	45.3	43.1	39.8	37.0
60°	71.8	64.0	58.0	51.3	49.1	45.3	40.3	36.4	33.7	30.9	28.2
62.5°	60.2	53.6	46.9	41.4	38.1	35.9	32.0	28.7	26.0	23.7	21.5
65°	49.7	43.6	38.1	32.6	30.9	28.2	25.4	22.6	20.4	17.7	15.5
67.5°	40.9	35.3	29.8	26.0	24.3	23.2	19.9	17.1	15.5	13.8	11.6
70°	32.0	28.2	23.7	20.4	18.8	17.1	14.9	13.3	11.0	9.9	8.3
72.5°	24.9	21.5	17.7	14.9	13.8	12.7	10.5	8.8	7.7	6.6	5.5
75°	17.7	14.9	12.7	9.9	9.4	8.8	7.2	6.1	5.0	3.9	3.3
77.5°	12.2	9.9	7.7	6.6	6.1	5.0	4.4	3.3	2.8	2.2	1.7
80°	6.6	5.0	3.9	3.3	2.8	2.2	2.2	1.7	1.1	1.1	0.6
82.5°	2.2	1.7	1.1	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.6
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°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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°	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4
2.5°	459.9	453.8	455.5	455.5	454.4	454.4	453.3	451.6	452.2	448.8	441.7
5°	454.9	447.2	446.1	447.2	442.8	441.7	439.5	442.8	432.8	436.7	432.3
7.5°	440.6	433.4	431.7	435.6	430.1	426.8	426.2	430.6	421.8	417.4	412.4
10°	424.5	421.8	416.8	414.1	412.4	413.0	408.5	403.0	401.4	400.3	395.8
12.5°	410.2	404.1	399.7	396.4	395.3	395.3	388.1	387.0	382.0	380.9	374.3
15°	393.1	385.9	383.1	378.7	374.9	377.1	368.8	366.6	364.9	357.8	358.9
17.5°	378.2	370.5	363.8	361.1	357.8	354.4	346.7	348.4	344.5	344.5	334.6
20°	358.9	350.6	345.6	340.1	340.1	335.7	330.2	330.7	325.7	320.8	311.9
22.5°	338.4	329.6	323.5	321.3	315.8	314.7	308.1	306.4	299.8	300.3	292.6
25°	316.9	308.1	299.8	300.3	295.4	293.2	289.3	281.6	278.8	275.5	273.3
27.5°	291.5	285.4	278.2	277.7	268.3	268.9	263.9	261.7	255.1	256.7	251.7
30°	268.3	259.5	252.9	251.2	247.3	246.2	238.5	235.2	236.3	231.9	229.1
32.5°	244.6	231.3	228.6	225.3	223.0	220.3	214.8	217.0	212.0	213.1	208.7
35°	213.1	207.6	200.4	200.4	198.2	196.0	192.1	194.3	189.4	187.2	182.7
37.5°	186.6	181.6	174.5	176.7	172.8	169.5	166.2	166.7	162.3	161.8	157.3
40°	157.9	155.1	150.2	150.2	147.4	147.4	145.7	144.1	141.3	138.0	133.0
42.5°	130.8	128.6	126.4	127.0	123.1	126.4	122.0	124.8	115.9	115.4	112.1
45°	111.0	106.0	106.5	104.3	102.1	103.2	99.4	100.5	95.5	94.4	91.1
47.5°	90.0	88.3	85.0	83.9	83.9	82.3	80.6	80.1	77.8	75.1	70.7
50°	74.0	67.9	66.8	65.1	64.0	64.0	61.8	58.5	59.1	56.3	51.9
52.5°	58.0	53.0	50.8	50.2	48.0	46.9	44.2	42.0	40.3	39.2	36.4
55°	44.7	40.3	37.5	37.5	34.2	34.2	30.4	28.7	26.5	24.3	22.6
57.5°	33.7	31.5	28.7	26.5	25.4	22.6	20.4	17.7	16.0	12.7	10.5
60°	25.4	23.2	20.4	18.8	17.7	14.9	12.2	9.9	6.1	5.0	4.4
62.5°	18.8	16.6	13.8	12.7	11.6	9.4	6.6	3.3	1.7	1.7	1.7
65°	13.8	11.0	8.8	7.7	6.6	5.0	2.2	1.1	0.6	0.6	0.6
67.5°	9.4	7.2	5.0	4.4	3.3	1.7	0.6	0.6	0.6	0.6	0.6
70°	6.1	4.4	2.2	1.7	1.1	0.6	0.6	0.6	0.6	0.6	0.6
72.5°	3.9	2.2	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	2.2	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.6	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	0.6	0.6	0.6
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°	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4
2.5°	449.4	445.5	447.7	442.8	445.0	448.8	446.1	447.2
5°	433.9	431.7	429.0	421.8	427.3	431.7	429.5	429.0
7.5°	417.4	409.6	413.5	411.3	410.2	414.6	409.6	415.2
10°	400.3	394.7	394.2	390.3	390.3	393.6	394.2	390.9
12.5°	374.9	372.1	372.1	371.6	371.0	374.3	374.9	373.2
15°	356.7	355.5	352.8	352.2	348.9	353.9	354.4	353.9
17.5°	334.6	335.1	332.4	332.4	334.6	336.2	331.8	336.2
20°	319.7	316.9	315.8	310.8	313.6	316.4	316.4	316.9
22.5°	298.1	293.7	295.4	292.6	290.9	294.8	294.8	296.5
25°	273.8	273.8	274.9	273.3	274.4	276.6	274.9	278.8
27.5°	250.6	252.9	252.9	250.6	251.7	258.4	261.1	256.7
30°	229.1	229.7	231.3	230.2	233.5	235.7	235.2	238.5
32.5°	204.8	207.6	208.7	207.0	208.1	213.1	210.3	209.8
35°	186.1	181.1	180.5	181.1	183.3	184.4	183.3	187.2
37.5°	159.0	157.3	155.1	155.7	157.3	159.6	160.7	163.4
40°	133.0	130.8	130.8	130.3	128.6	134.7	134.7	134.7
42.5°	110.4	109.9	107.1	107.1	109.3	111.0	109.9	113.7
45°	90.5	88.3	86.7	86.7	88.3	88.3	90.0	89.4
47.5°	71.2	69.0	69.6	67.9	69.6	71.8	69.0	69.6
50°	53.6	53.6	52.5	53.6	53.0	53.6	52.5	51.3
52.5°	36.4	41.4	42.0	39.8	34.8	30.4	27.6	29.8
55°	21.0	18.8	18.8	18.2	17.1	16.6	14.9	16.6
57.5°	10.5	9.4	9.4	9.4	8.8	8.3	7.2	7.2
60°	4.4	3.9	3.9	3.3	2.8	2.2	1.7	2.2
62.5°	1.7	1.1	1.1	1.1	1.1	1.1	1.1	1.1
65°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
67.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
70°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)