

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: P563782

Luminaire Tested: **LD4C10D010 EX4C10D2W 4LBSQLWWH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P563782
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: LD4C10D010 EX4C10D2W 4LBSQLWWH
Description: 4 INCH 1000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBSQLWW TRIM WITH H FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

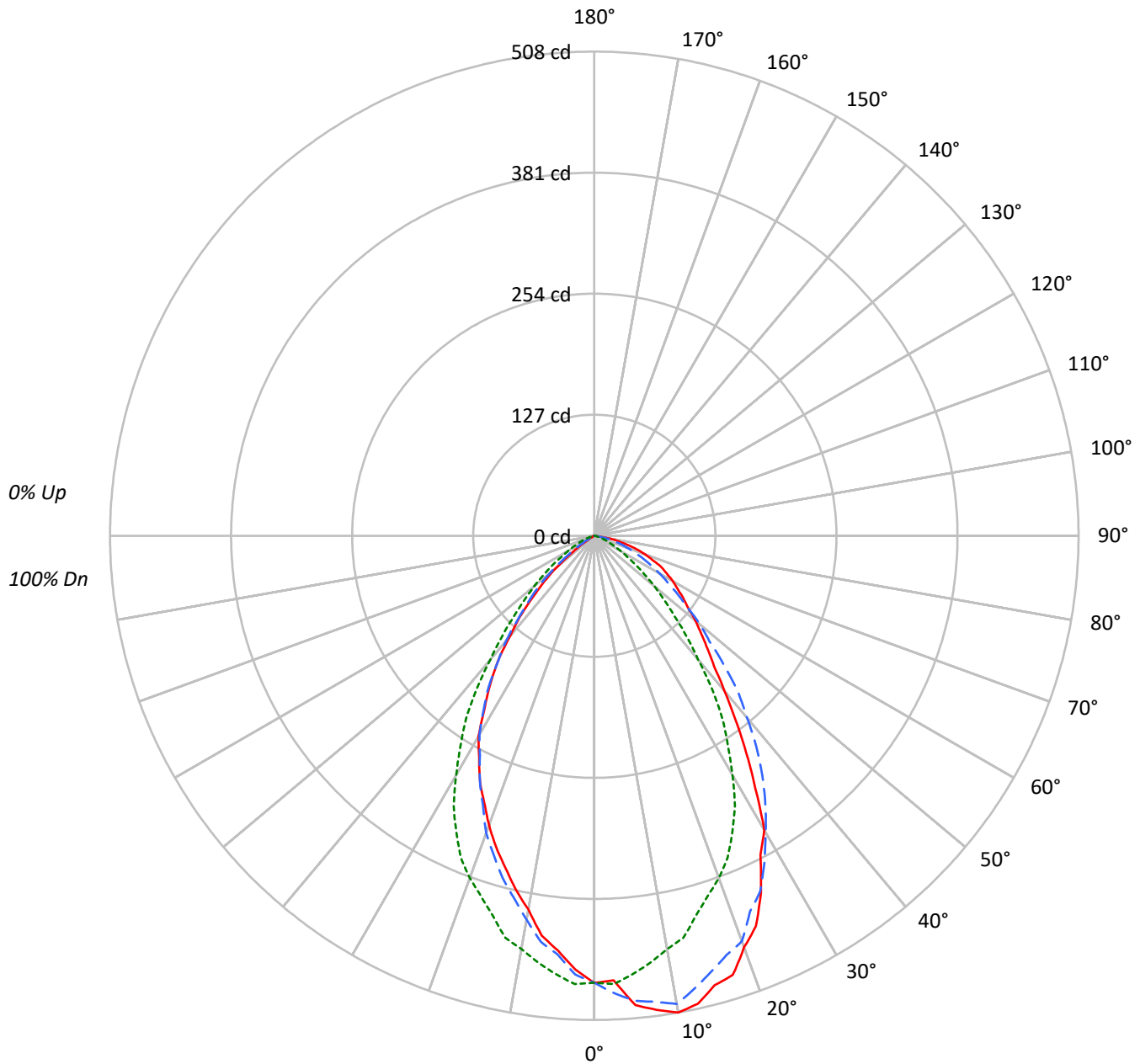
Lumens per Lamp: N/A
Luminaire Lumens: 672.4 lumens
Efficiency: N/A
Efficacy: 68.6 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.8
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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CATALOG NUMBER: LD4C10D010 EX4C10D2W 4LBSQLWWH

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°	45253	45253	45253
5°	47886	44729	42327
10°	49763	43139	39015
15°	48768	41186	36011
20°	47182	39214	33156
25°	44012	36464	30236
30°	39731	32277	27074
35°	32722	27634	22451
40°	26716	21325	17281
45°	22938	16197	12431
50°	20760	12324	7851
55°	19110	8899	2843
60°	18352	6079	425
65°	17717	4110	137
70°	15883	2849	169
75°	13011	1491	0
80°	8113	611	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.9	6.5
10°-20°	118.4	17.6
20°-30°	158.1	23.5
30°-40°	150.1	22.3
40°-50°	103.7	15.4
50°-60°	57.3	8.5
60°-70°	28.5	4.2
70°-80°	11.2	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°	320.5	47.7
0°-40°	470.5	70.0
0°-60°	631.6	93.9
0°-90°	672.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	672.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	469	469	469	469	469	
5°	494	490	462	441	437	47
15°	488	474	412	372	360	138
25°	413	412	342	284	284	188
35°	278	307	235	193	191	174
45°	168	193	119	97	91	131
55°	114	107	53	27	17	102
65°	78	56	18	1	1	75
75°	35	21	4	0	0	37
85°	0	1	0	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P563782

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0
2.5°	466.8	479.7	480.8	479.7	481.4	480.8	483.7	480.8	484.3	479.2	480.3
5°	494.4	489.3	500.0	494.4	494.4	493.9	492.1	491.5	493.9	486.5	489.9
7.5°	501.7	509.0	518.6	506.8	507.3	507.3	503.9	502.8	502.8	489.3	493.2
10°	507.9	503.4	508.4	503.9	507.9	507.3	509.5	502.3	507.3	499.4	498.8
12.5°	502.8	501.1	507.9	500.6	498.3	498.8	496.1	494.4	496.1	487.0	486.5
15°	488.2	489.9	500.0	492.1	491.0	489.9	486.5	480.8	485.4	473.0	473.6
17.5°	483.2	480.3	482.1	475.2	477.0	475.8	475.2	470.3	469.0	461.2	461.2
20°	459.5	465.7	465.7	461.2	461.2	460.7	453.4	457.8	452.8	450.5	452.8
22.5°	443.2	443.8	443.8	439.8	440.3	438.1	434.2	431.4	434.2	431.4	426.9
25°	413.4	414.5	421.2	414.0	412.8	415.1	411.7	410.0	409.4	402.7	411.7
27.5°	377.4	388.7	388.1	385.2	388.7	384.1	382.5	383.0	384.7	384.1	386.4
30°	356.6	358.3	360.0	357.7	358.3	356.6	356.6	357.1	361.6	360.0	359.4
32.5°	314.4	320.0	324.5	324.5	325.1	326.8	326.2	338.0	340.9	335.3	334.0
35°	277.8	281.8	285.7	286.2	293.6	294.2	294.7	298.0	306.0	307.7	307.1
37.5°	243.0	246.9	248.0	253.1	257.0	260.9	265.5	270.0	276.7	282.4	279.5
40°	212.1	213.7	216.6	218.8	226.6	226.6	228.9	237.9	245.2	249.7	249.1
42.5°	186.1	186.8	189.0	193.0	200.2	198.6	200.2	206.4	217.1	217.7	223.9
45°	168.1	167.6	169.3	169.9	174.3	176.6	177.7	182.2	191.2	192.4	193.0
47.5°	151.9	151.3	154.1	155.2	157.0	159.2	159.2	159.7	163.1	165.9	163.7
50°	138.3	138.3	138.3	139.5	142.3	141.7	142.3	144.5	146.3	145.1	144.5
52.5°	123.7	125.9	127.7	128.3	128.8	128.8	129.4	128.3	127.7	125.9	122.6
55°	113.6	115.9	115.9	115.9	115.9	118.1	115.4	115.9	115.9	111.4	106.9
57.5°	103.4	105.8	107.4	105.2	107.4	105.2	104.1	103.4	102.3	97.9	91.1
60°	95.1	96.2	95.6	95.1	96.2	94.5	93.4	91.1	90.0	83.8	79.3
62.5°	85.5	86.1	86.7	85.5	84.3	83.8	81.6	78.2	75.9	70.9	66.9
65°	77.6	75.9	75.4	74.8	73.6	72.0	70.3	66.3	64.7	60.2	56.3
67.5°	65.8	65.2	66.3	64.7	61.8	61.8	60.2	56.8	52.9	50.0	46.1
70°	56.3	55.6	54.5	52.9	52.3	50.0	50.0	46.1	45.0	40.0	36.5
72.5°	46.1	46.1	44.5	42.7	41.1	40.0	39.4	36.5	34.9	32.0	29.2
75°	34.9	34.9	34.3	32.7	31.5	30.4	29.8	27.6	25.8	23.1	21.4
77.5°	24.7	24.7	22.5	21.4	22.0	20.8	19.6	19.1	18.5	16.9	14.6
80°	14.6	14.0	12.4	12.9	12.4	12.4	11.8	11.2	10.1	9.0	7.8
82.5°	4.0	4.5	4.5	4.5	5.1	4.0	4.0	4.0	4.5	4.5	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°	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0
2.5°	474.7	474.1	474.7	470.8	479.7	473.0	471.9	470.8	474.7	470.8	465.2
5°	484.8	479.2	477.5	475.8	480.8	473.0	471.4	471.9	469.0	461.8	462.3
7.5°	488.2	483.2	478.1	467.4	471.9	470.3	465.7	462.3	457.8	451.6	450.5
10°	489.3	483.7	476.4	473.0	466.3	464.0	462.3	456.7	451.1	440.3	437.6
12.5°	485.9	479.2	470.3	467.4	462.3	455.0	451.1	445.4	440.3	431.9	425.8
15°	471.4	465.7	462.9	453.4	451.1	446.6	438.7	430.8	423.6	412.3	408.9
17.5°	454.5	452.2	449.4	442.1	441.6	437.0	429.7	423.0	413.4	396.0	390.3
20°	437.0	437.0	428.0	425.2	430.8	421.8	416.2	410.0	390.3	381.9	371.8
22.5°	424.1	417.9	412.8	408.3	408.9	403.2	395.4	383.0	375.7	365.6	353.8
25°	398.7	401.0	389.8	388.1	389.8	376.8	372.9	362.7	352.1	342.5	333.5
27.5°	383.0	376.8	369.5	363.3	363.3	358.3	347.1	344.8	328.5	319.5	308.2
30°	359.4	354.9	348.7	339.7	338.6	334.7	325.6	320.0	303.1	289.7	283.5
32.5°	329.6	327.9	322.9	312.7	309.3	304.9	293.6	284.0	276.2	260.9	253.7
35°	308.2	302.0	291.3	282.9	280.1	272.2	263.3	256.4	248.0	234.6	225.0
37.5°	276.2	270.0	259.8	249.7	249.7	241.9	229.5	222.8	211.0	203.0	195.2
40°	248.0	240.2	230.1	218.2	216.6	205.3	200.2	189.0	181.7	169.3	168.1
42.5°	216.6	209.2	200.2	191.2	184.5	178.8	165.9	157.5	149.6	143.4	141.7
45°	187.9	178.3	170.4	159.2	152.4	145.7	137.2	131.6	125.4	118.7	114.7
47.5°	163.1	155.2	143.9	133.9	127.2	123.7	114.1	108.0	102.9	98.5	95.6
50°	137.8	128.3	122.1	110.8	109.7	101.8	93.9	88.9	86.1	82.1	78.2
52.5°	118.7	109.7	101.2	92.8	88.3	85.5	78.2	73.1	69.2	66.3	64.1
55°	100.1	92.3	85.5	77.1	74.3	70.3	61.8	60.7	56.8	52.9	50.0
57.5°	86.1	78.7	70.9	65.2	60.2	57.4	50.7	46.1	43.8	40.5	37.6
60°	73.1	65.2	59.1	52.3	50.0	46.1	41.1	37.1	34.3	31.5	28.7
62.5°	61.3	54.5	47.8	42.2	38.8	36.5	32.7	29.2	26.4	24.2	22.0
65°	50.7	44.5	38.8	33.2	31.5	28.7	25.8	23.1	20.8	18.0	15.8
67.5°	41.6	36.0	30.4	26.4	24.7	23.6	20.2	17.4	15.8	14.0	11.8
70°	32.7	28.7	24.2	20.8	19.1	17.4	15.2	13.5	11.2	10.1	8.4
72.5°	25.3	22.0	18.0	15.2	14.0	12.9	10.7	9.0	7.8	6.7	5.6
75°	18.0	15.2	12.9	10.1	9.6	9.0	7.3	6.2	5.1	4.0	3.4
77.5°	12.4	10.1	7.8	6.7	6.2	5.1	4.5	3.4	2.8	2.2	1.7
80°	6.7	5.1	4.0	3.4	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°	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0
2.5°	468.5	462.3	464.0	464.0	462.9	462.9	461.8	460.1	460.7	457.2	449.9
5°	463.4	455.6	454.5	455.6	451.1	449.9	447.7	451.1	441.0	444.9	440.3
7.5°	448.8	441.6	439.8	443.8	438.1	434.8	434.2	438.7	429.7	425.2	420.1
10°	432.5	429.7	424.7	421.8	420.1	420.7	416.2	410.5	408.9	407.8	403.2
12.5°	417.9	411.7	407.2	403.8	402.7	402.7	395.4	394.3	389.2	388.1	381.3
15°	400.5	393.1	390.3	385.8	381.9	384.1	375.7	373.4	371.8	364.5	365.6
17.5°	385.2	377.4	370.7	367.8	364.5	361.1	353.2	354.9	350.9	350.9	340.9
20°	365.6	357.1	352.1	346.5	346.5	342.0	336.4	336.9	331.8	326.8	317.8
22.5°	344.8	335.8	329.6	327.3	321.7	320.6	313.8	312.2	305.4	306.0	298.0
25°	322.9	313.8	305.4	306.0	300.9	298.6	294.7	286.9	284.0	280.6	278.4
27.5°	296.9	290.8	283.5	282.9	273.3	273.9	268.8	266.6	259.8	261.5	256.4
30°	273.3	264.4	257.6	255.9	252.0	250.8	243.0	239.6	240.8	236.2	233.4
32.5°	249.1	235.7	232.8	229.5	227.2	224.4	218.8	221.0	216.0	217.1	212.6
35°	217.1	211.5	204.2	204.2	201.9	199.7	195.7	197.9	193.0	190.6	186.1
37.5°	190.1	185.0	177.7	179.9	176.1	172.6	169.3	169.9	165.4	164.8	160.3
40°	160.8	158.1	153.0	153.0	150.1	150.1	148.5	146.8	143.9	140.6	135.5
42.5°	133.3	131.0	128.8	129.4	125.4	128.8	124.3	127.2	118.1	117.6	114.1
45°	113.0	108.0	108.5	106.3	104.1	105.2	101.2	102.3	97.3	96.2	92.8
47.5°	91.6	90.0	86.7	85.5	85.5	83.8	82.1	81.6	79.3	76.5	72.0
50°	75.4	69.2	68.1	66.3	65.2	65.2	63.0	59.6	60.2	57.4	52.9
52.5°	59.1	54.0	51.8	51.2	48.9	47.8	45.0	42.7	41.1	40.0	37.1
55°	45.6	41.1	38.2	38.2	34.9	34.9	30.9	29.2	27.0	24.7	23.1
57.5°	34.3	32.0	29.2	27.0	25.8	23.1	20.8	18.0	16.3	12.9	10.7
60°	25.8	23.6	20.8	19.1	18.0	15.2	12.4	10.1	6.2	5.1	4.5
62.5°	19.1	16.9	14.0	12.9	11.8	9.6	6.7	3.4	1.7	1.7	1.7
65°	14.0	11.2	9.0	7.8	6.7	5.1	2.2	1.1	0.6	0.6	0.6
67.5°	9.6	7.3	5.1	4.5	3.4	1.7	0.6	0.6	0.6	0.6	0.6
70°	6.2	4.5	2.2	1.7	1.1	0.6	0.6	0.6	0.6	0.6	0.6
72.5°	4.0	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



TEST NUMBER: P563782

CATALOG NUMBER: LD4C10D010 EX4C10D2W 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	469.0	469.0	469.0	469.0	469.0	469.0	469.0	469.0
2.5°	457.8	453.9	456.1	451.1	453.4	457.2	454.5	455.6
5°	442.1	439.8	437.0	429.7	435.4	439.8	437.6	437.0
7.5°	425.2	417.4	421.2	419.0	417.9	422.3	417.4	423.0
10°	407.8	402.1	401.6	397.6	397.6	401.0	401.6	398.2
12.5°	381.9	379.1	379.1	378.5	378.0	381.3	381.9	380.2
15°	363.3	362.2	359.4	358.9	355.5	360.5	361.1	360.5
17.5°	340.9	341.4	338.6	338.6	340.9	342.5	338.0	342.5
20°	325.6	322.9	321.7	316.7	319.5	322.2	322.2	322.9
22.5°	303.7	299.3	300.9	298.0	296.4	300.4	300.4	302.0
25°	278.9	278.9	280.1	278.4	279.5	281.8	280.1	284.0
27.5°	255.3	257.6	257.6	255.3	256.4	263.3	266.0	261.5
30°	233.4	234.0	235.7	234.6	237.9	240.2	239.6	243.0
32.5°	208.6	211.5	212.6	211.0	212.1	217.1	214.3	213.7
35°	189.5	184.5	183.9	184.5	186.8	187.9	186.8	190.6
37.5°	161.9	160.3	158.1	158.6	160.3	162.5	163.7	166.5
40°	135.5	133.3	133.3	132.7	131.0	137.2	137.2	137.2
42.5°	112.5	111.9	109.1	109.1	111.4	113.0	111.9	115.9
45°	92.3	90.0	88.3	88.3	90.0	90.0	91.6	91.1
47.5°	72.5	70.3	70.9	69.2	70.9	73.1	70.3	70.9
50°	54.5	54.5	53.4	54.5	54.0	54.5	53.4	52.3
52.5°	37.1	42.2	42.7	40.5	35.4	30.9	28.1	30.4
55°	21.4	19.1	19.1	18.5	17.4	16.9	15.2	16.9
57.5°	10.7	9.6	9.6	9.6	9.0	8.4	7.3	7.3
60°	4.5	4.0	4.0	3.4	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)