

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: P563855

Luminaire Tested: **LD4C05D010 EX4C05D2W 4LBSQLWWLI**

Issue Date: 2/18/2022

Test Information

Test Method: LM-79-08
Report Number: P563855
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: LD4C05D010 EX4C05D2W 4LBSQLWWLI
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH, DIM TO WARM
Light Source: -
Ballast/Driver: -

Summary

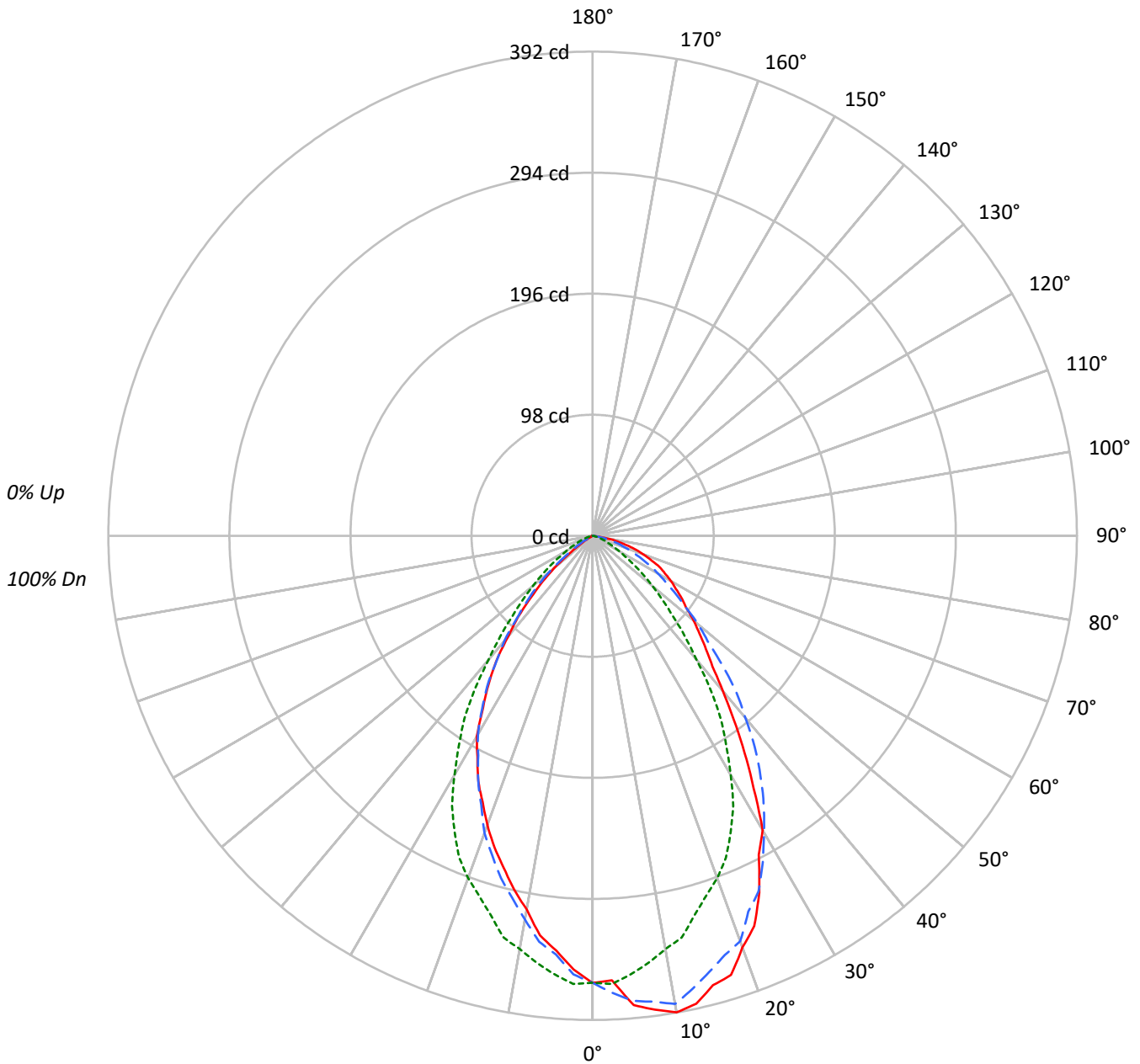
Lumens per Lamp: N/A
Luminaire Lumens: 518.8 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 7.2
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

TEST NUMBER: P563855

CATALOG NUMBER: LD4C05D010 EX4C05D2W 4LBSQLWWLI

Luminous Intensity Polar Plot





TEST NUMBER: P563855

CATALOG NUMBER: LD4C05D010 EX4C05D2W 4LBSQLWWLI

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								
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°	34919	34919	34919
5°	36951	34510	32660
10°	38388	33283	30099
15°	37630	31776	27790
20°	36411	30260	25578
25°	33962	28138	23326
30°	30662	24901	20890
35°	25243	21320	17327
40°	20607	16450	13339
45°	17712	12486	9593
50°	16017	9517	6064
55°	14753	6864	2187
60°	14145	4689	328
65°	13676	3174	91
70°	12244	2200	113
75°	10066	1156	0
80°	6279	500	0
85°	0	0	0



TEST NUMBER: P563855

CATALOG NUMBER: LD4C05D010 EX4C05D2W 4LBSQLWWLI

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.9	6.5
10°-20°	91.4	17.6
20°-30°	122.0	23.5
30°-40°	115.8	22.3
40°-50°	80.0	15.4
50°-60°	44.2	8.5
60°-70°	22.0	4.2
70°-80°	8.7	1.7
80°-90°	0.8	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°	247.3	47.7
0°-40°	363.1	70.0
0°-60°	487.3	93.9
0°-90°	518.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	518.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	362	362	362	362	362	
5°	382	378	356	340	337	37
15°	377	365	318	287	278	107
25°	319	318	264	219	219	145
35°	214	237	181	149	147	134
45°	130	149	92	75	70	101
55°	88	82	41	21	13	79
65°	60	43	14	0	0	58
75°	27	16	3	0	0	29
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P563855

CATALOG NUMBER: LD4C05D010 EX4C05D2W 4LBSQLWWLI

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	360.2	370.2	371.0	370.2	371.5	371.0	373.2	371.0	373.6	369.8	370.6
5°	381.5	377.5	385.8	381.5	381.5	381.0	379.7	379.3	381.0	375.3	378.0
7.5°	387.0	392.7	400.1	391.0	391.4	391.4	388.8	388.0	388.0	377.5	380.5
10°	391.8	388.4	392.3	388.8	391.8	391.4	393.1	387.6	391.4	385.3	384.9
12.5°	388.0	386.6	391.8	386.2	384.5	384.9	382.8	381.5	382.8	375.8	375.3
15°	376.7	378.0	385.8	379.7	378.8	378.0	375.3	371.0	374.5	365.0	365.4
17.5°	372.8	370.6	371.9	366.7	368.0	367.1	366.7	362.8	361.9	355.8	355.8
20°	354.6	359.3	359.3	355.8	355.8	355.4	349.8	353.3	349.3	347.6	349.3
22.5°	342.0	342.4	342.4	339.3	339.7	338.0	335.0	332.8	335.0	332.8	329.4
25°	319.0	319.8	325.0	319.4	318.5	320.2	317.7	316.3	315.9	310.8	317.7
27.5°	291.2	299.9	299.5	297.2	299.9	296.4	295.1	295.5	296.8	296.4	298.1
30°	275.2	276.5	277.7	276.0	276.5	275.2	275.2	275.6	279.0	277.7	277.3
32.5°	242.6	246.9	250.4	250.4	250.8	252.2	251.7	260.8	262.9	258.7	257.8
35°	214.3	217.4	220.4	220.8	226.5	226.9	227.3	230.0	236.1	237.4	236.9
37.5°	187.5	190.5	191.3	195.3	198.4	201.3	204.9	208.3	213.5	217.9	215.6
40°	163.6	164.9	167.0	168.9	174.9	174.9	176.6	183.6	189.2	192.7	192.3
42.5°	143.6	144.0	145.8	148.8	154.5	153.2	154.5	159.3	167.5	167.9	172.7
45°	129.8	129.3	130.6	131.0	134.6	136.3	137.1	140.6	147.5	148.4	148.8
47.5°	117.2	116.8	118.9	119.7	121.0	122.8	122.8	123.3	125.8	128.1	126.3
50°	106.7	106.7	106.7	107.6	109.8	109.3	109.8	111.5	112.8	112.0	111.5
52.5°	95.4	97.2	98.5	99.0	99.4	99.4	99.8	99.0	98.5	97.2	94.6
55°	87.7	89.4	89.4	89.4	89.4	91.1	89.0	89.4	89.4	86.0	82.5
57.5°	79.9	81.6	82.9	81.2	82.9	81.2	80.3	79.9	78.9	75.5	70.3
60°	73.3	74.3	73.7	73.3	74.3	72.9	72.0	70.3	69.5	64.7	61.2
62.5°	65.9	66.4	66.8	65.9	65.1	64.7	63.0	60.3	58.6	54.7	51.7
65°	59.9	58.6	58.2	57.7	56.9	55.5	54.2	51.2	49.9	46.4	43.4
67.5°	50.8	50.4	51.2	49.9	47.7	47.7	46.4	43.8	40.8	38.7	35.6
70°	43.4	42.9	42.1	40.8	40.4	38.7	38.7	35.6	34.7	30.8	28.2
72.5°	35.6	35.6	34.3	33.0	31.6	30.8	30.4	28.2	27.0	24.7	22.6
75°	27.0	27.0	26.4	25.1	24.3	23.4	23.0	21.3	19.9	17.8	16.5
77.5°	19.1	19.1	17.4	16.5	16.9	16.1	15.2	14.7	14.3	13.0	11.3
80°	11.3	10.9	9.6	10.0	9.6	9.6	9.2	8.6	7.8	6.9	6.1
82.5°	3.1	3.5	3.5	3.5	3.9	3.1	3.1	3.1	3.5	3.5	2.1
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
87.5°	0.4	0.9	1.7	1.7	1.7	1.7	1.7	1.3	1.3	1.3	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: P563855

CATALOG NUMBER: LD4C05D010 EX4C05D2W 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	366.3	365.8	366.3	363.2	370.2	365.0	364.1	363.2	366.3	363.2	358.9
5°	374.0	369.8	368.4	367.1	371.0	365.0	363.6	364.1	361.9	356.3	356.7
7.5°	376.7	372.8	368.8	360.6	364.1	362.8	359.3	356.7	353.3	348.5	347.6
10°	377.5	373.2	367.5	365.0	359.8	358.1	356.7	352.4	348.0	339.7	337.6
12.5°	374.9	369.8	362.8	360.6	356.7	351.0	348.0	343.7	339.7	333.2	328.5
15°	363.6	359.3	357.1	349.8	348.0	344.5	338.5	332.4	326.7	318.1	315.4
17.5°	350.6	348.9	346.8	341.1	340.7	337.2	331.5	326.3	319.0	305.5	301.2
20°	337.2	337.2	330.2	328.0	332.4	325.5	321.1	316.3	301.2	294.7	286.9
22.5°	327.2	322.5	318.5	315.0	315.4	311.2	305.1	295.5	289.9	282.1	272.9
25°	307.7	309.4	300.8	299.5	300.8	290.7	287.7	279.9	271.7	264.3	257.4
27.5°	295.5	290.7	285.1	280.3	280.3	276.5	267.7	266.0	253.4	246.5	237.8
30°	277.3	273.8	269.0	262.1	261.2	258.2	251.2	246.9	233.9	223.5	218.7
32.5°	254.3	253.0	249.1	241.3	238.6	235.2	226.5	219.1	213.1	201.3	195.7
35°	237.8	233.0	224.8	218.3	216.1	210.1	203.0	197.8	191.3	181.0	173.5
37.5°	213.1	208.3	200.5	192.7	192.7	186.7	177.1	171.8	162.8	156.6	150.5
40°	191.3	185.3	177.5	168.3	167.0	158.4	154.5	145.8	140.2	130.6	129.8
42.5°	167.0	161.4	154.5	147.5	142.3	138.0	128.1	121.6	115.5	110.7	109.3
45°	145.0	137.5	131.5	122.8	117.6	112.4	105.9	101.5	96.7	91.5	88.5
47.5°	125.8	119.7	111.1	103.2	98.1	95.4	88.1	83.3	79.4	76.0	73.7
50°	106.3	99.0	94.2	85.4	84.6	78.5	72.5	68.6	66.4	63.4	60.3
52.5°	91.5	84.6	78.1	71.6	68.2	65.9	60.3	56.5	53.4	51.2	49.4
55°	77.2	71.2	65.9	59.4	57.3	54.2	47.7	46.9	43.8	40.8	38.7
57.5°	66.4	60.7	54.7	50.4	46.4	44.2	39.1	35.6	33.9	31.2	29.1
60°	56.5	50.4	45.6	40.4	38.7	35.6	31.6	28.7	26.4	24.3	22.2
62.5°	47.3	42.1	36.9	32.6	29.9	28.2	25.1	22.6	20.4	18.7	16.9
65°	39.1	34.3	29.9	25.6	24.3	22.2	19.9	17.8	16.1	13.9	12.2
67.5°	32.1	27.8	23.4	20.4	19.1	18.2	15.7	13.4	12.2	10.9	9.2
70°	25.1	22.2	18.7	16.1	14.7	13.4	11.7	10.4	8.6	7.8	6.5
72.5°	19.5	16.9	13.9	11.7	10.9	10.0	8.2	6.9	6.1	5.2	4.4
75°	13.9	11.7	10.0	7.8	7.4	6.9	5.6	4.8	3.9	3.1	2.6
77.5°	9.6	7.8	6.1	5.2	4.8	3.9	3.5	2.6	2.1	1.7	1.3
80°	5.2	3.9	3.1	2.6	2.1	1.7	1.7	1.3	0.9	0.9	0.4
82.5°	1.7	1.3	0.9	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4
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°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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



TEST NUMBER: P563855

CATALOG NUMBER: LD4C05D010 EX4C05D2W 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	361.5	356.7	358.1	358.1	357.1	357.1	356.3	355.0	355.4	352.8	347.2
5°	357.5	351.5	350.6	351.5	348.0	347.2	345.4	348.0	340.3	343.3	339.7
7.5°	346.3	340.7	339.3	342.4	338.0	335.5	335.0	338.5	331.5	328.0	324.2
10°	333.7	331.5	327.6	325.5	324.2	324.6	321.1	316.8	315.4	314.6	311.2
12.5°	322.5	317.7	314.2	311.6	310.8	310.8	305.1	304.2	300.3	299.5	294.2
15°	308.9	303.3	301.2	297.7	294.7	296.4	289.9	288.2	286.9	281.2	282.1
17.5°	297.2	291.2	285.9	283.8	281.2	278.6	272.5	273.8	270.8	270.8	262.9
20°	282.1	275.6	271.7	267.3	267.3	263.9	259.5	259.9	256.0	252.2	245.1
22.5°	266.0	259.1	254.3	252.6	248.2	247.4	242.2	240.9	235.7	236.1	230.0
25°	249.1	242.2	235.7	236.1	232.1	230.4	227.3	221.3	219.1	216.6	214.8
27.5°	229.2	224.4	218.7	218.3	210.9	211.4	207.4	205.7	200.5	201.8	197.8
30°	210.9	203.9	198.8	197.4	194.4	193.6	187.5	184.8	185.7	182.3	180.0
32.5°	192.3	181.9	179.6	177.1	175.4	173.1	168.9	170.6	166.6	167.5	164.1
35°	167.5	163.2	157.6	157.6	155.7	154.0	151.1	152.8	148.8	147.1	143.6
37.5°	146.7	142.8	137.1	138.8	135.8	133.3	130.6	131.0	127.6	127.2	123.7
40°	124.1	122.0	118.0	118.0	115.9	115.9	114.5	113.2	111.1	108.5	104.6
42.5°	102.8	101.1	99.4	99.8	96.7	99.4	95.9	98.1	91.1	90.7	88.1
45°	87.2	83.3	83.7	82.0	80.3	81.2	78.1	78.9	75.1	74.3	71.6
47.5°	70.7	69.5	66.8	65.9	65.9	64.7	63.4	63.0	61.2	59.0	55.5
50°	58.2	53.4	52.5	51.2	50.4	50.4	48.6	46.0	46.4	44.2	40.8
52.5°	45.6	41.6	39.9	39.5	37.7	36.9	34.7	33.0	31.6	30.8	28.7
55°	35.1	31.6	29.5	29.5	27.0	27.0	23.9	22.6	20.9	19.1	17.8
57.5°	26.4	24.7	22.6	20.9	19.9	17.8	16.1	13.9	12.6	10.0	8.2
60°	19.9	18.2	16.1	14.7	13.9	11.7	9.6	7.8	4.8	3.9	3.5
62.5°	14.7	13.0	10.9	10.0	9.2	7.4	5.2	2.6	1.3	1.3	1.3
65°	10.9	8.6	6.9	6.1	5.2	3.9	1.7	0.9	0.4	0.4	0.4
67.5°	7.4	5.6	3.9	3.5	2.6	1.3	0.4	0.4	0.4	0.4	0.4
70°	4.8	3.5	1.7	1.3	0.9	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	3.1	1.7	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.4	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	0.4	0.4	0.4
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: P563855

CATALOG NUMBER: LD4C05D010 EX4C05D2W 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	361.9	361.9	361.9	361.9	361.9	361.9	361.9	361.9
2.5°	353.3	350.2	352.0	348.0	349.8	352.8	350.6	351.5
5°	341.1	339.3	337.2	331.5	335.9	339.3	337.6	337.2
7.5°	328.0	321.9	325.0	323.3	322.5	325.9	321.9	326.3
10°	314.6	310.2	309.8	306.8	306.8	309.4	309.8	307.2
12.5°	294.7	292.4	292.4	292.0	291.6	294.2	294.7	293.4
15°	280.3	279.4	277.3	276.9	274.2	278.2	278.6	278.2
17.5°	262.9	263.4	261.2	261.2	262.9	264.3	260.8	264.3
20°	251.2	249.1	248.2	244.3	246.5	248.7	248.7	249.1
22.5°	234.4	230.9	232.1	230.0	228.7	231.7	231.7	233.0
25°	215.2	215.2	216.1	214.8	215.6	217.4	216.1	219.1
27.5°	197.0	198.8	198.8	197.0	197.8	203.0	205.3	201.8
30°	180.0	180.6	181.9	181.0	183.6	185.3	184.8	187.5
32.5°	161.0	163.2	164.1	162.8	163.6	167.5	165.3	164.9
35°	146.3	142.3	141.9	142.3	144.0	145.0	144.0	147.1
37.5°	125.0	123.7	122.0	122.4	123.7	125.4	126.3	128.5
40°	104.6	102.8	102.8	102.4	101.1	105.9	105.9	105.9
42.5°	86.8	86.4	84.2	84.2	86.0	87.2	86.4	89.4
45°	71.2	69.5	68.2	68.2	69.5	69.5	70.7	70.3
47.5°	55.9	54.2	54.7	53.4	54.7	56.5	54.2	54.7
50°	42.1	42.1	41.2	42.1	41.6	42.1	41.2	40.4
52.5°	28.7	32.6	33.0	31.2	27.4	23.9	21.7	23.4
55°	16.5	14.7	14.7	14.3	13.4	13.0	11.7	13.0
57.5°	8.2	7.4	7.4	7.4	6.9	6.5	5.6	5.6
60°	3.5	3.1	3.1	2.6	2.1	1.7	1.3	1.7
62.5°	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
65°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
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)