

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: P856987

Luminaire Tested: **LX4C15D010 EX4C159040 4LBSWNH**

Issue Date: 2/18/2022



Test Information

Test Method: LM-79-08
Report Number: P856987
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251634)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LX4C15D010 EX4C159040 4LBSWNH
Description: 4 INCH 1500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 4000K, 90CRI LEDS
AND 4LCSW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Summary

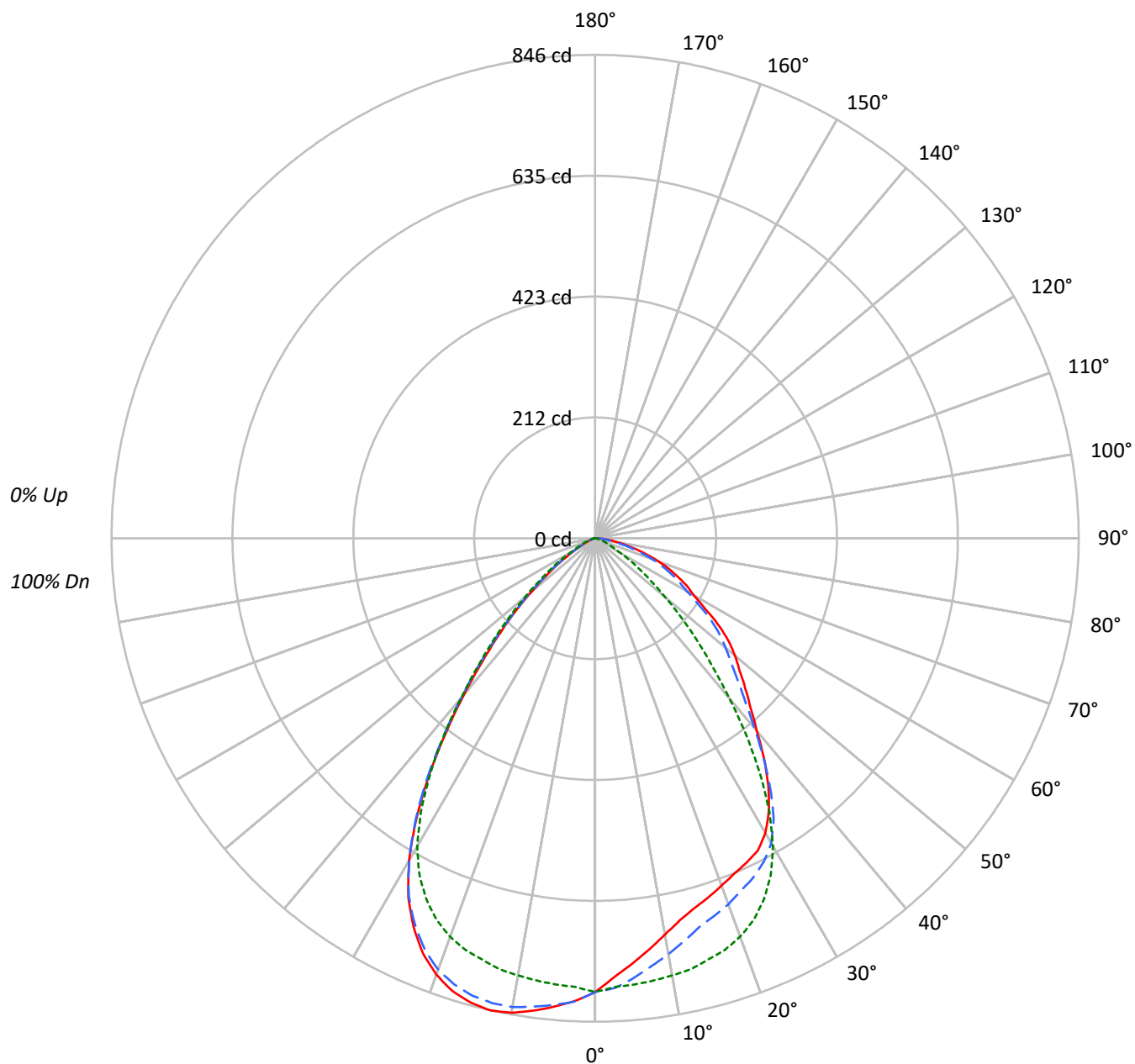
Lumens per Lamp: N/A
Luminaire Lumens: 1392.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 1.17 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	108	104	101	109	106	103	100	101	99	97	98	96	94	94	93	91	89		
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79		
3	96	88	81	76	94	86	80	75	83	78	74	81	76	73	78	75	72	70		
4	90	80	72	67	88	78	72	66	76	70	66	74	69	65	72	68	64	62		
5	83	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58	56		
6	78	67	59	53	76	66	59	53	64	58	53	62	57	52	61	56	52	50		
7	73	61	54	48	71	61	53	48	59	53	48	58	52	48	56	51	47	46		
8	68	57	49	44	67	56	49	44	55	48	44	54	48	43	52	47	43	42		
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	38		
10	61	49	42	37	59	48	42	37	47	41	37	47	41	37	46	40	37	35		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	97558	97558	97558
5°	92122	96673	101470
10°	87836	96892	105188
15°	85254	97095	106990
20°	84548	96994	106225
25°	84897	94603	101814
30°	84491	88265	92322
35°	79188	75363	76128
40°	70564	58424	57109
45°	64545	43557	40899
50°	61027	30523	27579
55°	56117	20605	17306
60°	49019	12064	9558
65°	46424	7733	5349
70°	42278	5532	3305
75°	34983	3892	2421
80°	27521	2193	1415
85°	24527	1410	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.0	5.4
10°-20°	215.3	15.5
20°-30°	319.1	22.9
30°-40°	319.5	23.0
40°-50°	223.3	16.0
50°-60°	132.9	9.5
60°-70°	69.3	5.0
70°-80°	30.8	2.2
80°-90°	6.7	0.5
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°	609.4	43.8
0°-40°	928.9	66.7
0°-60°	1285.1	92.3
0°-90°	1392.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1392.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	794	794	794	794	794	
5°	747	773	784	820	823	70
15°	670	704	763	829	841	190
25°	626	655	698	746	751	289
35°	528	534	502	512	508	327
45°	372	353	251	242	235	288
55°	262	246	96	84	81	232
65°	160	146	27	20	18	158
75°	74	64	8	5	5	80
85°	17	13	1	1	0	19
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°	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1
2.5°	768.5	777.7	768.5	771.6	783.9	772.6	778.8	778.8	775.7	782.8	788.0
5°	747.0	756.2	747.0	751.1	764.4	753.2	760.3	758.3	759.3	765.5	772.6
7.5°	725.6	732.7	724.5	729.7	741.9	732.7	738.8	738.8	739.9	749.1	755.2
10°	704.1	710.2	704.1	708.1	721.5	713.3	717.4	718.4	721.5	729.7	738.8
12.5°	684.6	689.7	683.6	689.7	701.0	692.8	697.9	698.9	702.0	711.2	721.5
15°	670.3	675.4	669.3	674.4	684.6	678.5	682.6	684.6	686.6	694.8	704.1
17.5°	659.0	663.1	658.0	664.1	672.3	665.2	671.3	671.3	674.4	682.6	692.8
20°	646.7	650.8	646.7	651.9	661.1	655.0	660.1	660.1	663.1	672.3	681.6
22.5°	635.5	637.5	635.5	639.6	648.8	643.7	646.7	647.8	650.8	659.0	667.2
25°	626.3	630.4	628.3	632.4	638.5	633.5	636.5	637.5	640.6	647.8	655.0
27.5°	616.0	618.1	616.0	621.2	626.3	622.2	625.3	624.2	626.3	632.4	638.5
30°	595.6	597.6	597.6	600.7	604.8	602.8	605.8	602.8	604.8	609.9	616.0
32.5°	565.9	566.9	567.9	571.0	574.1	571.0	573.1	573.1	573.1	577.2	581.3
35°	528.0	530.1	529.1	531.1	534.2	533.2	533.2	532.1	530.1	532.1	534.2
37.5°	485.1	482.0	482.0	485.1	487.1	483.0	485.1	483.0	483.0	484.0	484.0
40°	440.0	437.0	440.0	441.1	442.1	440.0	439.0	437.0	433.9	434.9	432.9
42.5°	402.2	400.1	401.1	401.1	402.2	400.1	401.1	397.1	394.0	391.9	388.9
45°	371.5	368.4	371.5	369.4	369.4	368.4	367.4	365.3	361.2	358.2	353.1
47.5°	342.8	342.8	343.8	343.8	343.8	341.8	341.8	337.7	333.6	329.5	322.4
50°	319.3	317.2	321.3	321.3	318.3	317.2	318.3	313.1	310.1	305.0	297.8
52.5°	293.7	293.7	294.7	294.7	293.7	291.6	292.7	288.6	285.5	280.4	273.2
55°	262.0	259.9	263.0	263.0	262.0	260.9	262.0	258.9	255.9	251.8	245.6
57.5°	226.2	225.1	227.2	228.2	226.2	226.2	227.2	224.1	223.1	219.0	212.8
60°	199.5	198.5	200.6	201.6	199.5	199.5	199.5	195.4	193.4	189.3	185.2
62.5°	181.1	180.1	182.2	181.1	180.1	179.1	180.1	176.0	174.0	169.9	165.8
65°	159.7	160.7	161.7	161.7	160.7	159.7	159.7	157.6	155.6	151.5	146.3
67.5°	139.2	139.2	140.2	141.2	140.2	140.2	140.2	137.1	135.1	132.0	125.9
70°	117.7	116.7	119.7	119.7	117.7	118.7	117.7	116.7	114.6	110.5	105.4
72.5°	95.2	95.2	96.2	96.2	95.2	95.2	95.2	94.1	91.1	89.0	83.9
75°	73.7	73.7	74.7	75.7	73.7	73.7	74.7	72.6	70.6	67.6	64.5
77.5°	55.3	54.2	55.3	55.3	54.2	54.2	54.2	53.2	52.2	49.1	46.1
80°	38.9	37.9	38.9	38.9	38.9	37.9	37.9	36.8	36.8	34.8	31.7
82.5°	26.6	25.6	26.6	26.6	26.6	25.6	25.6	25.6	24.6	23.5	21.5
85°	17.4	16.4	16.4	17.4	16.4	16.4	16.4	16.4	15.4	14.3	13.3
87.5°	8.2	8.2	8.2	8.2	8.2	8.2	8.2	7.2	7.2	7.2	6.1
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°	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1
2.5°	783.9	781.8	788.0	785.9	786.9	781.8	790.0	785.9	791.0	785.9	796.2
5°	770.6	768.5	777.7	776.7	777.7	773.7	782.8	781.8	788.0	783.9	795.1
7.5°	756.2	754.2	764.4	765.5	767.5	763.4	775.7	775.7	781.8	780.8	793.1
10°	739.9	740.9	751.1	753.2	757.3	755.2	766.5	769.6	777.7	776.7	792.1
12.5°	724.5	724.5	737.8	741.9	745.0	744.0	757.3	761.4	770.6	772.6	786.9
15°	709.2	710.2	722.5	728.6	732.7	731.7	746.0	751.1	762.4	763.4	780.8
17.5°	696.9	695.9	709.2	714.3	720.4	719.4	734.7	740.9	752.2	755.2	771.6
20°	686.6	685.6	697.9	704.1	708.1	707.1	722.5	729.7	739.9	741.9	758.3
22.5°	674.4	672.3	684.6	689.7	693.8	692.8	706.1	711.2	721.5	723.5	738.8
25°	660.1	658.0	669.3	672.3	675.4	673.4	684.6	687.7	695.9	697.9	713.3
27.5°	643.7	638.5	647.8	647.8	649.8	646.7	655.0	658.0	665.2	665.2	679.5
30°	618.1	611.0	616.0	615.0	616.0	612.0	617.1	618.1	623.2	622.2	632.4
32.5°	582.3	572.0	575.1	572.0	569.0	562.9	569.0	566.9	571.0	566.9	576.1
35°	533.2	522.9	521.9	517.8	514.8	509.6	509.6	504.5	505.5	502.5	508.6
37.5°	479.9	466.7	464.6	456.4	451.3	445.2	445.2	441.1	435.9	433.9	439.0
40°	427.7	413.4	408.3	395.0	389.9	383.7	379.6	374.6	372.5	364.3	368.4
42.5°	382.7	367.4	356.1	341.8	336.7	327.5	321.3	315.2	312.1	302.9	307.0
45°	344.9	326.5	314.2	295.7	288.6	278.4	269.1	262.0	254.8	250.7	248.7
47.5°	313.1	293.7	277.3	256.9	245.6	236.4	224.1	216.9	207.8	202.6	199.5
50°	286.5	265.0	246.6	223.1	211.8	201.6	187.3	176.0	167.8	159.7	157.6
52.5°	263.0	240.5	220.0	193.4	180.1	167.8	152.5	140.2	133.0	123.8	122.8
55°	235.4	215.9	193.4	165.8	152.5	140.2	123.8	111.6	102.3	96.2	94.1
57.5°	205.7	187.3	165.8	138.2	124.8	111.6	96.2	84.9	76.7	71.6	70.6
60°	178.1	160.7	140.2	112.6	99.2	88.0	71.6	60.4	53.2	49.1	47.1
62.5°	157.6	141.2	121.8	96.2	83.9	72.6	57.3	47.1	40.9	36.8	34.8
65°	138.2	121.8	104.4	80.8	70.6	60.4	46.1	36.8	30.7	26.6	24.6
67.5°	117.7	103.4	87.0	67.6	57.3	49.1	36.8	28.6	23.5	20.5	18.4
70°	97.2	83.9	70.6	54.2	47.1	38.9	28.6	22.5	17.4	15.4	13.3
72.5°	76.7	66.5	55.3	42.0	35.8	30.7	22.5	16.4	13.3	11.3	9.2
75°	57.3	50.1	40.9	31.7	26.6	22.5	16.4	12.3	10.2	8.2	7.2
77.5°	40.9	34.8	28.6	21.5	19.5	16.4	11.3	9.2	7.2	5.1	4.1
80°	27.6	24.6	19.5	15.4	12.3	11.3	8.2	6.1	4.1	3.1	3.1
82.5°	18.4	15.4	12.3	9.2	8.2	7.2	5.1	4.1	3.1	2.0	2.0
85°	11.3	9.2	7.2	5.1	5.1	4.1	3.1	2.0	1.0	1.0	1.0
87.5°	5.1	4.1	3.1	2.0	2.0	1.0	1.0	1.0	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°	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1
2.5°	804.3	798.2	794.1	799.2	801.3	798.2	801.3	806.4	811.5	812.5	798.2
5°	805.4	799.2	797.2	803.3	804.3	803.3	806.4	813.6	819.7	821.8	807.4
7.5°	805.4	801.3	800.3	807.4	808.4	807.4	812.5	820.7	826.8	830.9	816.6
10°	803.3	801.3	802.3	808.4	810.5	810.5	817.7	826.8	833.0	837.1	822.8
12.5°	800.3	800.3	800.3	807.4	809.5	810.5	816.6	828.9	833.0	839.1	824.8
15°	795.1	795.1	795.1	802.3	805.4	805.4	812.5	823.8	828.9	835.0	820.7
17.5°	785.9	785.9	786.9	793.1	796.2	796.2	803.3	815.6	818.7	825.8	811.5
20°	772.6	772.6	773.7	779.8	782.8	780.8	790.0	800.3	803.3	809.5	795.1
22.5°	753.2	753.2	753.2	759.3	761.4	760.3	769.6	778.8	778.8	786.9	771.6
25°	724.5	726.6	724.5	730.7	732.7	731.7	739.9	748.1	746.0	755.2	739.9
27.5°	689.7	688.7	688.7	693.8	693.8	692.8	698.9	708.1	706.1	712.2	697.9
30°	641.6	644.7	639.6	646.7	643.7	641.6	645.7	653.9	650.8	656.0	644.7
32.5°	586.4	582.3	582.3	582.3	584.3	579.2	583.3	587.4	584.3	589.4	577.2
35°	513.7	514.8	511.7	512.7	513.7	507.6	511.7	515.8	511.7	514.8	503.5
37.5°	441.1	442.1	434.9	439.0	434.9	432.9	437.0	439.0	434.9	438.0	425.7
40°	368.4	366.4	365.3	365.3	366.4	361.2	364.3	367.4	364.3	366.4	355.1
42.5°	305.0	304.0	301.9	302.9	299.8	298.8	299.8	302.9	299.8	301.9	293.7
45°	249.7	247.6	244.6	245.6	245.6	240.5	243.5	245.6	242.5	243.5	236.4
47.5°	198.5	195.4	195.4	194.4	194.4	192.4	195.4	194.4	191.3	193.4	186.3
50°	154.5	152.5	152.5	152.5	152.5	149.4	150.4	152.5	149.4	149.4	145.3
52.5°	120.7	117.7	115.7	115.7	115.7	114.6	114.6	115.7	112.6	112.6	111.6
55°	91.1	90.1	87.0	87.0	87.0	83.9	84.9	84.9	83.9	83.9	80.8
57.5°	67.6	64.5	62.4	62.4	60.4	60.4	59.4	60.4	58.3	58.3	56.3
60°	45.0	43.0	42.0	40.9	40.9	39.9	40.9	39.9	39.9	38.9	37.9
62.5°	32.7	30.7	28.6	28.6	28.6	27.6	27.6	27.6	27.6	27.6	26.6
65°	23.5	21.5	21.5	20.5	20.5	19.5	19.5	19.5	19.5	19.5	18.4
67.5°	16.4	15.4	14.3	14.3	14.3	14.3	14.3	14.3	13.3	13.3	13.3
70°	12.3	11.3	10.2	10.2	10.2	10.2	10.2	9.2	10.2	10.2	9.2
72.5°	8.2	8.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
75°	6.1	6.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
77.5°	4.1	4.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
80°	3.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
82.5°	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.0
87.5°	0.0	0.0	0.0	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	0.0	0.0	0.0



TEST NUMBER: P856987

CATALOG NUMBER: LX4C15D010 EX4C159040 4LBSWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	794.1	794.1	794.1	794.1	794.1	794.1	794.1	794.1
2.5°	813.6	812.5	810.5	813.6	805.4	802.3	801.3	810.5
5°	824.8	822.8	822.8	825.8	816.6	814.6	812.5	822.8
7.5°	835.0	833.0	833.0	836.1	827.9	825.8	823.8	834.0
10°	841.2	841.2	841.2	843.2	836.1	834.0	833.0	843.2
12.5°	844.3	844.3	843.2	847.3	838.1	838.1	836.1	846.3
15°	840.2	840.2	840.2	843.2	835.0	833.0	833.0	841.2
17.5°	829.9	829.9	828.9	832.0	822.8	822.8	821.8	830.9
20°	814.6	814.6	812.5	816.6	807.4	804.3	803.3	812.5
22.5°	790.0	789.0	788.0	790.0	781.8	779.8	778.8	786.9
25°	758.3	757.3	755.2	757.3	748.1	745.0	745.0	751.1
27.5°	713.3	713.3	710.2	713.3	703.0	702.0	701.0	708.1
30°	658.0	653.9	651.9	656.0	645.7	645.7	643.7	650.8
32.5°	589.4	585.4	584.3	586.4	577.2	574.1	578.2	582.3
35°	510.7	511.7	507.6	507.6	499.4	500.4	501.4	507.6
37.5°	434.9	432.9	431.8	432.9	426.7	424.7	422.7	428.8
40°	364.3	359.2	358.2	358.2	353.1	352.0	353.1	356.1
42.5°	297.8	296.8	292.7	294.7	289.6	291.6	290.6	290.6
45°	240.5	241.5	237.4	240.5	236.4	233.3	233.3	235.4
47.5°	190.3	190.3	189.3	189.3	186.3	187.3	185.2	188.3
50°	147.3	147.3	145.3	146.3	144.3	144.3	143.3	144.3
52.5°	112.6	111.6	111.6	110.5	108.5	109.5	110.5	108.5
55°	81.9	82.9	80.8	81.9	79.8	80.8	79.8	80.8
57.5°	56.3	57.3	55.3	57.3	55.3	56.3	55.3	55.3
60°	38.9	38.9	37.9	38.9	37.9	37.9	36.8	38.9
62.5°	26.6	26.6	26.6	26.6	26.6	25.6	26.6	26.6
65°	19.5	18.4	18.4	18.4	18.4	18.4	18.4	18.4
67.5°	13.3	13.3	13.3	13.3	13.3	13.3	13.3	13.3
70°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
72.5°	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
75°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
77.5°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
80°	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
82.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
85°	1.0	1.0	1.0	0.0	1.0	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)