

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: P879380

Luminaire Tested: **LD4C20D010 EU4209030 4LBDWWH**

Issue Date: 10/1/2024

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: P879380
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/1/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C20D010 EU4209030 4LBLDWWH
Description: 4 INCH 2000 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS
AND 4LBLDWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

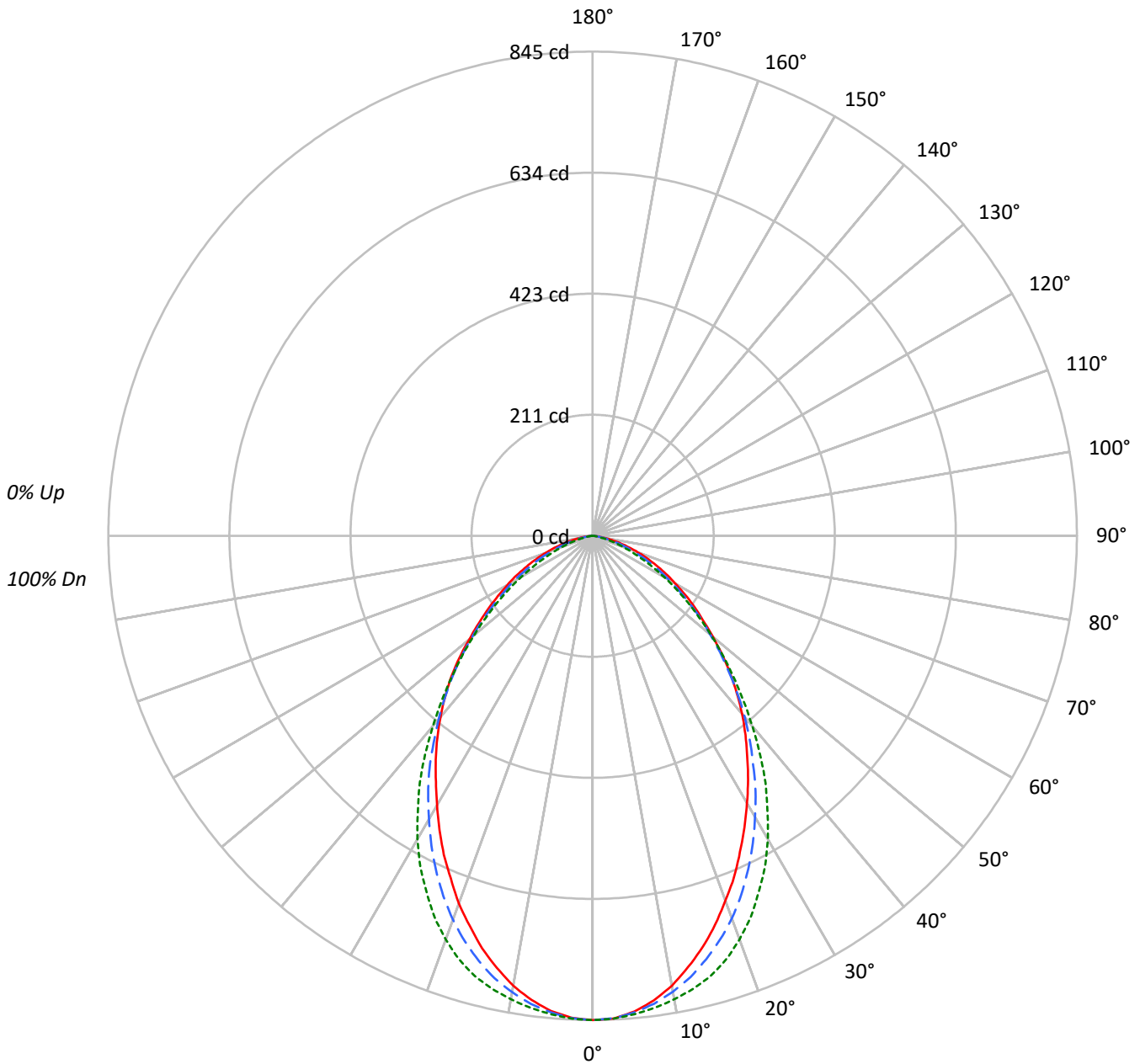
Lumens per Lamp: N/A
Luminaire Lumens: 1512.0 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.1 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 21.8
Input Voltage (V): NR
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			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			100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77			77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67			67
4	88	77	70	64	86	76	69	63	74	68	63	71	66	62	69	65	61	59			59
5	81	70	62	56	80	69	62	56	67	61	56	65	59	55	63	58	54	52			52
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47			47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	103848	103848	103848
5°	102790	103369	102679
10°	99450	102469	99487
15°	94487	101165	94805
20°	88562	97975	89294
25°	82484	92963	83244
30°	76405	86718	76987
35°	70489	78828	71554
40°	65016	69458	66218
45°	58898	60201	60670
50°	52216	51566	53515
55°	46543	43416	47614
60°	40738	35234	42262
65°	35639	27267	36918
70°	29993	19971	31574
75°	23449	12958	24778
80°	15352	6792	16909
85°	5215	3101	7048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.9	5.2
10°-20°	215.6	14.3
20°-30°	296.5	19.6
30°-40°	309.4	20.5
40°-50°	264.7	17.5
50°-60°	189.3	12.5
60°-70°	109.9	7.3
70°-80°	42.4	2.8
80°-90°	5.4	0.4
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°	591.1	39.1
0°-40°	900.4	59.6
0°-60°	1354.4	89.6
0°-90°	1512.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1512.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	845	845	845	845	845	
5°	834	835	838	835	833	78
15°	743	765	795	768	745	208
25°	608	642	686	646	614	280
35°	470	489	526	496	477	294
45°	339	336	346	345	349	261
55°	217	206	203	212	222	194
65°	123	108	94	112	127	122
75°	49	37	27	39	52	53
85°	4	3	2	3	5	7
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°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	843.2	842.5	842.8	842.8	842.8	842.5	843.2	843.2	842.8	842.8	842.8
5°	833.5	832.9	833.2	833.5	833.5	833.5	833.8	834.2	834.5	834.8	835.1
7.5°	818.0	817.1	818.0	819.3	819.3	819.6	819.9	820.2	821.1	822.7	823.6
10°	797.2	797.2	797.5	798.5	800.0	799.7	800.6	802.2	804.0	806.2	807.8
12.5°	770.8	771.4	772.4	773.3	774.9	775.8	777.3	779.2	782.3	785.4	788.8
15°	742.9	743.2	743.5	745.7	747.2	749.4	750.6	754.4	757.2	761.5	765.2
17.5°	711.5	711.2	712.2	714.0	717.7	718.7	720.2	724.3	728.3	734.2	739.2
20°	677.4	679.2	680.5	683.0	685.1	687.6	688.9	693.8	698.5	704.1	710.6
22.5°	645.1	643.5	645.7	648.5	650.4	652.2	654.4	659.7	664.7	671.5	678.0
25°	608.5	609.4	610.9	613.1	615.6	618.1	620.6	626.2	629.0	636.1	642.0
27.5°	573.7	575.2	575.9	578.7	580.8	582.7	583.9	590.5	592.9	599.2	605.1
30°	538.6	540.2	540.2	543.3	544.8	546.7	549.8	554.1	557.9	562.2	566.6
32.5°	504.8	504.8	506.0	508.8	510.4	512.5	513.5	516.6	520.3	524.6	529.3
35°	470.0	470.9	472.2	472.2	475.0	476.2	477.5	480.6	483.0	484.9	488.6
37.5°	438.0	438.0	437.1	438.7	440.5	440.2	442.1	443.6	445.2	447.3	450.5
40°	405.4	405.4	404.2	405.1	406.4	406.1	405.4	407.0	408.2	409.8	412.9
42.5°	372.2	371.6	371.3	371.3	371.9	371.3	371.9	372.2	372.2	372.2	374.1
45°	339.0	340.6	338.7	338.1	337.1	336.2	335.9	336.2	337.5	335.9	336.2
47.5°	306.4	307.0	305.8	304.9	303.9	303.3	303.9	302.1	302.7	303.0	301.7
50°	273.2	271.9	271.9	271.0	271.3	271.0	270.4	269.8	269.8	268.2	267.3
52.5°	242.5	243.1	243.7	241.5	241.8	240.3	240.6	239.0	239.0	237.2	237.8
55°	217.3	216.4	216.4	215.4	215.1	213.6	213.3	212.3	210.2	208.9	206.4
57.5°	191.2	190.9	189.7	190.0	188.1	187.8	187.2	185.6	184.1	182.5	179.7
60°	165.8	166.1	166.1	165.5	164.5	163.0	163.3	161.1	158.9	156.2	153.7
62.5°	144.7	143.7	143.4	142.8	140.9	140.9	139.4	137.8	135.7	132.9	130.7
65°	122.6	122.9	122.0	121.1	119.2	118.9	117.7	116.4	114.2	111.4	108.3
67.5°	102.8	102.1	101.8	100.9	99.0	98.7	97.8	95.0	93.1	90.3	87.9
70°	83.5	82.9	83.2	81.6	79.8	78.9	78.5	76.4	73.6	71.4	68.9
72.5°	65.5	65.5	65.2	63.6	62.7	62.1	60.8	58.4	56.8	54.3	52.5
75°	49.4	49.0	48.4	47.5	46.3	45.6	45.0	43.5	41.3	38.5	36.9
77.5°	34.1	34.5	33.8	33.5	32.0	31.0	30.7	29.8	27.9	26.1	24.5
80°	21.7	21.4	21.1	20.5	20.2	19.9	18.9	18.3	16.5	15.5	14.6
82.5°	11.8	11.2	11.2	10.9	10.2	9.9	9.6	9.0	8.7	8.1	7.5
85°	3.7	4.0	3.7	3.7	3.7	3.4	3.4	3.4	3.1	3.1	2.8
87.5°	0.3	0.6	0.3	0.3	0.6	0.3	0.3	0.6	0.3	0.3	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	842.8	843.2	843.2	843.5	843.5	843.5	843.5	843.5	843.5	843.5	843.5
5°	836.0	836.0	836.6	837.3	837.3	837.3	837.6	838.2	838.2	838.2	837.9
7.5°	824.8	826.1	827.3	828.6	828.9	829.2	829.8	831.1	831.1	831.1	831.1
10°	810.3	813.0	814.6	816.5	817.4	818.0	819.9	820.2	821.1	821.4	821.1
12.5°	791.6	795.4	798.8	801.9	803.1	804.4	806.2	808.1	809.0	809.9	809.6
15°	770.8	774.9	780.1	783.6	786.0	787.9	790.7	793.2	794.7	795.4	795.4
17.5°	745.7	750.6	756.2	761.8	763.4	766.5	769.6	773.0	774.9	775.2	774.9
20°	717.7	723.3	728.0	733.6	737.0	738.5	742.9	747.2	749.1	749.4	749.1
22.5°	684.5	689.8	696.0	701.9	704.7	707.5	712.2	716.5	719.0	720.8	719.0
25°	647.6	655.0	660.9	665.9	669.9	672.7	678.6	682.0	686.1	685.8	686.1
27.5°	611.3	617.5	624.0	629.9	632.4	635.5	640.1	645.7	649.1	651.3	651.0
30°	574.0	579.0	584.6	589.8	593.9	596.4	603.2	605.7	610.0	611.3	610.3
32.5°	534.6	538.0	543.6	550.7	552.3	554.8	559.1	565.3	566.9	567.5	567.8
35°	492.7	499.2	503.8	508.2	509.4	511.6	516.6	521.2	522.8	525.6	524.3
37.5°	453.9	457.6	459.8	464.1	467.8	469.7	472.2	475.3	478.4	479.6	479.3
40°	415.1	416.9	418.8	423.4	423.8	423.8	427.5	431.8	431.8	433.1	433.1
42.5°	375.3	375.6	378.1	380.6	381.2	381.8	385.6	386.2	388.1	389.0	390.2
45°	336.8	338.7	340.2	340.6	342.1	342.4	343.3	344.3	347.1	346.5	347.1
47.5°	301.7	302.7	303.6	303.6	304.5	304.2	305.8	304.9	306.7	307.3	308.3
50°	267.3	268.8	267.9	268.5	268.2	269.2	268.5	268.5	268.5	269.8	270.7
52.5°	235.6	235.9	235.0	235.3	235.3	234.7	235.3	235.0	234.7	234.7	235.0
55°	206.4	205.2	204.6	203.3	201.8	203.6	202.7	202.1	203.3	202.7	203.3
57.5°	178.2	176.6	175.4	174.8	172.6	173.8	172.6	172.0	172.0	172.0	173.5
60°	151.5	149.9	148.4	146.5	146.2	145.6	145.0	143.4	143.7	143.4	144.0
62.5°	128.2	125.1	122.9	121.4	121.1	120.1	119.2	117.7	118.0	118.0	118.3
65°	106.8	103.4	100.3	98.1	98.1	96.5	95.0	95.0	93.1	93.8	94.1
67.5°	85.4	82.6	79.5	77.9	77.0	75.7	74.8	74.2	73.3	73.3	73.9
70°	66.1	63.3	61.8	59.3	59.0	58.1	56.8	55.9	55.6	55.6	55.3
72.5°	50.0	47.5	45.6	44.1	43.2	42.2	41.0	40.7	40.0	40.0	40.7
75°	34.8	33.2	31.7	30.1	29.5	29.2	28.3	27.6	27.6	27.3	27.6
77.5°	23.3	21.7	20.2	19.6	18.9	18.3	18.0	17.7	16.8	16.8	16.8
80°	13.3	12.7	12.1	11.2	11.2	10.9	10.2	9.9	9.6	9.6	9.6
82.5°	6.8	6.5	5.9	5.6	5.6	5.6	5.3	5.3	5.0	5.0	5.0
85°	2.8	2.5	2.2	2.2	2.2	2.2	2.2	2.2	2.5	2.2	2.5
87.5°	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	843.5	843.2	843.2	843.2	843.2	843.2	842.8	842.8	842.5	842.5	842.5
5°	838.2	837.9	837.6	837.3	837.0	836.6	836.3	836.0	835.1	834.8	834.2
7.5°	830.7	830.1	829.2	828.9	828.3	827.3	826.1	825.5	824.2	822.7	822.0
10°	820.8	819.6	818.6	817.1	816.8	815.5	812.4	810.9	808.7	806.8	804.7
12.5°	808.7	807.5	805.3	803.1	801.9	799.1	796.3	793.8	791.0	787.0	783.9
15°	793.8	791.9	787.6	787.0	785.1	780.8	777.0	772.4	768.0	763.7	760.0
17.5°	773.9	769.9	767.7	764.9	762.8	757.2	753.1	747.9	742.0	737.0	731.7
20°	747.9	743.5	739.8	738.2	735.4	730.5	725.5	719.0	713.1	706.9	702.2
22.5°	716.8	714.0	708.4	706.6	703.2	698.2	692.3	686.1	680.5	673.7	667.4
25°	683.6	679.6	675.2	671.5	669.0	664.3	656.9	652.2	646.0	638.6	633.9
27.5°	648.2	643.5	637.3	634.9	632.7	626.5	620.3	614.4	609.4	602.9	598.8
30°	607.2	603.8	599.8	596.7	593.6	588.6	583.0	576.2	570.9	567.8	562.2
32.5°	565.6	562.8	557.6	556.0	552.6	548.6	544.5	539.5	534.0	529.3	525.0
35°	521.2	518.4	514.7	511.9	510.7	507.9	503.5	499.2	496.4	491.1	488.9
37.5°	476.8	475.9	472.2	469.4	468.5	465.0	462.9	459.8	455.7	454.5	452.0
40°	431.2	430.6	428.4	428.1	426.2	425.3	422.2	419.7	417.9	416.9	415.4
42.5°	389.3	388.7	386.8	387.1	385.3	384.6	384.3	382.2	380.6	378.7	379.0
45°	348.0	347.4	346.1	345.5	346.5	346.1	345.5	344.6	344.6	344.9	344.0
47.5°	308.3	308.9	307.6	308.3	308.3	307.3	307.3	308.6	308.9	309.5	310.1
50°	270.7	272.6	271.9	272.9	273.2	273.5	272.6	274.1	273.8	276.6	276.0
52.5°	236.6	236.9	238.1	238.4	238.7	239.0	240.6	241.8	242.1	243.4	245.6
55°	203.6	204.0	206.4	206.4	208.0	208.3	210.5	211.1	212.0	215.4	216.1
57.5°	172.6	174.5	175.7	176.3	177.3	178.8	180.1	182.9	184.4	186.6	188.7
60°	144.7	146.8	148.4	149.0	150.3	152.1	153.7	156.8	159.6	162.1	163.6
62.5°	118.9	120.8	122.0	124.2	124.2	125.7	129.5	131.3	134.4	136.6	139.4
65°	95.9	97.2	99.3	99.3	100.6	103.1	106.2	109.0	112.1	115.2	118.0
67.5°	75.1	76.1	77.3	78.5	79.2	82.3	84.8	88.8	91.6	93.8	97.2
70°	56.8	57.4	59.0	60.2	61.2	63.3	66.1	68.9	71.7	74.2	77.6
72.5°	40.7	41.9	43.5	44.4	45.0	46.6	49.4	52.2	54.6	57.1	59.0
75°	27.9	28.9	29.5	30.4	31.4	32.6	34.5	36.3	39.1	41.6	43.8
77.5°	17.4	18.3	19.2	19.6	19.9	21.1	22.4	24.2	26.1	27.9	29.5
80°	10.2	10.6	10.9	11.2	11.8	12.7	13.3	14.6	15.8	17.1	18.6
82.5°	5.3	5.6	5.9	5.9	5.9	6.2	7.1	7.8	8.1	8.7	9.6
85°	2.2	2.2	2.2	2.5	2.5	2.8	2.8	3.1	3.1	3.4	3.7
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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°	845.3	845.3	845.3	845.3	845.3	845.3	845.3	845.3
2.5°	842.2	842.2	842.2	841.9	842.2	842.2	842.2	841.9
5°	834.2	833.5	833.5	833.2	832.9	832.9	833.2	832.6
7.5°	820.8	819.9	819.3	819.3	818.9	818.6	818.6	817.1
10°	803.4	801.6	801.6	800.9	798.5	798.1	797.5	797.5
12.5°	781.7	779.5	778.3	776.7	775.2	773.9	773.6	772.4
15°	755.9	753.1	751.0	750.3	747.9	746.0	746.0	745.4
17.5°	728.0	723.6	722.1	720.5	717.1	716.8	716.2	713.4
20°	696.3	692.3	690.1	688.6	686.4	683.3	682.7	683.0
22.5°	663.1	657.5	655.7	654.1	651.9	649.1	649.1	647.0
25°	628.6	623.7	621.8	620.0	616.5	615.3	613.7	614.1
27.5°	593.6	588.9	587.4	583.9	581.8	580.2	578.7	578.7
30°	556.9	554.4	552.0	551.7	547.3	545.4	543.9	542.7
32.5°	521.5	518.4	517.2	516.0	513.8	511.3	511.0	508.8
35°	486.8	483.7	482.1	480.9	478.4	477.5	476.5	477.1
37.5°	450.1	449.5	448.6	447.0	445.5	445.2	443.9	445.5
40°	414.1	413.8	412.6	412.9	412.9	412.3	412.9	412.9
42.5°	379.4	379.4	378.1	378.7	379.0	379.7	380.6	381.2
45°	345.5	345.2	345.5	346.1	345.5	347.1	348.3	349.2
47.5°	310.8	311.1	312.3	312.6	313.2	315.4	315.4	315.4
50°	277.5	279.1	278.5	280.3	280.0	281.3	280.0	280.0
52.5°	245.9	247.4	247.7	248.0	249.9	250.2	250.2	249.9
55°	217.6	219.8	218.9	220.4	221.3	222.0	222.9	222.3
57.5°	191.5	192.5	193.4	193.7	195.0	195.6	196.2	195.6
60°	165.8	167.6	169.2	169.5	170.1	170.7	171.1	172.0
62.5°	141.6	144.7	145.3	145.6	147.1	148.1	148.7	149.3
65°	120.1	122.3	123.9	124.8	126.0	126.0	127.0	127.0
67.5°	99.3	101.5	102.4	103.1	104.9	105.2	106.8	106.8
70°	80.4	82.0	82.6	83.5	85.4	86.6	87.2	87.9
72.5°	62.1	64.0	64.9	66.1	67.4	68.3	68.6	69.5
75°	45.3	48.1	48.4	49.7	50.6	51.8	52.5	52.2
77.5°	31.7	32.6	33.8	34.5	35.4	36.3	37.3	37.3
80°	19.6	20.8	21.1	21.4	22.7	23.3	23.9	23.9
82.5°	10.2	10.9	11.5	11.8	12.4	12.4	12.7	13.0
85°	4.0	4.3	4.3	4.3	4.7	5.0	5.0	5.0
87.5°	0.6	0.9	0.6	0.6	0.9	0.9	0.9	0.9
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)