

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: P843223

Luminaire Tested: **LD4C08DE010B2750 EU4C08B27 4LBSWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843223
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251556)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C08DE010B2750 EU4C08B27 4LBSWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

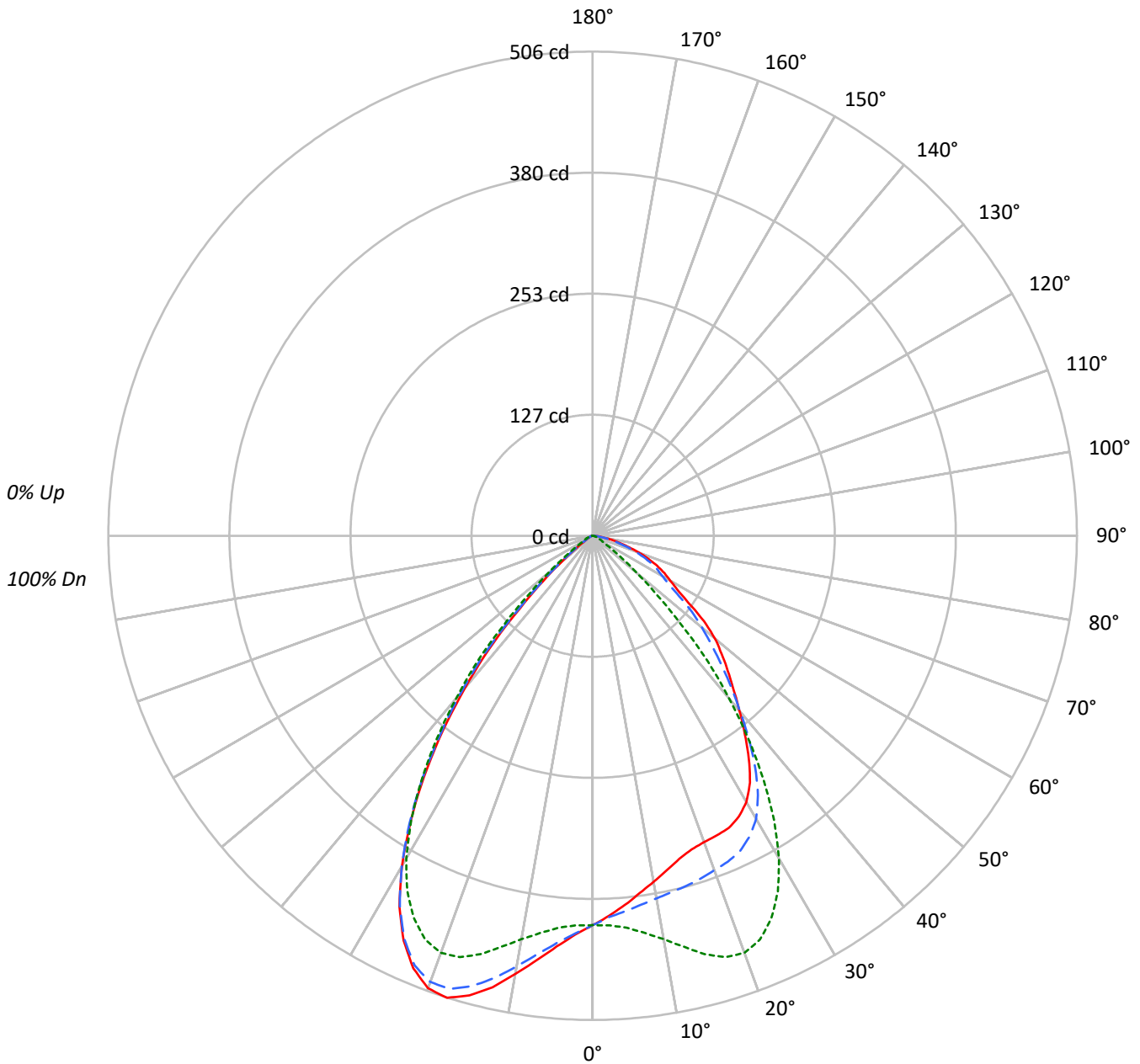
Lumens per Lamp: N/A
Luminaire Lumens: 750.9 lumens
Efficiency: N/A
Efficacy: 78.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.6
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	85	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	75	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	79	69	61	56	78	68	61	56	66	60	55	64	59	55	63	58	54	53																			
7	75	63	56	51	73	62	55	51	61	55	50	60	54	50	58	53	50	48																			
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44																			
9	66	54	47	42	65	54	47	42	53	46	42	52	46	42	51	46	42	40																			
10	62	51	44	39	61	50	43	39	49	43	39	48	43	39	47	42	39	37																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	50001	50001	50001
5°	47763	50710	53127
10°	45795	53405	57983
15°	44452	57565	63238
20°	44529	60636	65774
25°	45655	59847	63290
30°	45593	55240	56517
35°	42698	46688	46043
40°	38249	35603	33229
45°	34713	22604	18556
50°	31880	11487	7932
55°	26174	5119	2635
60°	22974	2875	1425
65°	21628	2151	1076
70°	18499	1724	934
75°	14098	1234	759
80°	10188	778	354
85°	7471	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.5	5.3
10°-20°	123.2	16.4
20°-30°	190.6	25.4
30°-40°	187.8	25.0
40°-50°	115.3	15.4
50°-60°	51.3	6.8
60°-70°	28.6	3.8
70°-80°	12.4	1.7
80°-90°	2.2	0.3
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°	353.3	47.1
0°-40°	541.1	72.1
0°-60°	707.7	94.2
0°-90°	750.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	750.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	407	407	407	407	407	
5°	387	394	411	427	431	36
15°	350	379	453	487	497	99
25°	337	364	442	465	467	155
35°	285	296	311	310	307	177
45°	200	190	130	114	107	155
55°	122	110	24	14	12	112
65°	74	67	7	4	4	73
75°	30	26	3	2	2	33
85°	5	4	0	0	0	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°	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0
2.5°	397.4	397.4	397.4	397.4	398.4	396.8	398.4	398.4	400.0	400.5	398.9
5°	387.3	386.8	387.3	387.3	388.4	387.8	389.4	390.5	392.6	393.7	393.7
7.5°	376.6	376.6	376.6	377.7	379.3	378.7	380.3	381.9	385.1	387.3	388.9
10°	367.1	366.6	368.2	368.7	370.3	370.3	372.9	374.5	378.2	382.5	384.7
12.5°	358.0	357.5	358.5	360.2	362.9	362.9	365.0	367.6	372.9	377.7	381.4
15°	349.5	350.1	351.7	352.7	355.9	355.9	358.5	361.8	367.6	373.5	378.7
17.5°	343.7	344.3	345.3	346.9	350.1	350.1	352.7	356.4	362.9	369.2	375.6
20°	340.6	341.1	342.1	343.7	346.4	346.9	349.0	353.2	359.1	366.0	371.9
22.5°	339.0	340.0	341.1	342.1	344.8	344.8	347.4	350.6	356.4	363.4	368.7
25°	336.8	337.8	338.4	340.0	342.1	342.1	343.7	347.4	352.7	358.5	363.9
27.5°	330.9	332.0	332.5	334.1	336.2	335.7	337.8	340.6	345.3	350.6	354.8
30°	321.4	321.9	323.0	323.5	325.1	325.1	326.7	329.3	332.5	337.3	341.6
32.5°	306.0	307.0	307.6	308.1	309.7	309.1	309.7	311.3	314.4	318.8	321.4
35°	284.7	286.8	286.8	287.9	288.4	287.9	287.9	290.0	291.7	294.9	296.5
37.5°	261.3	262.9	262.4	263.5	264.0	262.4	263.5	264.0	266.1	267.7	268.3
40°	238.5	239.0	239.0	239.0	239.0	238.5	239.0	239.6	241.1	241.1	239.6
42.5°	217.8	218.3	218.3	217.2	218.3	217.8	217.8	217.8	217.8	215.7	214.1
45°	199.8	200.3	200.3	199.8	199.8	198.7	198.2	197.6	196.0	193.3	189.6
47.5°	182.8	183.8	184.3	183.3	182.8	181.7	181.7	178.5	176.4	173.1	167.8
50°	166.8	167.8	167.8	166.8	166.8	165.2	163.6	162.6	159.4	155.7	149.2
52.5°	146.6	148.2	148.2	147.6	147.6	145.5	145.0	142.9	140.2	136.0	130.7
55°	122.2	124.3	123.7	123.2	122.2	122.2	122.2	120.6	119.0	115.8	110.5
57.5°	104.6	105.2	105.2	104.6	104.6	103.5	103.5	102.0	101.4	98.3	94.0
60°	93.5	93.5	94.0	93.5	93.0	92.4	91.9	90.9	89.3	87.1	84.0
62.5°	84.5	85.0	85.0	84.5	84.0	83.4	82.9	81.9	80.8	79.1	75.9
65°	74.4	75.4	74.9	74.4	73.8	73.3	73.3	72.2	71.2	70.1	66.9
67.5°	63.2	63.8	64.3	63.2	63.2	62.7	62.7	61.7	61.1	58.9	56.8
70°	51.5	52.0	52.0	51.5	51.5	51.0	51.0	50.4	49.9	48.3	46.2
72.5°	40.4	40.9	40.4	39.9	39.9	39.9	39.3	38.8	38.3	37.2	35.6
75°	29.7	29.7	30.2	29.7	29.2	29.2	28.7	28.7	27.6	27.1	25.5
77.5°	21.3	21.8	21.3	21.3	20.7	20.2	20.2	19.7	19.7	19.1	18.1
80°	14.4	14.4	14.9	14.4	13.9	14.4	13.9	13.3	13.3	12.8	11.7
82.5°	9.0	9.5	9.0	9.0	9.0	9.0	9.0	8.5	8.5	7.9	7.4
85°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	4.8	4.8	4.8	4.2
87.5°	2.6	2.6	2.1	2.1	2.6	2.6	2.6	2.1	2.1	2.1	2.1
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°	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0
2.5°	401.1	401.6	402.6	404.2	404.2	403.2	405.8	405.8	407.0	407.4	409.6
5°	396.8	397.9	400.0	402.6	403.2	402.6	406.3	408.0	409.6	411.2	414.4
7.5°	393.1	395.2	398.9	402.6	404.2	404.2	410.2	412.3	415.4	418.6	422.3
10°	391.0	394.2	399.5	405.3	407.0	408.5	415.4	419.7	423.9	428.1	433.5
12.5°	388.4	394.2	401.1	408.5	411.7	413.9	423.4	428.7	434.6	439.9	446.7
15°	387.8	394.7	403.7	413.3	417.6	420.7	431.4	438.8	445.7	452.6	459.5
17.5°	385.7	394.2	405.3	416.0	421.3	425.5	437.8	446.7	454.8	461.7	469.6
20°	383.0	392.6	404.8	416.5	422.3	426.5	439.9	448.3	457.4	463.8	471.2
22.5°	379.3	388.9	401.1	412.8	418.1	421.8	435.1	442.5	450.4	456.9	463.8
25°	372.9	381.9	392.6	402.1	407.4	410.7	422.3	429.2	435.1	441.5	447.8
27.5°	363.9	370.8	379.8	386.8	389.9	393.1	402.6	408.5	413.9	419.1	423.4
30°	348.0	353.2	359.6	365.5	368.7	369.2	378.2	381.4	385.7	389.4	392.6
32.5°	326.7	330.9	334.6	337.8	340.0	340.6	347.4	348.5	352.7	352.7	357.5
35°	299.6	301.7	304.4	304.4	306.0	304.4	309.1	310.2	310.7	311.3	315.1
37.5°	268.7	269.9	271.5	268.3	268.3	266.6	268.3	269.4	267.3	267.3	269.9
40°	239.6	237.4	235.3	232.2	230.6	227.4	227.4	224.7	223.2	222.0	222.6
42.5°	211.4	206.7	201.9	194.9	191.7	188.6	185.4	181.7	180.6	178.0	176.4
45°	184.3	177.5	171.0	159.9	153.6	150.3	143.4	136.0	131.3	130.1	125.9
47.5°	161.5	151.3	140.8	127.6	121.1	115.3	105.2	98.8	92.4	89.3	86.6
50°	141.3	132.3	118.5	104.2	96.1	90.3	79.1	71.7	64.8	60.1	56.8
52.5°	123.7	113.7	100.9	84.5	76.5	70.1	57.9	49.4	43.6	38.8	35.1
55°	104.2	96.1	83.4	68.0	60.1	52.6	42.0	33.0	27.1	23.9	21.3
57.5°	89.8	82.9	70.6	55.7	48.3	41.5	30.8	23.4	18.6	15.4	13.9
60°	80.2	73.8	63.2	48.9	42.0	35.6	25.5	18.6	14.4	11.7	10.6
62.5°	72.2	65.9	56.3	43.0	37.2	30.8	21.8	15.4	11.7	9.5	7.9
65°	63.2	57.4	48.9	37.2	31.8	26.5	18.6	12.8	9.5	7.4	6.3
67.5°	53.6	48.3	40.9	30.8	26.5	22.3	14.9	10.6	7.9	6.3	5.3
70°	43.6	39.3	32.4	25.0	21.3	17.6	12.3	8.5	5.8	4.8	4.2
72.5°	33.4	29.7	25.0	19.1	16.0	13.3	9.0	6.3	4.8	3.7	3.2
75°	23.9	21.3	17.6	13.9	11.7	9.5	6.9	4.8	3.2	2.6	2.1
77.5°	16.5	14.9	12.3	9.5	7.9	6.9	4.8	3.2	2.6	2.1	1.6
80°	10.6	9.5	7.9	5.8	4.8	4.2	2.6	2.1	1.6	1.1	1.1
82.5°	6.3	5.8	4.8	3.2	2.6	2.1	1.6	1.1	1.1	0.5	0.5
85°	3.7	3.2	2.1	1.6	1.6	1.1	1.1	0.5	0.5	0.0	0.0
87.5°	1.6	1.1	1.1	0.5	0.5	0.5	0.5	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



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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0
2.5°	408.5	411.2	410.7	412.3	411.7	411.7	414.4	413.3	416.0	416.0	416.5
5°	414.4	418.1	418.1	420.7	420.2	421.3	423.9	423.9	427.1	428.1	428.1
7.5°	422.8	427.6	428.7	431.4	431.8	434.1	436.2	436.7	440.9	442.0	442.5
10°	434.6	440.4	442.0	444.6	445.7	447.8	450.4	451.5	456.9	457.4	459.5
12.5°	448.9	455.2	456.9	460.1	460.6	463.2	466.9	468.0	473.3	474.9	476.5
15°	462.7	468.5	471.2	474.3	474.9	478.2	481.3	482.4	487.1	489.3	490.8
17.5°	472.2	479.2	480.8	485.0	485.0	487.7	490.8	491.9	496.7	498.3	499.3
20°	474.3	480.8	482.9	486.1	486.6	488.2	490.8	491.9	496.1	496.7	498.3
22.5°	466.4	472.8	473.8	477.0	477.5	479.2	481.3	480.8	486.1	485.6	486.1
25°	449.4	455.2	455.2	459.0	458.5	460.1	461.1	460.6	465.4	465.4	465.4
27.5°	425.0	430.4	430.8	433.5	431.8	432.5	433.5	433.0	436.2	436.2	436.2
30°	394.7	398.9	397.4	399.5	398.4	399.5	398.4	397.9	398.9	400.0	399.5
32.5°	357.0	360.2	360.2	360.7	360.7	357.5	356.4	356.4	355.9	355.4	355.4
35°	313.4	316.1	315.1	315.1	314.4	311.3	309.7	308.6	310.2	307.0	309.1
37.5°	268.7	269.4	267.7	267.3	264.5	264.5	261.9	259.8	260.8	260.3	258.2
40°	219.9	222.0	218.8	217.8	219.5	217.2	214.6	211.9	214.1	211.4	212.5
42.5°	172.1	171.5	170.5	170.5	170.5	167.3	166.8	166.3	166.8	164.7	163.1
45°	124.3	122.7	121.1	121.1	119.0	117.9	117.9	116.3	113.7	113.7	110.5
47.5°	84.0	80.2	79.1	78.6	77.5	77.5	76.5	75.4	74.9	72.2	72.2
50°	54.7	51.0	49.9	49.4	49.9	48.9	47.8	46.7	45.7	45.2	44.1
52.5°	33.0	31.3	30.2	29.7	28.7	28.1	27.6	26.5	26.0	26.0	25.5
55°	19.7	18.1	16.0	16.0	16.0	15.4	14.9	14.4	13.9	13.9	13.3
57.5°	12.3	11.1	10.0	9.5	9.5	9.5	9.0	9.0	9.0	9.0	8.5
60°	9.0	7.9	7.4	7.4	7.4	6.9	6.9	6.9	6.9	6.3	6.3
62.5°	6.9	6.3	5.8	5.8	5.3	5.3	5.3	5.3	5.3	5.3	4.8
65°	5.8	4.8	4.8	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
67.5°	4.2	3.7	3.7	3.7	3.7	3.2	3.2	3.2	3.2	3.2	3.2
70°	3.2	3.2	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
72.5°	2.6	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
75°	2.1	2.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.6	1.6	1.6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	1.1	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
82.5°	0.5	0.5	0.5	0.5	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	0.0	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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	407.0	407.0	407.0	407.0	407.0	407.0	407.0	407.0
2.5°	416.5	419.1	416.5	416.5	418.1	417.6	418.6	417.0
5°	428.7	432.5	429.7	429.2	431.8	431.4	431.8	430.8
7.5°	443.6	447.3	444.6	444.6	447.3	446.7	448.3	447.3
10°	460.6	464.8	461.1	461.7	465.4	464.8	464.8	464.8
12.5°	478.2	482.4	480.3	480.3	482.9	483.4	484.0	483.4
15°	492.4	496.7	494.0	494.0	497.7	497.2	497.7	497.2
17.5°	500.9	505.2	502.1	502.1	505.2	505.2	505.8	506.3
20°	498.8	503.6	500.9	499.8	503.6	503.6	503.1	503.1
22.5°	486.6	490.8	488.7	487.7	490.3	489.3	488.7	489.3
25°	465.4	469.6	465.4	465.4	467.5	466.9	467.5	466.9
27.5°	436.7	439.9	435.6	435.1	437.2	436.2	435.6	437.2
30°	398.4	401.6	399.5	397.9	400.5	398.9	397.9	398.4
32.5°	354.8	357.0	355.9	353.2	354.8	353.8	353.2	353.8
35°	307.0	309.7	305.4	304.9	307.6	305.4	304.4	307.0
37.5°	257.6	260.8	257.1	257.6	256.1	256.6	255.5	257.1
40°	210.9	210.4	209.3	208.8	209.3	207.7	208.8	207.2
42.5°	160.4	161.5	161.0	160.4	161.0	158.9	157.8	159.9
45°	111.6	111.1	110.0	108.9	108.9	108.4	108.4	106.8
47.5°	71.7	71.2	69.1	69.6	70.6	69.6	68.0	70.1
50°	43.6	43.0	43.0	42.5	43.6	42.5	41.5	41.5
52.5°	24.4	24.4	23.9	23.9	23.9	23.9	23.4	22.8
55°	13.3	12.8	12.8	12.8	12.3	12.3	12.3	12.3
57.5°	8.5	8.5	8.5	8.5	8.5	8.5	7.9	7.9
60°	6.3	6.3	6.3	6.3	5.8	6.3	5.8	5.8
62.5°	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
65°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
67.5°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
70°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
72.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
75°	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
77.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
80°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)