

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: P843370

Luminaire Tested: **LD4C15DE010B2750 EU4C15B30 4LBLWWH**

Issue Date: 5/7/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P843370  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LD4C15DE010B2750 EU4C15B30 4LBLWWH  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

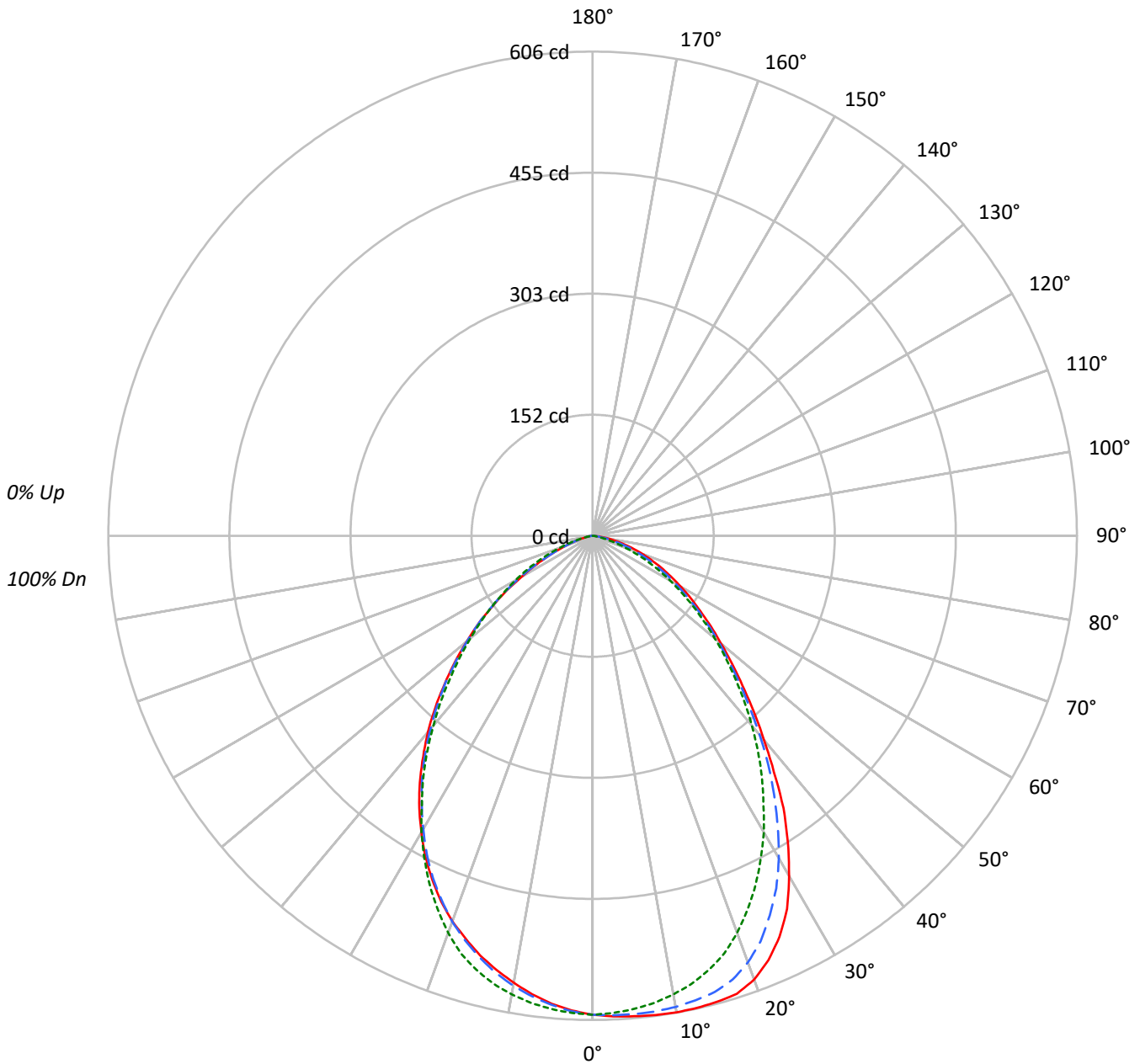
Lumens per Lamp: N/A  
Luminaire Lumens: 1129.5 lumens  
Efficiency: N/A  
Efficacy: 66.4 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 17  
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				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	101	108	105	102	99	101	98	96	97	95	93	94	92	90	88				88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77				77
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68				68
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60				60
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53				53
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47				47
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43				43
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39				39
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	47	41	37	35				35
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	73638	73638	73638
5°	74450	73315	72514
10°	75548	72704	70870
15°	76783	71530	69164
20°	77279	69108	67121
25°	75056	65378	64375
30°	69752	60758	60801
35°	62435	55386	56571
40°	53469	49652	51464
45°	46007	43765	45416
50°	40003	38111	39257
55°	35213	32771	32492
60°	31303	27372	25210
65°	27500	21918	18227
70°	23599	15517	12356
75°	19129	8971	7215
80°	13725	3891	3608
85°	5215	1692	1692



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	56.5	5.0
10°-20°	159.9	14.2
20°-30°	228.3	20.2
30°-40°	238.9	21.1
40°-50°	200.1	17.7
50°-60°	140.1	12.4
60°-70°	76.3	6.8
70°-80°	26.5	2.3
80°-90°	3.0	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°	444.7	39.4
0°-40°	683.6	60.5
0°-60°	1023.8	90.6
0°-90°	1129.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1129.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	599	599	599	599	599	
5°	604	601	594	589	588	58
15°	604	591	562	546	544	170
25°	554	524	482	473	475	253
35°	416	396	369	372	377	258
45°	265	259	252	260	261	206
55°	164	159	153	153	152	149
65°	95	86	75	63	63	94
75°	40	33	19	15	15	43
85°	4	2	1	1	1	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°	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4
2.5°	602.1	601.5	601.7	601.7	601.7	601.5	601.7	601.5	601.5	601.3	600.7
5°	603.7	603.3	603.3	603.3	603.1	602.9	602.9	602.6	602.1	601.9	600.9
7.5°	604.9	604.4	604.4	604.2	604.0	603.7	603.5	602.9	602.1	601.7	600.5
10°	605.6	604.9	604.9	604.4	604.0	603.7	603.3	602.3	601.5	600.3	598.7
12.5°	605.2	604.4	604.2	603.7	602.9	602.3	601.9	600.7	599.1	597.6	595.4
15°	603.7	603.3	602.9	602.1	600.9	600.3	599.8	598.0	595.9	593.6	591.1
17.5°	600.9	600.3	599.4	598.4	596.8	596.2	595.0	592.7	589.7	586.5	582.5
20°	591.1	590.6	589.7	588.0	585.5	584.7	583.0	580.0	576.1	572.2	568.1
22.5°	574.7	574.0	572.6	571.2	568.9	567.3	565.9	561.8	557.4	553.2	549.3
25°	553.7	553.0	551.2	549.3	547.0	544.3	542.9	539.7	535.3	530.0	524.3
27.5°	526.7	524.5	523.7	521.7	518.2	517.3	515.2	511.0	506.9	502.3	497.5
30°	491.7	491.7	490.3	489.4	486.2	485.2	482.9	478.6	476.3	469.8	466.1
32.5°	454.6	454.1	453.0	452.2	450.4	448.9	446.5	444.2	439.1	436.0	430.9
35°	416.3	413.5	414.1	412.7	411.5	409.6	409.4	406.9	402.2	400.4	395.8
37.5°	372.7	371.7	373.2	371.1	370.0	370.3	368.4	366.8	364.9	361.7	360.8
40°	333.4	334.2	334.0	332.2	333.2	332.0	330.1	328.5	327.5	325.5	324.8
42.5°	298.0	296.7	296.2	296.2	296.5	296.5	295.5	294.3	294.3	292.3	290.2
45°	264.8	264.8	264.4	265.8	263.8	263.8	263.0	262.8	261.9	261.4	258.9
47.5°	236.3	236.1	235.9	235.6	235.3	235.3	233.9	232.8	232.6	231.2	229.8
50°	209.3	210.7	210.3	209.1	208.7	208.9	207.9	207.2	207.0	204.8	205.0
52.5°	186.8	186.5	187.0	186.2	185.1	185.3	184.5	183.5	182.5	181.4	180.5
55°	164.4	165.5	165.1	164.4	164.1	163.7	163.0	161.8	161.6	159.1	158.9
57.5°	145.7	145.4	145.0	143.8	143.6	142.9	142.9	142.0	140.7	139.3	138.1
60°	127.4	127.4	126.8	126.6	125.6	125.4	125.2	124.3	122.7	121.5	119.6
62.5°	110.0	110.4	110.0	109.3	108.6	107.7	107.2	106.5	105.1	104.0	102.4
65°	94.6	94.2	94.0	93.2	92.9	92.0	91.7	90.3	88.9	88.1	86.2
67.5°	79.7	79.1	79.1	78.6	78.2	77.4	77.0	75.6	74.0	73.1	71.3
70°	65.7	65.3	65.3	65.3	64.1	63.4	63.1	62.5	60.2	59.2	57.4
72.5°	52.8	52.6	52.4	51.6	51.0	51.0	50.0	48.7	47.5	46.3	44.9
75°	40.3	40.8	40.3	39.4	39.2	38.7	38.1	36.9	35.7	34.4	32.8
77.5°	29.5	29.1	28.6	28.6	28.1	27.2	27.0	26.0	24.6	23.8	22.1
80°	19.4	19.1	18.7	18.2	18.0	17.8	17.6	16.6	15.2	14.5	13.1
82.5°	10.6	10.4	10.4	10.2	9.4	9.4	9.2	8.2	7.6	7.2	6.5
85°	3.7	3.7	3.7	3.5	3.5	3.5	3.3	3.0	2.7	2.5	2.1
87.5°	0.4	0.2	0.4	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2
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°	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4
2.5°	600.3	599.8	599.6	599.4	599.1	598.9	598.7	598.2	598.0	597.8	597.2
5°	600.3	599.4	598.9	598.2	597.8	597.2	596.6	595.9	595.2	594.5	593.9
7.5°	599.4	598.0	597.0	595.7	595.2	594.5	593.1	592.2	591.1	589.7	588.0
10°	597.0	595.4	593.6	591.7	591.1	589.9	588.0	586.5	584.7	582.8	581.2
12.5°	593.3	590.8	588.6	586.0	584.7	583.5	581.0	578.6	576.3	574.2	571.4
15°	587.8	584.9	581.8	578.4	576.7	575.4	571.8	568.9	565.2	562.4	559.7
17.5°	578.8	574.2	570.6	566.2	563.8	562.2	559.1	554.6	551.2	548.2	545.0
20°	563.4	559.1	554.0	549.1	546.6	544.5	539.9	535.3	531.8	528.6	525.1
22.5°	543.1	537.6	533.9	527.9	525.9	523.3	517.7	513.6	509.7	506.5	503.2
25°	518.5	513.6	508.5	503.0	500.5	497.5	492.9	488.5	486.0	482.3	478.4
27.5°	490.1	486.2	480.0	475.1	472.6	470.2	465.9	462.0	458.3	455.7	452.0
30°	460.2	455.5	450.0	444.9	443.6	440.7	436.8	433.8	429.9	428.3	426.8
32.5°	427.2	421.9	417.8	414.5	411.7	409.4	407.3	402.5	401.8	397.7	397.2
35°	391.2	388.9	385.0	382.2	379.9	378.3	374.8	372.5	370.0	369.3	367.7
37.5°	357.3	354.5	350.8	348.3	346.7	346.5	343.9	342.6	340.8	339.8	337.9
40°	321.8	320.7	317.4	317.0	314.4	314.2	312.8	311.3	309.6	309.6	309.8
42.5°	289.1	287.7	286.3	284.7	283.3	283.3	282.6	282.2	281.8	281.0	282.2
45°	258.4	256.6	255.6	254.0	254.8	253.3	252.9	252.9	252.2	251.9	253.6
47.5°	229.8	227.7	226.9	226.3	226.3	226.7	224.5	225.3	225.0	225.5	226.1
50°	203.8	201.9	200.5	200.5	200.7	199.9	198.9	199.7	198.9	199.4	201.1
52.5°	179.6	177.8	177.0	177.0	175.7	175.5	175.9	174.9	175.2	175.5	176.3
55°	157.3	156.1	154.9	153.8	154.0	153.6	152.6	152.4	152.8	153.0	154.2
57.5°	137.2	135.6	133.9	133.5	133.1	133.1	131.9	131.7	132.1	130.9	130.9
60°	118.0	117.1	115.1	114.3	114.3	113.2	112.2	112.7	111.6	111.4	111.6
62.5°	100.3	99.6	98.3	96.8	96.4	95.9	94.8	94.2	93.8	92.9	91.5
65°	84.8	83.2	81.6	80.7	80.0	78.8	78.2	77.2	75.8	75.4	74.0
67.5°	69.4	67.8	66.2	65.5	64.7	64.1	62.9	61.8	60.2	58.3	56.7
70°	55.7	53.7	52.8	51.0	50.4	49.6	47.9	46.7	45.2	43.2	41.5
72.5°	42.6	41.2	39.9	38.3	37.1	36.4	35.0	33.2	31.3	30.2	28.6
75°	30.7	29.9	28.1	26.2	25.8	24.9	23.3	22.1	20.7	18.9	17.6
77.5°	20.7	19.4	18.2	16.6	16.2	15.2	14.3	13.1	12.3	11.1	10.2
80°	12.3	11.1	10.4	9.2	8.8	8.2	7.6	6.7	6.0	5.5	5.3
82.5°	6.0	5.1	4.9	4.1	3.9	3.7	3.3	3.0	2.5	2.5	2.5
85°	2.1	1.6	1.6	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2
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°	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4
2.5°	597.0	596.8	596.6	596.4	596.4	596.2	596.2	595.9	595.9	595.7	595.7
5°	592.9	592.2	591.7	591.3	591.3	590.6	590.2	589.7	589.4	589.4	589.0
7.5°	587.2	586.2	585.3	584.7	584.3	583.2	582.3	582.3	581.4	581.0	580.4
10°	579.6	577.9	576.5	575.9	574.9	574.2	573.1	572.4	571.8	570.6	570.3
12.5°	569.2	568.1	565.9	565.0	564.6	563.2	561.3	560.4	560.2	559.3	558.5
15°	557.4	554.8	553.0	551.9	551.9	549.5	548.7	547.2	546.4	545.6	545.4
17.5°	542.2	539.7	537.8	536.2	535.7	533.9	532.5	532.1	530.9	531.4	530.2
20°	522.6	520.6	519.2	517.1	517.1	515.9	515.5	514.3	513.8	513.4	513.8
22.5°	501.6	499.1	496.8	496.6	496.6	495.0	494.8	494.4	493.6	494.2	494.0
25°	477.0	475.1	473.7	473.5	473.5	472.6	471.7	472.1	472.8	472.6	473.3
27.5°	451.4	449.5	449.1	448.9	448.3	448.1	448.6	448.6	449.3	450.2	451.2
30°	423.7	423.3	422.5	422.3	421.9	423.1	423.5	424.2	423.9	425.3	426.2
32.5°	396.1	395.1	394.9	395.3	396.1	395.8	397.2	397.7	398.1	399.7	400.4
35°	368.2	368.0	367.4	367.4	367.7	369.5	369.5	371.1	372.1	372.5	374.4
37.5°	338.2	339.1	339.6	340.2	340.5	341.2	341.6	343.2	344.2	345.1	346.1
40°	310.7	310.3	312.3	310.9	311.5	313.5	314.4	314.2	315.6	317.0	317.9
42.5°	281.4	282.2	282.6	283.1	284.2	284.5	285.7	287.3	287.7	289.3	289.8
45°	253.1	253.3	254.3	255.2	255.8	257.7	258.2	258.9	260.3	260.3	260.9
47.5°	226.3	227.3	227.3	228.7	229.8	229.6	231.2	231.7	231.4	232.6	233.1
50°	200.7	202.2	201.9	202.9	203.3	203.6	205.0	205.4	204.4	205.6	205.8
52.5°	176.3	177.0	178.0	178.2	177.8	178.8	178.4	179.4	179.2	180.0	179.2
55°	154.0	153.8	153.8	154.2	153.8	154.2	154.7	153.8	153.0	154.0	153.8
57.5°	131.7	131.7	131.1	131.9	131.1	130.5	130.2	129.6	128.8	128.8	128.6
60°	110.6	110.2	109.3	109.0	109.0	107.9	107.5	106.5	106.5	105.6	104.7
62.5°	91.1	89.9	89.3	89.3	88.7	87.6	85.6	84.2	83.7	82.3	82.1
65°	72.7	71.5	70.8	69.4	68.2	67.8	65.7	64.1	63.4	62.0	62.3
67.5°	55.7	53.9	51.8	51.0	50.2	48.7	47.9	46.7	46.1	46.1	46.1
70°	40.1	38.5	36.4	35.7	35.2	33.8	33.2	33.0	33.6	33.4	33.6
72.5°	27.0	25.4	24.4	24.0	23.5	22.8	23.3	23.5	23.1	23.3	23.5
75°	16.4	15.9	15.2	15.0	15.0	15.2	15.0	15.0	15.2	15.2	15.4
77.5°	9.4	9.0	9.0	8.8	9.2	9.0	9.0	9.0	9.2	9.2	9.2
80°	5.1	5.1	5.1	5.1	5.3	5.1	5.3	5.3	5.3	5.3	5.3
82.5°	2.5	2.5	2.5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.5
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.2	0.4	0.4	0.4	0.4	0.4	0.2	0.2	0.2	0.2	0.2
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°	599.4	599.4	599.4	599.4	599.4	599.4	599.4	599.4
2.5°	595.2	595.2	595.2	594.7	595.0	595.0	594.7	594.7
5°	588.8	588.6	588.0	588.0	587.6	588.0	587.8	588.0
7.5°	580.0	580.0	579.3	579.3	579.1	578.8	578.6	578.8
10°	569.6	569.6	569.2	568.9	569.2	568.3	568.3	568.1
12.5°	558.1	557.7	557.2	557.4	557.2	556.5	556.2	556.5
15°	544.7	544.0	544.3	543.6	543.6	543.3	543.8	543.8
17.5°	530.0	529.6	529.0	529.2	528.8	529.0	528.8	528.6
20°	513.6	513.4	513.4	512.4	512.7	512.4	512.7	513.4
22.5°	494.8	494.4	494.8	494.0	494.4	494.4	495.2	495.2
25°	473.9	473.7	474.2	474.5	474.7	475.3	474.7	474.9
27.5°	450.9	451.6	452.2	452.6	453.4	452.8	452.2	453.0
30°	427.6	427.6	427.4	428.3	429.0	429.7	428.6	428.6
32.5°	400.8	402.0	402.0	402.2	403.0	403.0	403.0	403.9
35°	375.2	376.0	376.2	375.2	375.8	375.6	377.2	377.2
37.5°	346.7	346.7	346.9	348.6	348.6	347.9	348.3	348.3
40°	319.5	319.7	318.8	319.3	320.5	319.9	320.5	320.9
42.5°	289.8	291.4	290.4	291.0	290.7	291.0	291.2	291.2
45°	261.4	261.9	261.9	262.1	262.6	263.0	261.7	261.4
47.5°	233.7	233.9	234.7	233.5	234.9	233.5	234.9	233.3
50°	205.8	206.8	206.1	206.6	205.8	205.8	205.6	205.4
52.5°	179.4	179.2	179.2	178.8	178.8	179.4	178.8	179.6
55°	152.8	153.0	152.6	152.4	152.2	152.8	152.2	151.7
57.5°	127.8	128.2	127.2	127.8	126.1	126.8	127.0	127.2
60°	104.4	103.8	103.8	102.8	102.8	103.5	102.6	102.6
62.5°	80.9	81.3	80.7	81.6	81.6	82.5	82.1	82.5
65°	62.0	62.3	62.5	62.5	62.5	63.9	63.4	62.7
67.5°	46.7	47.1	47.3	47.1	47.7	47.3	47.3	47.5
70°	33.8	34.2	34.4	34.4	34.2	34.4	34.4	34.4
72.5°	23.5	23.8	23.5	23.8	24.0	23.8	23.8	24.0
75°	15.4	15.4	15.2	15.2	15.2	15.2	15.4	15.2
77.5°	9.0	9.2	9.0	9.2	9.2	9.2	9.2	9.2
80°	5.3	5.3	5.3	5.1	5.3	5.3	5.3	5.1
82.5°	2.7	2.7	2.5	2.5	2.7	2.7	2.7	2.7
85°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
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)