

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: P843314

Luminaire Tested: **LD4C10DE010B2750 EU4C10B35 4LBLWWH**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843314
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: LD4C10DE010B2750 EU4C10B35 4LBLWWH
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

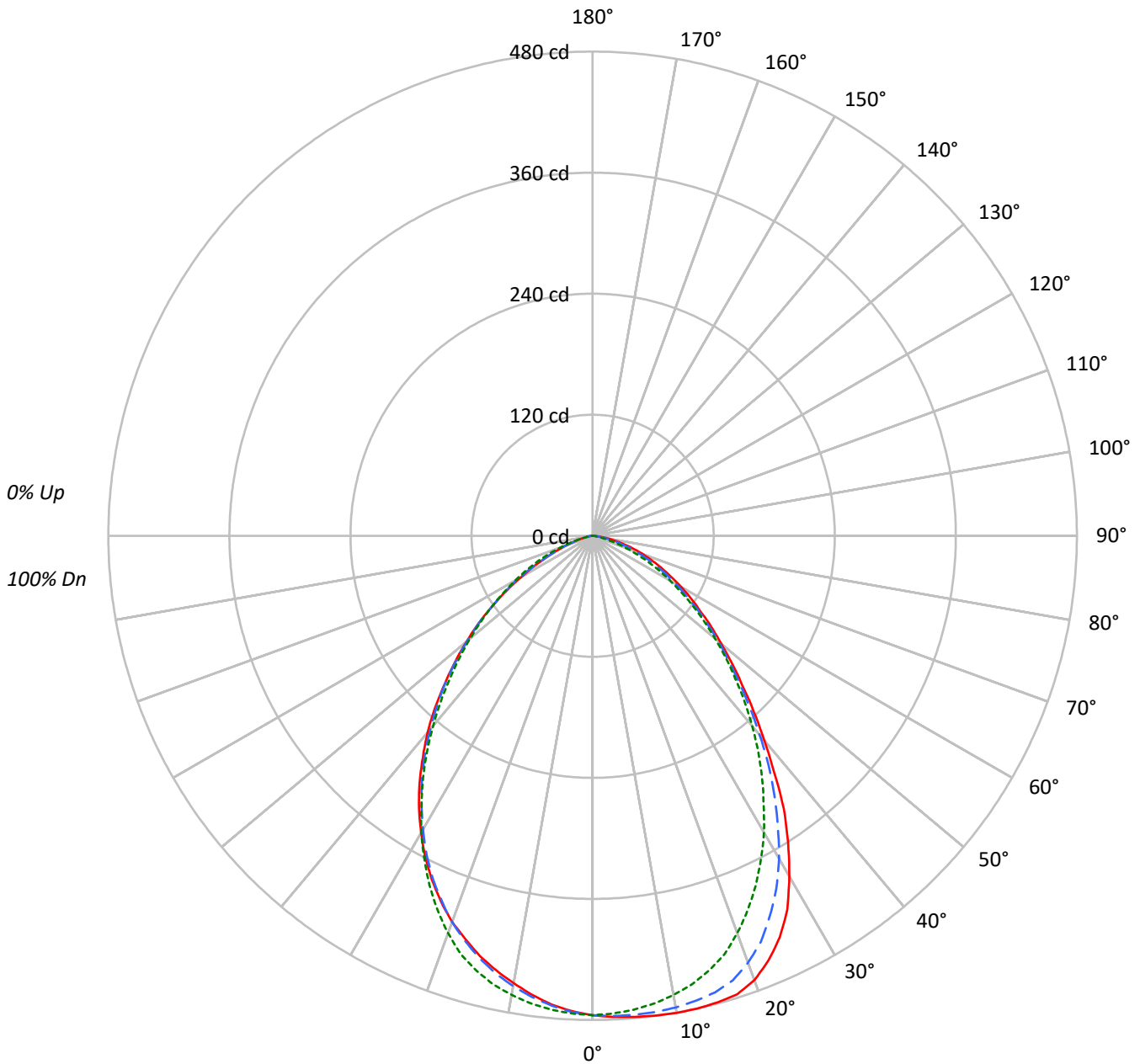
Lumens per Lamp: N/A
Luminaire Lumens: 895.8 lumens
Efficiency: N/A
Efficacy: 67.4 lumens/watt
Spacing Criteria (0/90/45): 1.15 / 1.09 / 1.17
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 13.3
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	88																			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77																			
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	70	68																			
4	88	78	70	64	86	77	69	64	74	68	63	72	67	62	70	65	62	60																			
5	82	71	63	57	80	69	62	57	67	61	56	66	60	55	64	59	55	53																			
6	76	64	56	51	74	63	56	50	62	55	50	60	54	50	59	53	49	47																			
7	71	59	51	46	69	58	51	45	57	50	45	55	49	45	54	49	44	43																			
8	67	54	47	41	65	54	46	41	52	46	41	51	45	41	50	45	40	39																			
9	62	50	43	38	61	50	42	37	48	42	37	47	41	37	47	41	37	35																			
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	58392	58392	58392
5°	59047	58147	57518
10°	59917	57659	56187
15°	60897	56738	54856
20°	61277	54805	53236
25°	59522	51836	51050
30°	55311	48189	48204
35°	49522	43928	44858
40°	42403	39388	40815
45°	36486	34713	36017
50°	31727	30217	31134
55°	27909	26002	25767
60°	24841	21696	19976
65°	21802	17384	14448
70°	18714	12285	9806
75°	15189	7120	5743
80°	10825	3042	2830
85°	4229	1410	1410



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.8	5.0
10°-20°	126.8	14.2
20°-30°	181.1	20.2
30°-40°	189.4	21.1
40°-50°	158.7	17.7
50°-60°	111.1	12.4
60°-70°	60.5	6.8
70°-80°	21.0	2.3
80°-90°	2.4	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°	352.7	39.4
0°-40°	542.1	60.5
0°-60°	811.9	90.6
0°-90°	895.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	895.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	475	475	475	475	475	
5°	479	477	472	468	466	46
15°	479	469	446	433	431	135
25°	439	416	382	375	377	201
35°	330	314	293	295	299	205
45°	210	205	200	206	207	163
55°	130	126	121	121	120	118
65°	75	68	60	50	50	75
75°	32	26	15	12	12	35
85°	3	2	1	1	1	5
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°	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3
2.5°	477.5	477.0	477.2	477.2	477.2	477.0	477.2	477.0	477.0	476.8	476.5
5°	478.8	478.5	478.5	478.5	478.3	478.1	478.1	477.9	477.5	477.3	476.6
7.5°	479.7	479.3	479.3	479.2	479.0	478.8	478.7	478.1	477.5	477.2	476.3
10°	480.3	479.7	479.7	479.3	479.0	478.8	478.5	477.7	477.0	476.0	474.8
12.5°	480.0	479.3	479.2	478.8	478.1	477.7	477.3	476.5	475.2	473.9	472.2
15°	478.8	478.5	478.1	477.5	476.6	476.0	475.7	474.2	472.6	470.8	468.7
17.5°	476.6	476.0	475.3	474.6	473.3	472.8	471.9	470.0	467.7	465.1	462.0
20°	468.7	468.4	467.7	466.4	464.4	463.7	462.4	460.0	456.9	453.7	450.4
22.5°	455.7	455.2	454.1	453.0	451.2	449.9	448.9	445.6	442.1	438.8	435.6
25°	439.1	438.6	437.1	435.6	433.8	431.6	430.6	428.0	424.5	420.3	415.8
27.5°	417.8	416.0	415.3	413.7	411.0	410.3	408.6	405.3	402.0	398.4	394.5
30°	389.9	389.9	388.9	388.2	385.6	384.9	383.0	379.6	377.7	372.6	369.6
32.5°	360.5	360.1	359.3	358.7	357.3	356.0	354.1	352.3	348.3	345.7	341.7
35°	330.2	328.0	328.4	327.2	326.4	324.9	324.7	322.7	319.0	317.6	313.9
37.5°	295.6	294.8	296.0	294.3	293.4	293.6	292.1	290.8	289.4	286.8	286.1
40°	264.4	265.0	264.9	263.5	264.2	263.2	261.8	260.5	259.8	258.2	257.6
42.5°	236.4	235.3	234.9	234.9	235.1	235.1	234.4	233.4	233.4	231.8	230.1
45°	210.0	210.0	209.7	210.8	209.2	209.2	208.6	208.5	207.7	207.3	205.3
47.5°	187.4	187.2	187.0	186.9	186.7	186.7	185.6	184.7	184.5	183.4	182.2
50°	166.0	167.1	166.7	165.8	165.4	165.6	164.9	164.4	164.1	162.3	162.6
52.5°	148.1	147.9	148.3	147.8	146.8	147.0	146.3	145.5	144.8	143.8	143.2
55°	130.3	131.3	130.9	130.3	130.2	129.8	129.2	128.3	128.2	126.2	126.0
57.5°	115.5	115.4	115.0	114.1	113.9	113.4	113.4	112.6	111.5	110.4	109.5
60°	101.1	101.1	100.6	100.4	99.6	99.4	99.3	98.6	97.3	96.4	94.9
62.5°	87.3	87.6	87.3	86.6	86.1	85.4	85.0	84.5	83.3	82.5	81.2
65°	75.0	74.8	74.6	73.8	73.7	73.0	72.8	71.7	70.5	69.8	68.4
67.5°	63.2	62.7	62.7	62.3	62.0	61.4	61.0	60.0	58.7	58.0	56.5
70°	52.1	51.7	51.7	51.7	50.9	50.2	50.1	49.5	47.7	47.0	45.5
72.5°	41.9	41.7	41.5	40.9	40.4	40.4	39.7	38.6	37.7	36.7	35.6
75°	32.0	32.4	32.0	31.3	31.1	30.7	30.1	29.3	28.3	27.3	25.9
77.5°	23.4	23.1	22.6	22.6	22.3	21.6	21.4	20.6	19.6	18.8	17.6
80°	15.3	15.1	14.8	14.5	14.3	14.1	13.9	13.1	12.1	11.5	10.5
82.5°	8.5	8.2	8.2	8.0	7.5	7.5	7.3	6.6	6.0	5.7	5.1
85°	3.0	3.0	3.0	2.7	2.7	2.7	2.5	2.3	2.2	2.0	1.7
87.5°	0.3	0.2	0.3	0.2	0.3	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°	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3
2.5°	476.0	475.7	475.5	475.3	475.2	475.0	474.8	474.5	474.2	474.0	473.7
5°	476.0	475.3	475.0	474.5	474.0	473.7	473.2	472.6	472.0	471.5	471.0
7.5°	475.3	474.2	473.5	472.4	472.0	471.5	470.4	469.7	468.7	467.7	466.4
10°	473.5	472.2	470.8	469.3	468.7	467.9	466.4	465.1	463.7	462.2	460.9
12.5°	470.5	468.5	466.7	464.7	463.7	462.7	460.7	458.9	457.1	455.4	453.2
15°	466.2	463.8	461.4	458.7	457.4	456.4	453.4	451.2	448.3	446.1	443.9
17.5°	459.1	455.4	452.5	449.0	447.2	445.9	443.4	439.9	437.1	434.8	432.1
20°	446.9	443.4	439.3	435.5	433.5	431.8	428.1	424.5	421.8	419.2	416.5
22.5°	430.8	426.3	423.4	418.7	417.0	415.0	410.6	407.3	404.2	401.7	399.2
25°	411.2	407.3	403.3	398.9	396.9	394.5	390.9	387.4	385.4	382.4	379.4
27.5°	388.7	385.6	380.6	376.8	374.8	372.9	369.5	366.4	363.4	361.4	358.5
30°	364.9	361.3	356.8	352.8	351.8	349.5	346.5	344.0	341.0	339.7	338.4
32.5°	338.8	334.5	331.3	328.7	326.5	324.7	323.0	319.2	318.7	315.4	315.0
35°	310.2	308.4	305.3	303.1	301.3	300.1	297.3	295.4	293.4	292.9	291.6
37.5°	283.3	281.2	278.3	276.3	275.0	274.8	272.8	271.7	270.2	269.5	268.0
40°	255.2	254.3	251.7	251.4	249.4	249.2	248.1	246.9	245.6	245.6	245.7
42.5°	229.3	228.1	227.1	225.8	224.6	224.6	224.1	223.8	223.4	222.8	223.8
45°	205.0	203.5	202.7	201.5	202.0	201.0	200.5	200.5	200.0	199.8	201.1
47.5°	182.2	180.6	179.9	179.5	179.5	179.7	178.1	178.6	178.4	178.8	179.4
50°	161.6	160.1	159.1	159.1	159.3	158.5	157.8	158.3	157.8	158.1	159.4
52.5°	142.5	141.0	140.5	140.5	139.3	139.1	139.5	138.8	139.0	139.1	139.8
55°	124.7	123.7	122.9	121.9	122.2	121.7	121.0	120.9	121.2	121.4	122.3
57.5°	108.8	107.5	106.2	105.9	105.4	105.4	104.6	104.4	104.7	103.9	103.9
60°	93.6	92.9	91.3	90.6	90.6	89.8	89.1	89.4	88.5	88.3	88.5
62.5°	79.5	79.0	77.8	76.8	76.5	76.0	75.1	74.8	74.5	73.7	72.6
65°	67.3	66.0	64.7	64.0	63.5	62.5	62.0	61.2	60.2	59.8	58.7
67.5°	55.0	53.7	52.5	51.9	51.4	50.9	49.9	49.0	47.7	46.2	44.9
70°	44.2	42.6	41.9	40.4	40.1	39.3	38.1	37.1	35.9	34.2	32.9
72.5°	33.8	32.7	31.6	30.4	29.4	28.9	27.8	26.3	24.9	23.9	22.6
75°	24.3	23.8	22.3	20.8	20.5	19.8	18.5	17.6	16.5	15.0	13.9
77.5°	16.5	15.3	14.5	13.1	12.8	12.1	11.3	10.5	9.7	8.8	8.0
80°	9.7	8.8	8.2	7.3	7.0	6.6	6.0	5.3	4.8	4.3	4.2
82.5°	4.8	4.0	3.8	3.3	3.1	3.0	2.5	2.3	2.0	2.0	2.0
85°	1.7	1.3	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	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°	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3
2.5°	473.5	473.3	473.2	473.0	473.0	472.8	472.8	472.6	472.6	472.4	472.4
5°	470.2	469.7	469.3	469.0	469.0	468.4	468.0	467.7	467.5	467.5	467.2
7.5°	465.7	464.9	464.2	463.7	463.5	462.5	461.8	461.8	461.1	460.7	460.4
10°	459.6	458.4	457.2	456.7	455.9	455.4	454.5	453.9	453.4	452.5	452.3
12.5°	451.4	450.4	448.9	448.1	447.7	446.6	445.2	444.4	444.3	443.6	442.9
15°	442.1	440.1	438.6	437.6	437.6	435.9	435.1	434.1	433.3	432.8	432.6
17.5°	430.0	428.0	426.5	425.3	424.9	423.4	422.3	422.0	421.0	421.4	420.5
20°	414.5	412.8	411.7	410.0	410.0	409.2	408.8	407.9	407.5	407.2	407.5
22.5°	397.8	395.8	394.0	393.8	393.8	392.5	392.4	392.2	391.4	392.0	391.7
25°	378.2	376.8	375.7	375.6	375.6	374.8	374.1	374.4	374.9	374.8	375.4
27.5°	358.0	356.5	356.1	356.0	355.6	355.4	355.8	355.8	356.3	357.1	357.8
30°	336.0	335.7	335.2	335.0	334.5	335.5	335.8	336.4	336.2	337.3	338.0
32.5°	314.1	313.4	313.2	313.6	314.1	313.9	315.0	315.4	315.7	317.0	317.6
35°	292.0	291.8	291.4	291.4	291.6	293.1	293.1	294.3	295.1	295.4	296.9
37.5°	268.2	269.0	269.3	269.8	270.0	270.5	271.0	272.2	273.0	273.7	274.5
40°	246.4	246.1	247.7	246.6	247.0	248.6	249.4	249.2	250.2	251.4	252.1
42.5°	223.3	223.8	224.1	224.5	225.4	225.6	226.5	227.8	228.1	229.4	229.8
45°	200.7	201.0	201.7	202.4	203.0	204.4	204.8	205.3	206.5	206.5	207.0
47.5°	179.5	180.2	180.2	181.4	182.2	182.1	183.4	183.7	183.6	184.5	184.9
50°	159.3	160.3	160.1	160.9	161.3	161.4	162.6	162.9	162.1	163.1	163.3
52.5°	139.8	140.5	141.1	141.3	141.0	141.8	141.5	142.3	142.0	142.8	142.0
55°	122.2	121.9	121.9	122.3	121.9	122.3	122.7	121.9	121.4	122.2	121.9
57.5°	104.4	104.4	104.1	104.6	104.1	103.4	103.3	102.7	102.2	102.2	102.1
60°	87.8	87.4	86.6	86.5	86.5	85.6	85.2	84.5	84.5	83.8	83.0
62.5°	72.2	71.3	70.8	70.8	70.4	69.5	67.8	66.7	66.3	65.3	65.0
65°	57.6	56.7	56.2	55.0	54.2	53.7	52.1	50.9	50.2	49.2	49.4
67.5°	44.2	42.7	41.1	40.4	39.9	38.6	38.1	37.1	36.6	36.6	36.6
70°	31.8	30.6	28.9	28.3	27.9	26.9	26.3	26.1	26.7	26.5	26.7
72.5°	21.4	20.1	19.4	19.0	18.6	18.1	18.5	18.6	18.3	18.5	18.6
75°	13.0	12.6	12.1	11.8	11.8	12.1	11.8	11.8	12.1	12.1	12.3
77.5°	7.5	7.1	7.1	7.0	7.3	7.1	7.1	7.1	7.3	7.3	7.3
80°	4.0	4.0	4.0	4.0	4.2	4.0	4.2	4.2	4.2	4.2	4.2
82.5°	2.0	2.0	2.0	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.0
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
87.5°	0.2	0.3	0.3	0.3	0.3	0.3	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°	475.3	475.3	475.3	475.3	475.3	475.3	475.3	475.3
2.5°	472.0	472.0	472.0	471.7	471.9	471.9	471.7	471.7
5°	466.9	466.7	466.4	466.4	466.0	466.4	466.2	466.4
7.5°	460.0	460.0	459.4	459.4	459.2	459.1	458.9	459.1
10°	451.7	451.7	451.4	451.2	451.4	450.7	450.7	450.4
12.5°	442.6	442.3	441.9	442.1	441.9	441.4	441.1	441.4
15°	432.0	431.5	431.6	431.1	431.1	430.9	431.3	431.3
17.5°	420.3	420.0	419.6	419.8	419.4	419.6	419.4	419.2
20°	407.3	407.2	407.2	406.4	406.6	406.4	406.6	407.2
22.5°	392.4	392.2	392.4	391.7	392.2	392.2	392.7	392.7
25°	375.9	375.7	376.1	376.2	376.4	376.9	376.4	376.6
27.5°	357.6	358.1	358.7	358.9	359.6	359.1	358.7	359.3
30°	339.2	339.2	339.0	339.7	340.2	340.8	339.8	339.8
32.5°	317.9	318.9	318.9	319.0	319.6	319.6	319.6	320.4
35°	297.6	298.1	298.4	297.6	298.0	297.8	299.1	299.1
37.5°	275.0	275.0	275.2	276.5	276.5	275.8	276.3	276.3
40°	253.4	253.6	252.9	253.2	254.1	253.7	254.1	254.5
42.5°	229.8	231.1	230.4	230.8	230.6	230.8	230.9	230.9
45°	207.3	207.7	207.7	207.8	208.2	208.6	207.5	207.3
47.5°	185.4	185.6	186.1	185.2	186.2	185.2	186.2	185.0
50°	163.3	164.0	163.4	163.8	163.3	163.3	163.1	162.9
52.5°	142.3	142.0	142.0	141.8	141.8	142.3	141.8	142.5
55°	121.2	121.4	121.0	120.9	120.7	121.2	120.7	120.3
57.5°	101.3	101.6	100.9	101.3	100.1	100.6	100.7	100.9
60°	82.8	82.3	82.3	81.5	81.5	82.1	81.3	81.3
62.5°	64.2	64.5	64.0	64.7	64.7	65.5	65.0	65.5
65°	49.2	49.4	49.5	49.5	49.5	50.7	50.2	49.7
67.5°	37.1	37.3	37.4	37.3	37.9	37.4	37.4	37.7
70°	26.9	27.1	27.3	27.3	27.1	27.3	27.3	27.3
72.5°	18.6	18.8	18.6	18.8	19.0	18.8	18.8	19.0
75°	12.3	12.3	12.1	12.1	12.1	12.1	12.3	12.1
77.5°	7.1	7.3	7.1	7.3	7.3	7.3	7.3	7.3
80°	4.2	4.2	4.2	4.0	4.2	4.2	4.2	4.0
82.5°	2.2	2.2	2.0	2.0	2.2	2.2	2.2	2.2
85°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)