

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: P843313

Luminaire Tested: **LD4C10DE010B35 EU4C10B35 4LBLDWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843313
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-5)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C10DE010B35 EU4C10B35 4LBLDWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

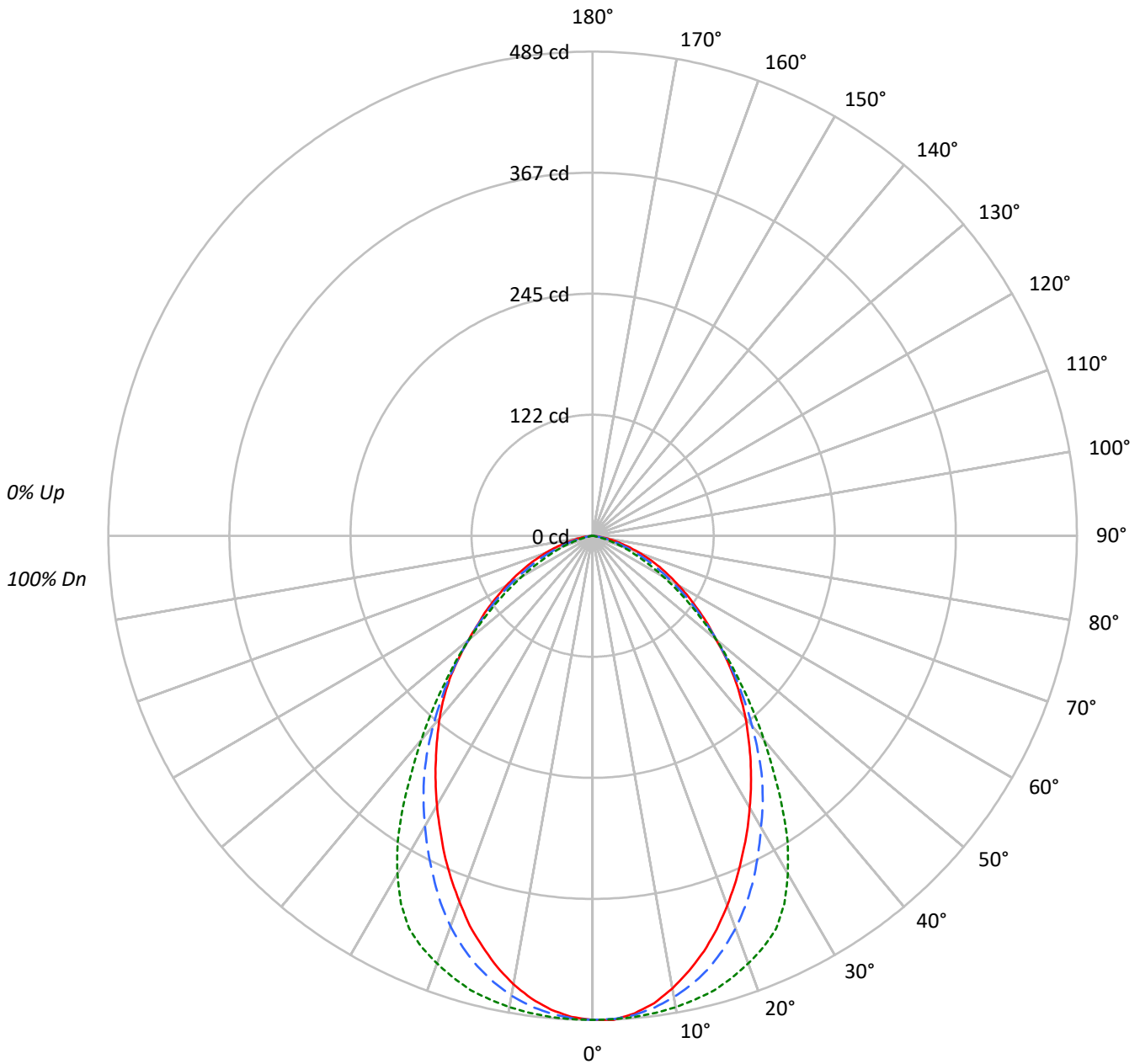
Lumens per Lamp: N/A
Luminaire Lumens: 897.9 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.19 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77																			
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	60063	60063	60063
5°	59713	60157	59257
10°	57896	60304	57397
15°	55237	60439	54627
20°	51968	60087	51393
25°	48406	59386	48013
30°	44983	55921	44600
35°	41708	50017	41393
40°	38554	43141	38538
45°	35130	36816	35426
50°	31020	31134	31211
55°	27802	25467	27930
60°	24595	20222	24620
65°	21657	15407	21424
70°	17924	11027	17924
75°	13955	6313	13433
80°	9056	1556	8702
85°	3242	423	2537



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.9	5.1
10°-20°	127.0	14.1
20°-30°	177.5	19.8
30°-40°	187.2	20.9
40°-50°	159.3	17.7
50°-60°	112.4	12.5
60°-70°	63.7	7.1
70°-80°	22.7	2.5
80°-90°	2.2	0.2
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°	350.4	39.0
0°-40°	537.6	59.9
0°-60°	809.3	90.1
0°-90°	897.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	897.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	489	489	489	489	489	
5°	484	486	488	484	480	46
15°	434	453	475	450	430	122
25°	357	384	438	380	354	164
35°	278	298	334	297	276	174
45°	202	205	212	206	204	155
55°	130	125	119	126	130	117
65°	74	64	53	64	74	74
75°	29	20	13	20	28	32
85°	2	1	0	1	2	4
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°	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9
2.5°	489.3	488.4	488.4	488.4	488.4	488.4	488.4	488.4	488.4	488.5	488.5
5°	484.2	483.8	483.7	483.7	483.7	483.7	483.8	484.5	484.9	485.5	485.8
7.5°	476.1	475.4	475.7	475.7	476.1	476.5	477.0	477.7	478.9	479.6	480.5
10°	464.1	463.3	464.2	464.6	465.7	466.2	467.2	468.2	470.4	471.6	473.0
12.5°	450.0	449.6	450.0	451.4	452.6	453.3	454.4	456.7	458.9	461.3	463.9
15°	434.3	433.3	433.8	435.7	437.5	438.8	439.8	442.8	445.8	449.4	452.6
17.5°	416.7	415.4	416.9	418.3	420.7	421.8	423.1	426.5	430.6	434.6	438.1
20°	397.5	397.1	398.1	400.1	402.4	403.9	405.0	408.9	412.3	417.8	421.8
22.5°	377.6	377.9	378.6	380.9	382.5	384.6	386.1	389.6	393.7	398.7	403.9
25°	357.1	357.6	359.0	360.3	363.1	364.2	366.3	369.9	373.3	378.1	383.8
27.5°	337.4	337.5	339.0	339.7	342.3	344.7	345.5	349.4	353.5	357.1	362.0
30°	317.1	317.6	318.6	320.6	323.1	324.0	325.1	328.6	331.7	336.2	340.1
32.5°	297.6	297.3	298.4	299.5	302.4	304.1	304.6	308.6	311.4	315.9	319.6
35°	278.1	277.2	278.8	280.0	282.5	284.0	284.7	287.8	290.3	294.2	298.3
37.5°	258.5	259.2	260.0	260.9	262.2	262.6	264.7	265.5	268.7	271.7	273.9
40°	240.4	240.1	239.7	240.6	242.3	243.0	243.1	245.2	245.9	248.9	250.4
42.5°	221.0	221.3	221.0	221.3	222.1	222.1	222.7	224.0	224.5	225.5	227.5
45°	202.2	202.2	201.7	201.9	202.0	201.9	202.0	202.5	203.7	203.7	205.2
47.5°	182.7	182.3	183.1	182.4	182.1	181.9	182.4	181.9	183.1	183.1	183.4
50°	162.3	162.3	163.3	163.1	163.5	162.8	162.9	162.9	163.1	162.9	163.6
52.5°	146.6	146.3	146.0	145.0	145.3	144.6	144.6	144.8	144.3	144.0	143.2
55°	129.8	130.2	129.7	129.2	129.2	128.5	128.4	127.2	126.5	126.0	125.4
57.5°	114.6	115.0	114.9	113.9	112.8	113.0	112.6	111.6	109.9	108.8	107.9
60°	100.1	100.4	100.1	99.1	98.8	98.0	97.8	96.4	95.1	93.6	92.5
62.5°	86.8	86.8	86.6	85.4	84.5	84.6	83.8	82.6	81.0	79.0	77.3
65°	74.5	74.2	73.3	72.8	72.0	71.1	70.5	69.0	67.7	66.0	63.8
67.5°	62.0	61.4	61.0	60.5	58.9	58.7	58.0	56.5	54.7	53.4	51.6
70°	49.9	49.7	49.0	49.0	47.7	47.2	46.1	44.8	43.2	41.4	39.9
72.5°	39.4	39.1	38.4	37.7	36.6	36.2	35.3	34.1	32.6	30.7	28.9
75°	29.4	29.1	28.9	28.0	27.1	26.1	25.8	24.5	23.1	21.8	20.1
77.5°	20.6	20.3	19.8	19.2	18.6	18.1	17.6	16.5	15.1	14.1	12.6
80°	12.8	12.5	12.1	11.8	11.3	11.1	10.5	9.8	8.8	8.0	7.1
82.5°	6.6	6.6	6.2	6.0	5.7	5.5	5.3	4.8	4.2	3.7	3.1
85°	2.3	2.3	2.2	2.0	2.0	1.8	1.8	1.7	1.3	1.3	1.0
87.5°	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9
2.5°	488.7	488.5	488.7	488.7	488.9	488.9	488.9	488.7	488.9	488.7	488.7
5°	485.8	486.4	486.7	487.0	487.3	487.5	487.5	487.7	487.8	487.8	487.7
7.5°	481.2	482.4	483.4	484.2	484.5	484.9	485.5	485.8	486.2	486.0	485.8
10°	475.2	477.0	478.5	480.0	480.7	481.2	482.2	482.9	483.2	483.4	482.9
12.5°	466.6	469.2	471.6	473.9	475.0	475.7	477.6	478.9	479.6	479.6	479.0
15°	455.8	459.4	462.9	466.1	467.9	469.0	471.7	473.6	474.7	475.2	474.2
17.5°	442.8	447.1	451.3	455.3	457.1	458.8	462.6	465.1	467.5	467.9	466.8
20°	426.2	431.5	436.3	441.2	443.3	445.8	450.1	454.4	458.1	459.6	456.6
22.5°	407.5	413.4	417.8	423.8	426.5	429.3	435.0	440.3	446.6	450.1	444.6
25°	388.2	393.1	398.4	404.2	408.1	411.0	417.7	424.3	433.0	438.1	430.5
27.5°	367.3	371.8	378.1	384.6	387.4	391.1	398.9	406.2	414.5	419.0	413.4
30°	345.7	351.2	357.3	363.1	367.3	370.8	377.2	383.4	390.4	394.2	389.9
32.5°	324.4	329.7	334.7	341.2	343.5	346.7	352.3	357.6	363.0	366.4	361.5
35°	301.8	306.6	311.4	315.8	316.9	320.6	325.1	328.2	330.7	333.5	330.2
37.5°	277.4	281.0	283.4	288.2	290.0	290.5	294.2	296.3	299.1	299.6	299.5
40°	252.5	255.8	257.9	260.7	262.2	262.2	264.7	266.7	268.7	269.0	268.7
42.5°	229.3	230.9	232.6	234.4	234.1	236.3	237.3	238.3	239.7	239.7	240.1
45°	205.9	207.2	208.7	209.0	210.5	210.5	211.3	211.7	212.5	211.9	211.2
47.5°	184.1	184.7	184.9	186.5	186.9	185.6	186.7	186.9	186.7	186.7	186.4
50°	163.5	163.8	163.6	163.1	163.3	163.8	163.3	162.6	162.9	162.9	163.3
52.5°	143.3	142.6	142.3	142.3	141.5	141.5	140.6	140.2	140.0	139.3	140.2
55°	124.9	123.7	122.2	121.7	121.2	121.0	119.9	119.0	118.7	118.9	118.7
57.5°	107.1	105.6	104.4	104.1	103.4	102.4	101.1	100.2	100.1	99.6	99.6
60°	91.1	89.3	87.6	86.0	86.1	85.4	84.1	83.6	83.0	82.3	82.8
62.5°	76.5	74.5	72.6	71.0	69.8	69.3	68.4	67.5	66.9	66.4	67.1
65°	62.0	60.3	58.3	56.7	56.2	55.6	54.7	53.2	53.0	53.0	53.4
67.5°	49.0	47.2	45.4	44.2	43.5	42.8	42.4	41.7	41.1	40.8	40.9
70°	37.7	35.9	34.4	33.3	32.7	32.6	31.3	31.1	30.9	30.7	30.6
72.5°	27.4	25.9	24.6	23.9	23.3	22.6	22.3	21.8	21.6	21.6	21.6
75°	18.8	17.8	16.3	15.3	15.0	14.5	13.9	13.5	13.1	13.3	13.3
77.5°	11.3	10.3	9.3	8.6	8.5	7.8	7.3	7.0	6.5	6.5	6.6
80°	6.2	5.3	4.5	4.0	3.7	3.5	3.0	2.7	2.3	2.2	2.2
82.5°	2.7	2.2	1.8	1.7	1.5	1.3	1.1	1.0	1.0	0.7	1.0
85°	1.0	0.7	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
87.5°	0.2	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9
2.5°	488.5	488.5	488.4	488.4	488.4	488.0	488.0	487.8	487.7	487.5	487.0
5°	487.3	487.0	486.7	486.5	486.4	485.8	485.2	484.9	484.4	483.7	483.2
7.5°	485.5	484.9	484.2	483.8	483.2	482.0	481.0	480.2	479.2	477.9	476.5
10°	482.4	481.2	480.2	479.4	478.5	476.9	475.0	473.6	471.6	469.7	467.7
12.5°	477.9	476.7	474.5	473.4	472.2	469.9	467.5	464.4	461.7	459.1	456.7
15°	472.4	470.1	467.5	466.1	464.4	460.6	456.9	453.6	450.0	446.9	443.0
17.5°	464.4	460.9	457.3	455.6	453.4	449.1	444.6	440.1	435.9	432.0	427.3
20°	452.3	448.5	443.8	441.2	439.3	433.5	429.3	424.2	419.8	415.0	409.7
22.5°	438.3	433.0	427.7	424.0	422.0	416.2	410.5	405.9	401.2	395.7	391.9
25°	422.3	415.8	409.4	405.7	402.6	396.4	390.9	386.1	380.3	375.6	371.8
27.5°	404.4	396.9	389.4	385.8	382.9	376.1	370.3	365.3	359.7	355.5	351.5
30°	383.1	376.3	369.1	366.3	362.8	355.8	349.0	344.7	338.4	334.0	329.7
32.5°	356.3	352.0	346.3	342.3	340.5	334.0	328.4	323.1	317.8	314.3	309.9
35°	327.1	323.2	318.6	316.3	313.9	309.9	305.3	300.8	296.6	293.3	289.3
37.5°	297.5	293.6	290.7	288.3	286.8	283.2	280.5	277.0	274.0	271.0	268.7
40°	266.7	265.7	262.6	261.4	261.1	257.1	254.7	251.9	250.1	248.3	247.1
42.5°	239.6	237.7	235.3	235.5	234.4	232.3	230.6	228.8	227.5	226.5	225.3
45°	212.7	211.2	210.0	211.0	209.2	208.5	207.2	207.0	206.0	204.4	203.9
47.5°	187.1	186.9	187.1	186.5	186.1	185.7	185.9	185.1	184.1	183.6	182.9
50°	163.6	163.8	164.1	164.8	163.5	164.0	163.8	163.6	163.6	163.1	163.5
52.5°	141.0	141.2	141.5	142.0	142.3	142.3	142.8	143.2	143.9	144.8	144.8
55°	119.6	120.9	121.6	122.5	121.9	123.0	123.6	125.2	125.8	125.8	126.5
57.5°	100.6	101.9	102.4	103.4	103.9	104.8	106.2	107.1	108.4	109.6	110.6
60°	83.2	83.8	85.2	86.8	86.5	88.6	89.8	91.3	92.9	93.6	95.1
62.5°	67.7	68.4	69.5	70.0	71.3	72.4	75.0	76.5	77.8	79.7	81.2
65°	53.7	54.5	55.6	56.7	57.2	58.9	60.2	62.7	64.0	66.0	67.7
67.5°	41.1	42.2	43.2	43.9	44.2	45.9	47.9	49.0	51.4	53.4	54.7
70°	30.7	31.6	32.7	32.6	33.3	34.6	36.1	37.7	39.4	41.4	42.8
72.5°	21.4	22.3	23.1	23.3	23.9	24.9	25.9	27.3	28.7	30.6	32.6
75°	13.5	13.7	14.5	14.8	15.1	16.3	17.2	18.5	19.8	21.3	22.5
77.5°	6.8	7.3	7.7	8.0	8.2	9.1	10.0	11.1	12.3	13.7	15.0
80°	2.5	2.7	3.3	3.5	3.8	4.3	5.1	5.7	6.6	7.7	8.5
82.5°	1.0	1.1	1.3	1.3	1.5	1.8	2.0	2.5	3.1	3.5	3.8
85°	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.7	1.0	1.1	1.1
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°	488.9	488.9	488.9	488.9	488.9	488.9	488.9	488.9
2.5°	486.9	486.9	486.7	486.5	486.5	486.5	486.4	486.4
5°	482.5	482.0	481.8	481.4	481.2	481.0	480.5	480.5
7.5°	475.4	474.7	474.1	473.6	472.9	472.2	472.2	471.6
10°	465.9	464.4	463.7	462.9	462.1	460.9	460.6	460.1
12.5°	454.4	451.4	450.7	449.4	448.0	447.3	445.9	445.9
15°	440.1	437.0	435.3	434.6	432.8	431.5	431.0	429.5
17.5°	423.5	421.0	418.5	417.4	415.4	413.7	413.0	412.9
20°	406.7	402.7	401.2	399.5	397.1	395.7	394.6	393.1
22.5°	387.3	383.8	381.4	380.3	378.3	375.8	373.9	373.9
25°	366.8	363.7	362.3	360.0	357.6	356.7	354.5	354.2
27.5°	347.2	344.2	341.5	340.2	337.5	336.2	334.4	333.7
30°	326.9	323.2	321.4	321.2	317.9	316.7	315.2	314.4
32.5°	306.6	303.5	301.6	300.6	299.1	297.0	295.6	295.0
35°	286.5	284.5	282.8	281.5	279.2	278.1	277.0	276.0
37.5°	265.5	263.7	262.9	261.9	260.7	258.7	258.4	257.6
40°	245.2	242.8	242.8	242.1	241.0	240.8	240.3	240.3
42.5°	224.0	222.8	222.7	222.8	222.1	221.8	221.3	222.5
45°	203.0	203.5	202.5	202.7	202.4	203.2	203.2	203.9
47.5°	183.6	182.9	183.2	183.6	184.1	184.1	183.9	183.7
50°	162.9	163.6	164.4	163.5	163.8	164.0	163.1	163.3
52.5°	145.2	145.3	146.0	145.3	146.0	145.7	146.1	145.3
55°	128.0	128.0	128.7	128.9	129.1	129.7	129.8	130.4
57.5°	111.4	112.2	113.2	113.0	113.7	114.4	113.9	114.4
60°	96.9	97.6	98.6	98.9	99.4	99.8	99.8	100.2
62.5°	82.3	83.8	84.5	85.2	85.2	86.0	86.6	86.8
65°	69.1	70.8	71.3	71.8	72.2	73.0	73.8	73.7
67.5°	56.7	57.7	58.5	58.9	60.0	60.3	61.0	61.8
70°	44.4	45.9	46.4	47.2	48.1	48.9	49.5	49.9
72.5°	34.1	35.1	35.4	36.2	37.1	37.9	38.2	38.8
75°	23.8	25.6	25.8	26.3	27.1	28.0	28.6	28.3
77.5°	15.8	17.0	17.2	17.9	18.6	19.4	19.6	19.8
80°	9.3	10.0	10.3	10.6	11.1	11.5	11.8	12.3
82.5°	4.3	4.8	5.1	5.1	5.5	5.8	5.8	6.0
85°	1.5	1.5	1.7	1.7	1.8	1.8	2.0	1.8
87.5°	0.2	0.2	0.0	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)