

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: P843385

Luminaire Tested: **LD4C15DE010B2750 EU4C15B35 4LBLWWLI**

Issue Date: 5/7/2024



Test Information

Test Method: LM-79-08
Report Number: P843385
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2107-320-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C15DE010B2750 EU4C15B35 4LBLWWLI
Description: 4in Downlight with BioUp LEDs
Light Source: -
Ballast/Driver:

Summary

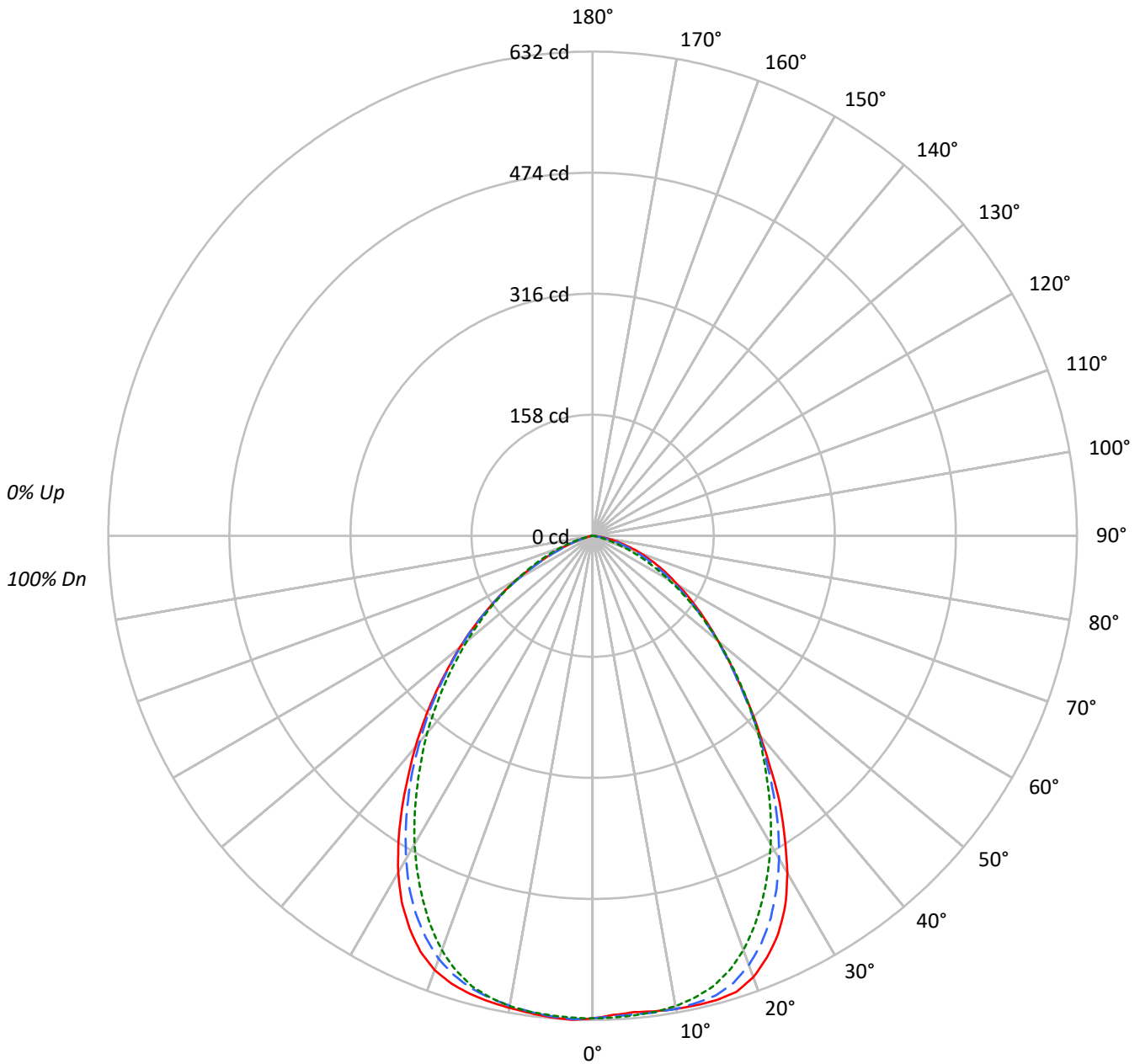
Lumens per Lamp: N/A
Luminaire Lumens: 1207.8 lumens
Efficiency: N/A
Efficacy: 71.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.18
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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									
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	109	105	102	99	101	99	96	97	95	93	94	92	91	89																			
2	103	96	91	86	101	95	89	85	91	87	83	88	84	81	85	82	80	78																			
3	95	87	80	74	93	85	79	74	82	77	72	80	75	71	77	73	70	68																			
4	88	78	71	65	86	77	70	65	75	69	64	72	67	63	70	66	62	60																			
5	82	71	63	57	80	70	63	57	68	61	57	66	60	56	64	59	55	54																			
6	76	65	57	51	75	64	56	51	62	56	51	61	55	50	59	54	50	48																			
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	43																			
8	67	55	47	42	65	54	47	42	53	46	41	52	46	41	50	45	41	39																			
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	41	37	36																			
10	59	47	40	35	58	46	39	35	45	39	35	45	39	35	44	38	34	33																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	77398	77398	77398
5°	76966	77484	77780
10°	78242	77768	78055
15°	79772	77419	78716
20°	80169	75253	78848
25°	77699	71071	76642
30°	72121	65936	71993
35°	63860	59811	65060
40°	54447	53870	57703
45°	46788	47310	50281
50°	40825	40920	43099
55°	36091	34570	35727
60°	31622	28207	28060
65°	27965	21860	19448
70°	23887	15050	11566
75°	19319	8069	5269
80°	13230	2052	1344
85°	4088	564	564



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.9	5.0
10°-20°	173.3	14.4
20°-30°	250.4	20.7
30°-40°	258.9	21.4
40°-50°	213.9	17.7
50°-60°	147.6	12.2
60°-70°	77.3	6.4
70°-80°	24.3	2.0
80°-90°	2.1	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°	483.6	40.0
0°-40°	742.6	61.5
0°-60°	1104.1	91.4
0°-90°	1207.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1207.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	630	630	630	630	630	
5°	624	627	628	630	631	60
15°	627	621	609	612	619	177
25°	573	550	524	545	565	262
35°	426	412	399	420	434	264
45°	269	268	272	285	289	210
55°	168	163	161	166	167	151
65°	96	87	75	62	67	95
75°	41	32	17	12	11	44
85°	3	1	0	0	0	6
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°	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0
2.5°	626.0	626.2	626.2	626.6	626.6	626.6	627.0	627.0	627.2	627.4	627.6
5°	624.1	624.1	624.5	624.7	625.3	625.5	626.0	626.2	626.6	627.0	627.2
7.5°	626.0	626.0	626.2	626.4	626.4	626.6	626.6	627.0	627.2	627.4	627.4
10°	627.2	627.2	627.2	627.2	627.4	627.4	627.4	627.2	627.2	627.2	627.0
12.5°	627.6	627.6	627.4	627.2	627.4	627.2	627.2	626.4	626.0	625.5	624.7
15°	627.2	627.2	627.0	626.6	626.4	626.0	625.7	624.5	623.6	622.2	621.3
17.5°	624.1	623.6	623.2	622.6	621.7	621.0	620.5	618.4	616.7	614.4	611.7
20°	613.2	612.7	612.1	610.8	609.6	608.7	607.3	604.2	602.5	599.0	596.4
22.5°	595.4	595.0	595.2	593.1	590.7	589.3	588.4	585.7	583.0	578.4	575.6
25°	573.2	571.8	571.8	568.5	567.3	566.4	565.2	562.1	557.8	553.8	550.1
27.5°	544.4	542.5	541.5	541.1	538.2	536.1	534.4	532.1	528.5	525.0	519.7
30°	508.4	508.2	507.0	504.8	502.7	501.7	499.8	495.8	492.5	489.9	486.6
32.5°	466.1	465.8	465.8	465.8	464.4	464.2	461.3	459.2	456.6	452.6	450.4
35°	425.8	425.6	425.8	422.3	421.4	420.6	420.4	418.9	415.4	413.5	411.6
37.5°	380.4	381.2	380.6	379.7	380.9	378.7	380.4	377.4	375.9	375.5	373.3
40°	339.5	341.4	339.5	339.7	340.9	338.8	338.8	338.3	337.4	336.9	336.4
42.5°	304.5	302.1	303.5	302.4	303.5	302.8	301.6	302.4	302.6	301.6	301.4
45°	269.3	269.7	270.1	269.5	269.5	268.7	270.6	269.5	269.5	269.7	268.0
47.5°	240.6	239.9	240.4	239.9	240.1	239.7	240.1	240.4	239.9	239.9	238.5
50°	213.6	213.1	214.8	213.4	213.4	213.1	213.4	212.9	212.2	212.2	212.7
52.5°	190.2	189.2	189.0	190.2	188.6	188.6	188.8	188.4	187.4	186.9	185.7
55°	168.5	168.2	168.5	167.5	167.0	167.0	165.8	165.4	165.1	163.9	163.2
57.5°	148.1	147.4	147.6	147.4	146.5	146.2	145.2	145.2	144.3	143.4	142.1
60°	128.7	128.7	129.5	128.5	127.8	127.2	126.8	126.3	124.7	123.0	121.6
62.5°	111.5	111.7	111.5	110.7	110.2	109.8	109.3	107.9	106.5	105.6	103.9
65°	96.2	96.0	95.3	94.9	93.7	93.7	92.8	92.0	90.3	88.9	87.3
67.5°	80.7	80.2	80.2	80.2	78.8	78.6	78.1	76.7	75.2	73.3	71.9
70°	66.5	66.9	66.2	65.6	64.8	64.6	63.9	62.5	60.8	58.9	57.7
72.5°	53.0	53.5	52.8	52.6	51.1	50.7	50.3	49.2	47.3	46.1	44.2
75°	40.7	40.9	40.4	40.0	39.0	38.8	37.7	36.7	35.5	33.6	31.9
77.5°	29.3	28.9	28.9	27.9	27.0	27.0	26.8	25.3	23.7	22.2	20.8
80°	18.7	18.4	17.8	17.2	16.6	16.3	16.1	14.9	13.7	12.8	11.8
82.5°	9.4	9.2	9.0	8.8	8.2	7.8	8.0	7.1	6.7	5.7	5.0
85°	2.9	3.1	3.1	2.9	2.6	2.6	2.6	2.3	1.9	1.7	1.4
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0
2.5°	627.9	628.1	628.3	628.6	628.6	628.8	629.1	629.3	629.5	629.5	629.7
5°	627.4	627.9	627.9	628.1	628.1	628.1	628.3	628.3	628.3	628.3	628.6
7.5°	627.6	627.6	627.6	627.4	627.4	627.2	627.2	627.2	626.6	626.6	626.6
10°	626.4	626.2	626.0	625.5	625.3	625.1	624.5	624.1	623.6	623.4	622.9
12.5°	624.1	623.2	622.2	621.3	620.7	620.5	619.6	618.9	618.2	617.4	617.0
15°	619.4	618.0	616.3	614.4	614.0	613.4	611.7	610.4	609.4	608.7	607.5
17.5°	609.9	607.1	605.2	602.3	601.2	600.6	598.1	596.6	595.0	594.5	593.5
20°	593.1	590.5	587.0	584.3	583.0	581.5	579.4	577.5	575.6	575.6	574.4
22.5°	572.1	568.7	564.2	561.0	560.7	557.8	556.0	553.8	553.1	551.7	551.7
25°	545.5	542.7	537.7	534.8	533.5	532.7	529.7	526.8	525.4	524.3	525.2
27.5°	516.2	511.9	508.2	504.6	503.4	502.1	499.2	498.0	495.4	495.2	494.9
30°	482.6	478.4	474.6	472.9	470.5	469.4	467.3	465.8	464.8	464.8	464.4
32.5°	447.4	443.6	441.7	438.2	436.9	435.3	433.8	432.5	432.9	432.5	432.7
35°	409.3	408.4	404.8	402.6	402.6	402.4	400.0	399.2	398.6	398.8	400.0
37.5°	373.0	370.3	367.8	366.5	367.6	366.3	365.9	365.9	367.4	366.5	368.4
40°	334.5	334.3	333.4	333.8	334.0	332.4	332.8	333.0	334.0	335.9	336.2
42.5°	300.9	300.7	300.7	300.7	300.3	299.3	300.3	301.8	301.6	303.0	304.3
45°	268.5	268.0	269.0	268.3	269.7	270.1	269.5	269.9	271.4	272.3	274.1
47.5°	238.9	238.9	239.1	239.7	238.2	239.4	239.9	240.8	241.6	242.0	242.9
50°	211.5	211.5	211.0	211.0	211.0	211.7	210.8	211.9	212.2	214.1	215.3
52.5°	186.1	185.0	185.7	185.2	184.2	183.8	184.2	184.6	185.9	186.5	187.8
55°	162.0	162.0	160.1	159.7	160.4	160.1	159.9	159.9	160.7	161.4	162.6
57.5°	140.8	139.3	137.9	137.7	137.0	137.2	137.2	137.0	136.5	136.8	137.0
60°	120.7	119.7	117.6	117.6	117.3	117.1	115.9	115.7	114.5	114.8	113.8
62.5°	102.2	101.7	98.9	97.9	97.9	97.2	96.0	95.8	94.1	94.1	93.2
65°	85.7	84.2	82.6	80.9	80.9	80.0	79.2	77.1	75.9	75.2	73.8
67.5°	70.5	68.3	66.7	65.3	64.3	64.1	62.5	61.0	59.1	58.0	55.8
70°	55.8	54.2	52.6	51.1	50.1	49.2	47.6	45.4	44.0	41.9	40.4
72.5°	42.1	40.7	39.2	37.3	36.2	35.5	33.8	31.9	29.6	28.1	26.2
75°	30.2	28.7	26.8	25.1	24.3	23.7	21.8	20.3	18.7	17.0	15.1
77.5°	19.7	17.8	16.3	14.4	14.2	13.7	11.8	10.4	9.2	8.2	7.1
80°	10.4	9.4	8.2	7.1	6.7	5.9	5.0	4.2	3.6	2.9	2.3
82.5°	4.4	3.8	3.1	2.6	2.3	2.1	1.7	1.4	1.2	1.2	1.0
85°	1.2	1.0	1.0	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.0	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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0
2.5°	630.0	630.2	630.5	630.5	630.7	631.0	631.0	631.2	631.4	631.6	631.6
5°	628.8	628.8	628.8	629.1	629.1	629.1	629.1	629.5	629.5	629.7	630.0
7.5°	626.4	626.4	626.4	626.4	626.2	626.4	626.2	626.2	626.6	627.0	627.2
10°	622.6	622.4	622.4	622.2	622.2	622.2	622.4	622.6	622.9	623.2	623.8
12.5°	616.7	616.5	616.5	616.3	616.3	616.5	616.7	617.2	618.2	618.6	619.6
15°	607.3	607.1	607.3	607.5	608.0	608.7	609.4	610.1	611.5	612.7	614.0
17.5°	593.5	593.8	594.1	594.5	595.2	596.2	598.1	600.0	601.6	603.5	605.4
20°	574.6	575.6	575.8	577.5	578.0	580.1	582.2	585.1	587.6	590.1	592.6
22.5°	552.0	552.6	553.6	555.5	556.6	559.5	562.1	565.4	568.3	571.3	575.1
25°	526.2	526.4	529.2	529.2	532.1	534.4	537.5	541.1	545.3	549.3	552.0
27.5°	496.8	498.0	500.2	501.1	503.2	507.0	509.6	513.8	518.1	521.6	524.5
30°	466.1	466.9	470.5	471.1	472.7	475.9	479.5	483.6	486.8	490.8	493.5
32.5°	433.6	436.3	438.4	440.0	440.5	445.5	447.4	450.2	453.9	458.0	460.6
35°	402.2	403.4	406.4	407.4	408.8	411.6	415.4	417.8	419.7	422.3	425.4
37.5°	368.8	372.4	373.0	375.9	376.4	379.0	380.9	383.7	386.0	388.5	388.9
40°	337.8	339.0	341.6	342.4	342.8	346.4	348.7	349.4	350.6	352.7	355.6
42.5°	306.4	307.6	310.4	309.7	311.8	313.5	314.6	317.5	318.7	319.4	319.4
45°	275.4	275.8	277.7	278.7	279.8	280.8	282.9	284.4	284.8	286.9	287.7
47.5°	245.8	246.3	247.7	249.4	248.9	250.0	252.5	253.1	253.4	254.8	255.5
50°	216.7	217.9	219.8	219.4	220.7	221.5	223.6	224.0	224.0	224.3	224.5
52.5°	189.5	190.5	190.9	191.4	192.1	193.2	194.2	193.8	194.7	195.7	194.9
55°	162.6	163.2	164.5	164.9	164.9	165.1	164.7	166.8	165.8	165.6	165.8
57.5°	137.9	137.0	136.8	137.9	138.4	138.1	137.5	138.4	138.4	137.9	137.2
60°	114.0	113.3	113.1	113.3	112.3	111.7	112.1	111.7	110.5	110.0	110.2
62.5°	92.2	91.6	89.7	89.7	89.2	88.9	87.0	87.3	86.3	84.9	85.4
65°	72.1	70.2	69.3	69.1	67.4	66.0	65.6	63.9	62.5	62.2	62.5
67.5°	54.2	52.0	50.3	49.7	48.8	47.6	45.9	44.5	44.9	44.7	45.7
70°	37.7	36.2	34.6	33.3	33.8	32.4	31.4	31.4	31.7	31.9	32.4
72.5°	25.1	23.2	22.4	21.8	21.3	20.3	20.8	20.8	20.6	20.8	20.3
75°	14.2	13.2	12.6	12.3	11.8	11.8	11.8	11.8	11.6	11.3	11.3
77.5°	6.3	5.9	5.7	5.4	5.4	5.4	5.2	5.0	5.0	5.0	4.8
80°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
82.5°	1.0	1.0	1.2	1.2	1.2	1.0	1.2	1.2	1.0	1.0	1.2
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.2	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.0	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):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	630.0	630.0	630.0	630.0	630.0	630.0	630.0	630.0
2.5°	631.9	632.1	632.1	632.1	632.4	632.4	632.4	632.4
5°	630.2	630.5	630.5	630.5	630.7	630.7	630.7	630.7
7.5°	627.4	627.6	627.6	627.9	627.9	628.1	628.1	628.3
10°	624.1	624.5	624.7	625.1	625.3	625.5	625.5	625.7
12.5°	620.5	621.0	621.3	621.7	622.2	622.4	622.6	622.9
15°	615.3	616.3	616.7	617.0	618.0	618.4	618.6	618.9
17.5°	607.1	609.0	609.6	610.1	611.1	612.1	612.7	613.0
20°	595.2	597.4	598.3	599.5	600.9	602.1	602.5	603.1
22.5°	578.6	581.1	582.4	583.8	585.1	586.2	588.2	587.4
25°	555.0	559.1	560.7	561.4	564.0	565.4	566.4	565.4
27.5°	528.5	530.8	532.3	534.0	535.8	537.3	537.7	539.2
30°	496.6	500.6	500.4	502.1	504.4	505.8	506.3	507.5
32.5°	463.5	465.4	466.7	466.5	467.5	470.1	469.2	471.3
35°	428.2	428.4	430.8	430.6	432.5	432.5	432.5	433.8
37.5°	390.6	393.4	392.3	395.0	394.2	394.8	394.8	395.3
40°	356.3	357.3	357.3	358.2	358.9	358.2	358.6	359.8
42.5°	320.8	321.7	321.9	321.5	322.3	324.4	322.7	324.1
45°	287.7	288.4	289.4	288.6	289.8	289.1	289.8	289.4
47.5°	256.5	256.2	255.9	257.9	256.2	256.5	257.4	255.7
50°	224.5	225.9	225.0	225.7	226.1	226.1	225.5	225.5
52.5°	196.1	195.9	195.1	195.9	195.5	195.7	196.1	195.7
55°	166.8	167.7	167.2	167.0	167.2	167.2	168.7	166.8
57.5°	137.9	137.5	138.1	139.8	138.1	139.3	140.0	140.2
60°	110.5	110.5	111.9	111.2	112.6	113.8	114.8	114.2
62.5°	84.2	85.4	85.9	86.1	87.6	88.5	88.5	88.2
65°	62.5	64.1	64.1	65.0	65.6	65.6	66.0	66.9
67.5°	46.1	46.1	46.3	46.9	46.6	46.6	47.1	47.3
70°	32.2	31.7	32.4	32.2	32.2	31.9	32.2	32.2
72.5°	20.3	20.3	20.6	20.3	19.9	20.1	20.1	20.6
75°	10.9	11.3	10.9	10.9	11.1	10.7	10.9	11.1
77.5°	4.4	4.4	4.4	4.4	4.4	4.2	4.2	4.2
80°	2.1	2.1	2.1	2.1	2.1	2.1	1.9	1.9
82.5°	1.0	1.2	1.0	1.2	1.0	1.0	1.0	1.0
85°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
87.5°	0.0	0.2	0.0	0.2	0.0	0.0	0.0	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)