

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: P843377

Luminaire Tested: **LD4C15DE010B2750 EU4C15B30 4LBSWLI**

Issue Date: 5/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P843377  
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: LD4C15DE010B2750 EU4C15B30 4LBSWLI  
Description: 4in Downlight with BioUp LEDs  
Light Source: -  
Ballast/Driver:

**Summary**

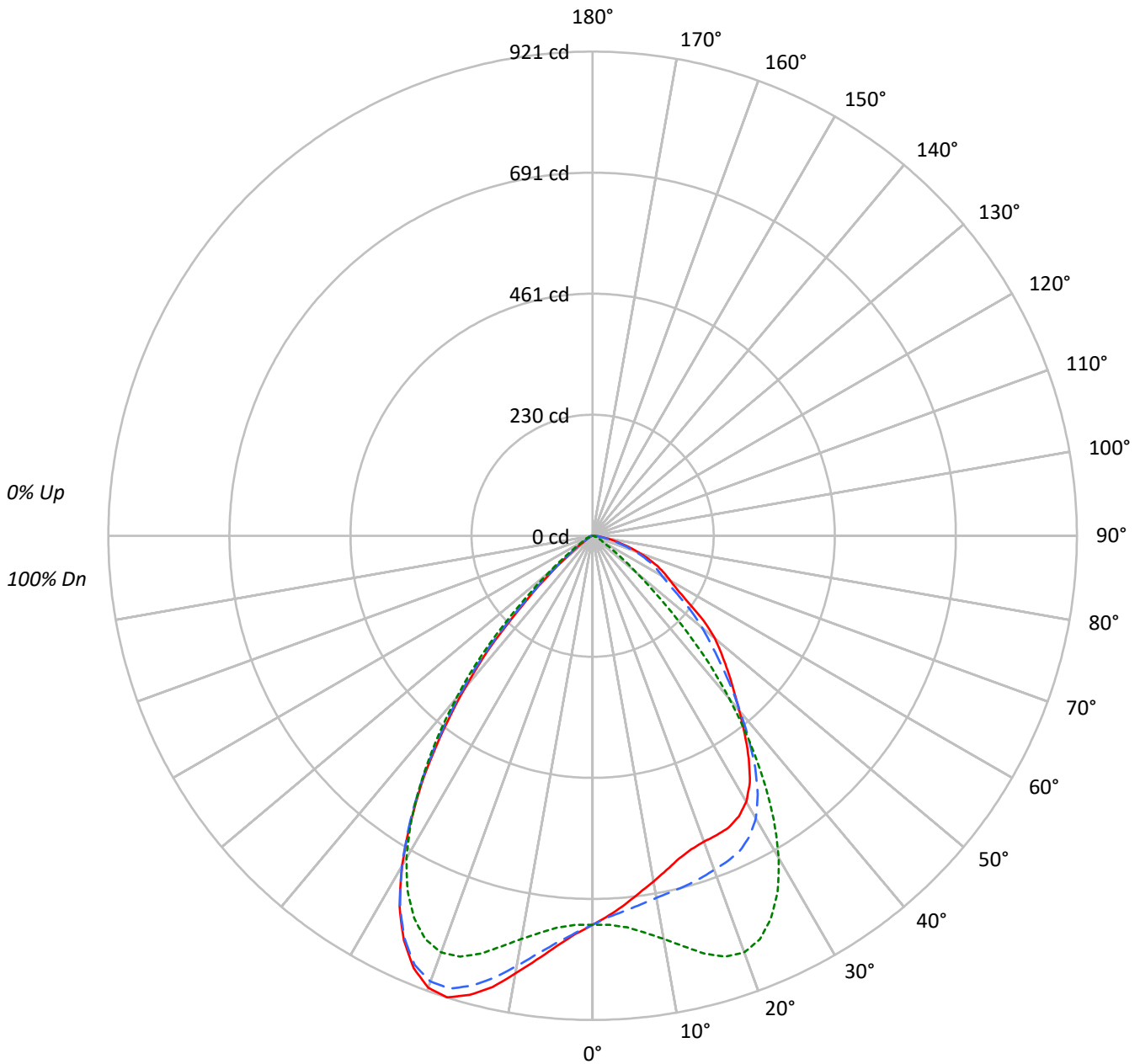
Lumens per Lamp: N/A  
Luminaire Lumens: 1365.4 lumens  
Efficiency: N/A  
Efficacy: 80.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.19  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P843377

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B30 4LBSWLI

### Luminous Intensity Polar Plot





TEST NUMBER: P843377

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B30 4LBSWLI

**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°	90899	90899	90899
5°	86844	92196	96611
10°	83270	97117	105438
15°	80840	104662	115003
20°	80940	110251	119586
25°	83013	108809	115099
30°	82888	100436	102777
35°	77643	84887	83732
40°	69554	64759	60413
45°	63103	41107	33741
50°	57969	20852	14392
55°	47593	9317	4755
60°	41770	5234	2629
65°	39302	3924	1977
70°	33657	3125	1760
75°	25632	2326	1424
80°	18465	1344	707
85°	13532	0	0



TEST NUMBER: P843377

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B30 4LBSWLI

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.9	5.3
10°-20°	224.0	16.4
20°-30°	346.6	25.4
30°-40°	341.4	25.0
40°-50°	209.7	15.4
50°-60°	93.2	6.8
60°-70°	52.1	3.8
70°-80°	22.5	1.7
80°-90°	4.0	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°	642.4	47.0
0°-40°	983.9	72.1
0°-60°	1286.8	94.2
0°-90°	1365.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1365.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	740	740	740	740	740	
5°	704	716	748	777	783	66
15°	636	689	823	886	904	180
25°	612	662	803	846	849	281
35°	518	539	566	564	558	321
45°	363	345	237	207	194	281
55°	222	201	44	25	22	204
65°	135	122	14	8	7	132
75°	54	46	5	3	3	59
85°	10	8	0	0	0	12
90°	0	0	0	0	0	



TEST NUMBER: P843377

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B30 4LBSWLI

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	722.5	722.5	722.5	722.5	724.5	721.5	724.5	724.5	727.3	728.3	725.4
5°	704.2	703.2	704.2	704.2	706.1	705.1	708.0	710.0	713.8	715.8	715.8
7.5°	684.8	684.8	684.8	686.8	689.7	688.7	691.6	694.5	700.3	704.2	707.0
10°	667.5	666.5	669.4	670.3	673.3	673.3	678.0	681.0	687.8	695.5	699.3
12.5°	651.0	650.1	652.0	654.9	659.8	659.8	663.6	668.4	678.0	686.8	693.5
15°	635.6	636.6	639.4	641.3	647.2	647.2	652.0	657.8	668.4	679.1	688.7
17.5°	625.0	625.9	627.9	630.8	636.6	636.6	641.3	648.1	659.8	671.3	682.9
20°	619.1	620.2	622.1	625.0	629.8	630.8	634.7	642.4	653.0	665.6	676.1
22.5°	616.3	618.2	620.2	622.1	626.9	626.9	631.7	637.5	648.1	660.7	670.3
25°	612.4	614.3	615.3	618.2	622.1	622.1	625.0	631.7	641.3	652.0	661.7
27.5°	601.8	603.7	604.6	607.6	611.4	610.5	614.3	619.1	627.9	637.5	645.3
30°	584.3	585.4	587.3	588.3	591.1	591.1	594.1	598.8	604.6	613.3	621.0
32.5°	556.4	558.3	559.3	560.2	563.2	562.1	563.2	566.0	571.9	579.6	584.3
35°	517.7	521.6	521.6	523.5	524.5	523.5	523.5	527.4	530.3	536.1	539.0
37.5°	475.2	478.2	477.2	479.1	480.1	477.2	479.1	480.1	484.0	486.8	487.8
40°	433.7	434.7	434.7	434.7	434.7	433.7	434.7	435.6	438.5	438.5	435.6
42.5°	396.1	397.0	397.0	395.0	397.0	396.1	396.1	396.1	396.1	392.2	389.2
45°	363.2	364.1	364.1	363.2	363.2	361.3	360.3	359.3	356.4	351.6	344.8
47.5°	332.3	334.2	335.2	333.3	332.3	330.3	330.3	324.6	320.7	314.9	305.2
50°	303.3	305.2	305.2	303.3	303.3	300.4	297.5	295.6	289.8	283.0	271.4
52.5°	266.6	269.5	269.5	268.5	268.5	264.7	263.7	259.9	255.0	247.3	237.7
55°	222.2	226.0	225.1	224.1	222.2	222.2	222.2	219.2	216.4	210.6	201.0
57.5°	190.3	191.2	191.2	190.3	190.3	188.4	188.4	185.5	184.5	178.7	171.0
60°	170.0	170.0	171.0	170.0	169.0	168.1	167.1	165.2	162.2	158.4	152.6
62.5°	153.6	154.5	154.5	153.6	152.6	151.7	150.7	148.8	146.8	143.9	138.1
65°	135.2	137.2	136.2	135.2	134.3	133.3	133.3	131.4	129.5	127.4	121.7
67.5°	115.0	115.9	116.9	115.0	115.0	114.0	114.0	112.0	111.1	107.2	103.3
70°	93.7	94.7	94.7	93.7	93.7	92.8	92.8	91.8	90.7	87.9	84.1
72.5°	73.4	74.4	73.4	72.4	72.4	72.4	71.5	70.5	69.6	67.6	64.7
75°	54.0	54.0	55.1	54.0	53.1	53.1	52.1	52.1	50.2	49.3	46.3
77.5°	38.6	39.6	38.6	38.6	37.7	36.7	36.7	35.7	35.7	34.8	32.9
80°	26.1	26.1	27.1	26.1	25.2	26.1	25.2	24.1	24.1	23.2	21.3
82.5°	16.4	17.3	16.4	16.4	16.4	16.4	16.4	15.4	15.4	14.5	13.5
85°	9.6	9.6	9.6	9.6	9.6	9.6	9.6	8.7	8.7	8.7	7.7
87.5°	4.9	4.9	3.8	3.8	4.9	4.9	4.9	3.8	3.8	3.8	3.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P843377

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B30 4LBSWLI

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	729.2	730.2	732.2	735.1	735.1	733.2	738.0	738.0	739.9	740.9	744.7
5°	721.5	723.5	727.3	732.2	733.2	732.2	739.0	741.8	744.7	747.6	753.5
7.5°	714.7	718.7	725.4	732.2	735.1	735.1	745.7	749.5	755.4	761.2	767.9
10°	710.9	716.8	726.4	737.0	739.9	742.8	755.4	763.1	770.8	778.5	788.3
12.5°	706.1	716.8	729.2	742.8	748.6	752.4	769.9	779.5	790.2	799.8	812.4
15°	705.1	717.7	734.1	751.4	759.2	765.0	784.3	797.9	810.5	822.9	835.5
17.5°	701.3	716.8	737.0	756.3	766.0	773.8	796.0	812.4	826.9	839.4	853.9
20°	696.5	713.8	736.1	757.3	767.9	775.7	799.8	815.2	831.6	843.3	856.8
22.5°	689.7	707.0	729.2	750.5	760.2	766.9	791.1	804.6	819.1	830.7	843.3
25°	678.0	694.5	713.8	731.2	740.9	746.7	767.9	780.5	791.1	802.7	814.3
27.5°	661.7	674.2	690.6	703.2	709.0	714.7	732.2	742.8	752.4	762.1	769.9
30°	632.7	642.4	653.9	664.6	670.3	671.3	687.8	693.5	701.3	708.0	713.8
32.5°	594.1	601.8	608.6	614.3	618.2	619.1	631.7	633.6	641.3	641.3	650.1
35°	544.8	548.7	553.5	553.5	556.4	553.5	562.1	564.1	565.1	566.0	572.8
37.5°	488.7	490.6	493.6	487.8	487.8	484.9	487.8	489.7	485.9	485.9	490.6
40°	435.6	431.7	427.9	422.1	419.2	413.4	413.4	408.6	405.7	403.8	404.8
42.5°	384.4	375.8	367.0	354.5	348.7	342.9	337.1	330.3	328.4	323.6	320.7
45°	335.2	322.6	311.1	290.7	279.2	273.3	260.8	247.3	238.6	236.6	228.9
47.5°	293.6	275.3	255.9	231.8	220.2	209.6	191.2	179.7	168.1	162.2	157.5
50°	256.9	240.5	215.4	189.3	174.8	164.3	143.9	130.4	117.8	109.1	103.3
52.5°	225.1	206.7	183.5	153.6	139.1	127.4	105.2	89.8	79.2	70.5	63.8
55°	189.3	174.8	151.7	123.6	109.1	95.6	76.3	59.9	49.3	43.5	38.6
57.5°	163.3	150.7	128.5	101.4	87.9	75.3	56.1	42.5	33.8	28.0	25.2
60°	145.8	134.3	115.0	88.8	76.3	64.7	46.3	33.8	26.1	21.3	19.2
62.5°	131.4	119.7	102.4	78.3	67.6	56.1	39.6	28.0	21.3	17.3	14.5
65°	115.0	104.3	88.8	67.6	58.0	48.3	33.8	23.2	17.3	13.5	11.5
67.5°	97.5	87.9	74.4	56.1	48.3	40.6	27.1	19.2	14.5	11.5	9.6
70°	79.2	71.5	58.9	45.4	38.6	31.8	22.2	15.4	10.7	8.7	7.7
72.5°	60.8	54.0	45.4	34.8	29.0	24.1	16.4	11.5	8.7	6.8	5.8
75°	43.5	38.6	31.8	25.2	21.3	17.3	12.6	8.7	5.8	4.9	3.8
77.5°	29.9	27.1	22.2	17.3	14.5	12.6	8.7	5.8	4.9	3.8	3.0
80°	19.2	17.3	14.5	10.7	8.7	7.7	4.9	3.8	3.0	1.9	1.9
82.5°	11.5	10.7	8.7	5.8	4.9	3.8	3.0	1.9	1.9	1.0	1.0
85°	6.8	5.8	3.8	3.0	3.0	1.9	1.9	1.0	1.0	0.0	0.0
87.5°	3.0	1.9	1.9	1.0	1.0	1.0	1.0	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



TEST NUMBER: P843377

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B30 4LBSWLI

**CANDELA DISTRIBUTION (continued):**

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	742.8	747.6	746.7	749.5	748.6	748.6	753.5	751.4	756.3	756.3	757.3
5°	753.5	760.2	760.2	765.0	764.0	766.0	770.8	770.8	776.6	778.5	778.5
7.5°	768.9	777.6	779.5	784.3	785.3	789.2	793.0	794.0	801.7	803.7	804.6
10°	790.2	800.7	803.7	808.5	810.5	814.3	819.1	821.0	830.7	831.6	835.5
12.5°	816.2	827.8	830.7	836.5	837.4	842.3	849.1	851.0	860.6	863.6	866.4
15°	841.3	851.9	856.8	862.6	863.6	869.4	875.1	877.1	885.8	889.7	892.5
17.5°	858.7	871.3	874.2	882.0	882.0	886.7	892.5	894.4	903.1	906.1	908.0
20°	862.6	874.2	878.0	883.9	884.8	887.7	892.5	894.4	902.2	903.1	906.1
22.5°	848.1	859.6	861.7	867.4	868.3	871.3	875.1	874.2	883.9	882.8	883.9
25°	817.2	827.8	827.8	834.6	833.6	836.5	838.4	837.4	846.1	846.1	846.1
27.5°	772.7	782.4	783.4	788.3	785.3	786.2	788.3	787.2	793.0	793.0	793.0
30°	717.7	725.4	722.5	726.4	724.5	726.4	724.5	723.5	725.4	727.3	726.4
32.5°	649.1	654.9	654.9	655.8	655.8	650.1	648.1	648.1	647.2	646.2	646.2
35°	569.9	574.7	572.8	572.8	571.9	566.0	563.2	561.2	564.1	558.3	562.1
37.5°	488.7	489.7	486.8	485.9	481.0	481.0	476.3	472.3	474.2	473.3	469.5
40°	399.9	403.8	398.0	396.1	398.9	395.0	390.3	385.4	389.2	384.4	386.4
42.5°	313.0	312.0	310.1	310.1	310.1	304.3	303.3	302.4	303.3	299.4	296.6
45°	226.0	223.2	220.2	220.2	216.4	214.4	214.4	211.5	206.7	206.7	201.0
47.5°	152.6	145.8	143.9	143.0	141.1	141.1	139.1	137.2	136.2	131.4	131.4
50°	99.5	92.8	90.7	89.8	90.7	88.8	86.9	85.0	83.0	82.1	80.2
52.5°	59.9	57.0	55.1	54.0	52.1	51.2	50.2	48.3	47.4	47.4	46.3
55°	35.7	32.9	29.0	29.0	29.0	28.0	27.1	26.1	25.2	25.2	24.1
57.5°	22.2	20.3	18.4	17.3	17.3	17.3	16.4	16.4	16.4	16.4	15.4
60°	16.4	14.5	13.5	13.5	13.5	12.6	12.6	12.6	12.6	11.5	11.5
62.5°	12.6	11.5	10.7	10.7	9.6	9.6	9.6	9.6	9.6	9.6	8.7
65°	10.7	8.7	8.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
67.5°	7.7	6.8	6.8	6.8	6.8	5.8	5.8	5.8	5.8	5.8	5.8
70°	5.8	5.8	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	4.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
75°	3.8	3.8	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	3.0	3.0	3.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	1.0	1.0	1.0	1.0	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	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





TEST NUMBER: P843377

CATALOG NUMBER: LD4C15DE010B2750 EU4C15B30 4LBSWLI

**CANDELA DISTRIBUTION (continued):**

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	739.9	739.9	739.9	739.9	739.9	739.9	739.9	739.9
2.5°	757.3	762.1	757.3	757.3	760.2	759.2	761.2	758.3
5°	779.5	786.2	781.5	780.5	785.3	784.3	785.3	783.4
7.5°	806.6	813.3	808.5	808.5	813.3	812.4	815.2	813.3
10°	837.4	845.2	838.4	839.4	846.1	845.2	845.2	845.2
12.5°	869.4	877.1	873.2	873.2	878.0	879.0	880.0	879.0
15°	895.4	903.1	898.4	898.4	905.1	904.2	905.1	904.2
17.5°	910.8	918.7	912.8	912.8	918.7	918.7	919.6	920.6
20°	907.0	915.7	910.8	908.9	915.7	915.7	914.7	914.7
22.5°	884.8	892.5	888.6	886.7	891.6	889.7	888.6	889.7
25°	846.1	853.9	846.1	846.1	850.0	849.1	850.0	849.1
27.5°	794.0	799.8	792.1	791.1	795.0	793.0	792.1	795.0
30°	724.5	730.2	726.4	723.5	728.3	725.4	723.5	724.5
32.5°	645.3	649.1	647.2	642.4	645.3	643.4	642.4	643.4
35°	558.3	563.2	555.5	554.4	559.3	555.5	553.5	558.3
37.5°	468.4	474.2	467.5	468.4	465.6	466.5	464.6	467.5
40°	383.5	382.5	380.6	379.6	380.6	377.7	379.6	376.7
42.5°	291.7	293.6	292.6	291.7	292.6	288.8	286.9	290.7
45°	202.9	201.9	200.0	198.0	198.0	197.0	197.0	194.2
47.5°	130.4	129.5	125.5	126.6	128.5	126.6	123.6	127.4
50°	79.2	78.3	78.3	77.3	79.2	77.3	75.3	75.3
52.5°	44.4	44.4	43.5	43.5	43.5	43.5	42.5	41.6
55°	24.1	23.2	23.2	23.2	22.2	22.2	22.2	22.2
57.5°	15.4	15.4	15.4	15.4	15.4	15.4	14.5	14.5
60°	11.5	11.5	11.5	11.5	10.7	11.5	10.7	10.7
62.5°	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
65°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
67.5°	5.8	5.8	5.8	5.8	5.8	5.8	5.8	5.8
70°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
72.5°	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
75°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
77.5°	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
80°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
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)