

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: io LED

Report Number: P135881

Luminaire Tested: **LD6A10D010TE ERM6A10830 6LM121H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P135881  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23373)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD6A10D010TE ERM6A10830 6LM121H  
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED DOUBLE WALL WASH LUMINAIRE  
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER  
Light Source: (1) HIGH LUMEN LED 3000K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1134.0 lumens  
Efficiency: N/A  
Efficacy: 81.0 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 1.06 / 1.01  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

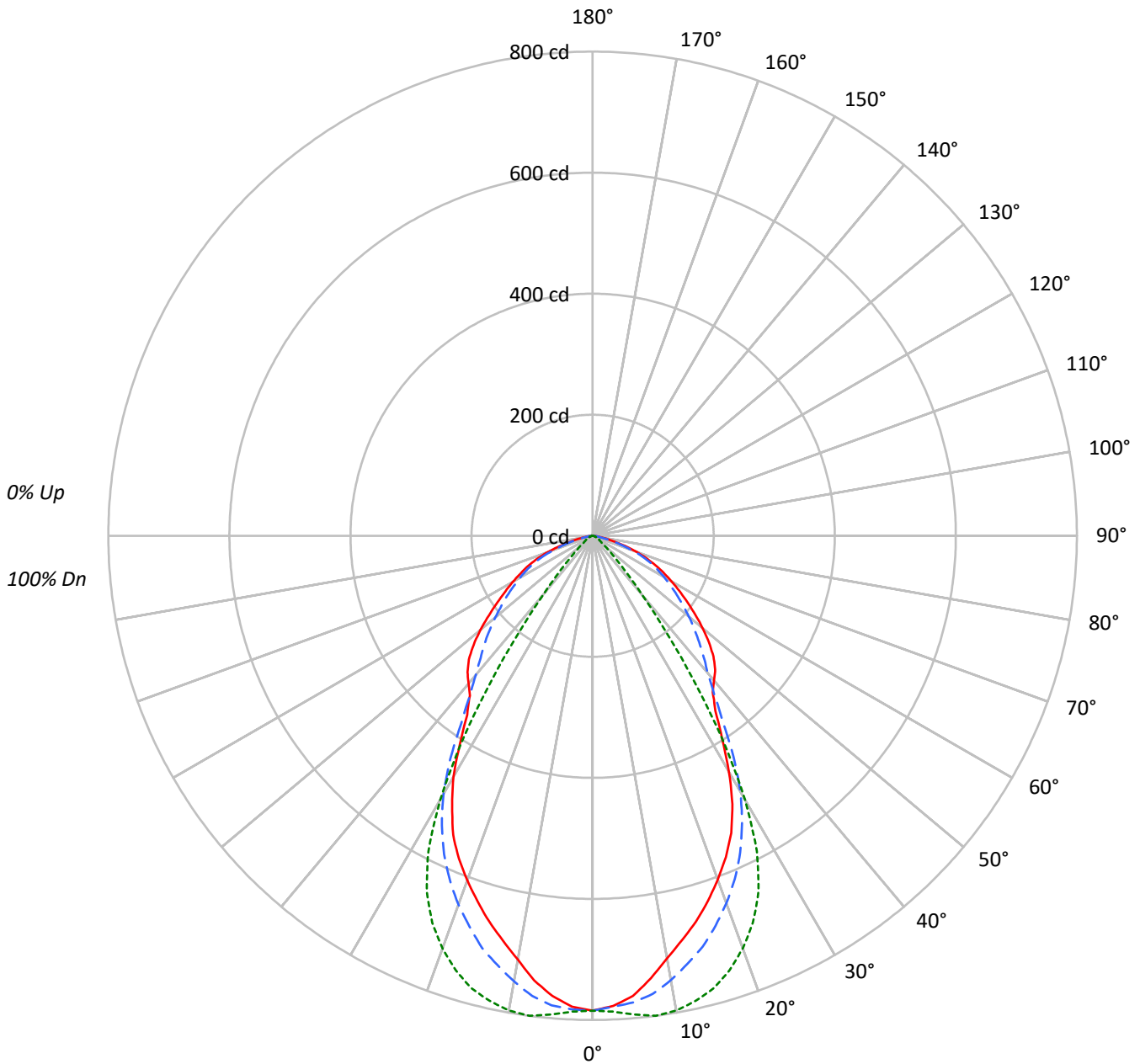
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89																			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79																			
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70																			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62																			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56																			
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51																			
7	74	62	55	49	72	61	54	49	60	53	49	59	53	49	57	52	48	47																			
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43																			
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39																			
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36																			

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

	0°	90°	180°
0°	51188	51188	51188
5°	49988	52005	49988
10°	46949	52759	47108
15°	44585	52271	44585
20°	41962	50356	42045
25°	38987	46668	39246
30°	33930	37945	34638
35°	28130	22938	28791
40°	26546	10697	27151
45°	26028	5028	26683
50°	24055	2649	24542
55°	21702	1752	21839
60°	19637	1396	19794
65°	17568	1096	18108
70°	14478	897	14917
75°	9553	605	9553
80°	5335	451	5335
85°	3518	0	2695



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.2	6.5
10°-20°	198.5	17.5
20°-30°	265.4	23.4
30°-40°	219.4	19.4
40°-50°	157.5	13.9
50°-60°	115.7	10.2
60°-70°	74.7	6.6
70°-80°	26.5	2.3
80°-90°	3.1	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°	537.1	47.4
0°-40°	756.6	66.7
0°-60°	1029.7	90.8
0°-90°	1134.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1134.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	785	785	785	785	785	
5°	763	774	794	779	763	71
15°	660	703	774	705	660	185
25°	542	577	648	581	545	246
35°	353	374	288	378	362	227
45°	282	249	54	252	289	215
55°	191	170	15	172	192	171
65°	114	106	7	107	117	112
75°	38	31	2	31	38	43
85°	5	2	0	2	4	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6
2.5°	777.5	771.5	776.3	771.5	772.7	777.5	778.7	781.0	782.2	778.7	778.7
5°	763.3	757.3	763.3	758.5	760.9	766.8	768.0	772.7	775.1	773.9	776.3
7.5°	737.2	732.4	738.4	734.8	738.4	746.7	750.2	756.1	760.9	763.3	766.8
10°	708.7	704.0	709.9	706.4	712.3	721.8	725.3	732.4	739.5	745.5	751.4
12.5°	683.8	679.1	682.7	681.5	687.4	695.7	701.6	709.9	718.2	724.1	732.4
15°	660.1	655.4	660.1	657.8	662.5	672.0	677.9	686.2	695.7	702.8	712.3
17.5°	632.9	628.1	631.7	630.5	635.3	643.5	649.5	657.8	667.3	675.5	685.0
20°	604.4	599.7	603.3	600.9	605.6	615.1	619.8	629.3	637.6	645.9	654.2
22.5°	574.8	570.1	574.8	571.3	578.4	584.3	589.0	598.5	605.6	613.9	621.0
25°	541.6	536.9	540.4	538.1	542.8	549.9	553.5	563.0	568.9	577.2	584.3
27.5°	500.1	494.2	501.3	496.6	502.5	508.4	512.0	520.3	527.4	534.5	540.4
30°	450.4	445.6	452.7	449.2	456.3	461.0	465.8	474.1	480.0	488.3	489.5
32.5°	398.2	395.8	401.8	399.4	406.5	411.3	414.8	423.1	427.8	432.6	429.0
35°	353.2	350.8	356.7	355.6	361.5	365.0	368.6	373.3	373.3	374.5	365.0
37.5°	325.9	324.7	329.5	328.3	333.0	336.6	336.6	337.8	335.4	329.5	315.3
40°	311.7	310.5	314.1	312.9	316.4	317.6	316.4	314.1	307.0	295.1	276.1
42.5°	299.8	297.5	299.8	298.7	301.0	302.2	298.7	295.1	285.6	271.4	248.9
45°	282.1	279.7	283.3	280.9	283.3	283.3	279.7	275.0	264.3	248.9	225.2
47.5°	260.7	258.4	261.9	259.6	261.9	261.9	258.4	253.6	243.0	227.6	203.8
50°	237.0	234.7	237.0	235.8	238.2	239.4	234.7	231.1	221.6	207.4	183.7
52.5°	213.3	211.0	213.3	213.3	214.5	214.5	211.0	208.6	200.3	187.3	165.9
55°	190.8	188.4	192.0	190.8	192.0	192.0	188.4	186.1	180.1	169.5	149.3
57.5°	169.5	168.3	170.7	169.5	169.5	169.5	167.1	165.9	161.2	151.7	135.1
60°	150.5	148.1	149.3	149.3	149.3	150.5	148.1	147.0	143.4	136.3	120.9
62.5°	131.6	130.4	131.6	130.4	130.4	131.6	130.4	129.2	126.8	120.9	107.9
65°	113.8	111.4	113.8	112.6	112.6	112.6	111.4	111.4	109.0	105.5	93.6
67.5°	94.8	93.6	94.8	93.6	92.4	92.4	91.3	91.3	90.1	87.7	77.0
70°	75.9	73.5	74.7	72.3	73.5	71.1	71.1	69.9	68.7	67.6	59.3
72.5°	55.7	54.5	54.5	52.1	52.1	51.0	49.8	49.8	48.6	48.6	42.7
75°	37.9	37.9	36.7	34.4	35.6	33.2	33.2	33.2	32.0	30.8	27.3
77.5°	24.9	23.7	23.7	22.5	22.5	20.1	21.3	20.1	20.1	19.0	16.6
80°	14.2	14.2	14.2	13.0	13.0	11.9	11.9	11.9	10.7	10.7	9.5
82.5°	8.3	8.3	8.3	7.1	7.1	7.1	7.1	5.9	5.9	5.9	4.7
85°	4.7	3.6	3.6	3.6	3.6	3.6	3.6	2.4	2.4	2.4	2.4
87.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6
2.5°	783.4	782.2	781.0	785.8	787.0	783.4	783.4	787.0	789.3	783.4	782.2
5°	782.2	783.4	783.4	789.3	792.9	790.5	790.5	794.1	796.4	789.3	787.0
7.5°	776.3	779.8	782.2	790.5	796.4	795.3	796.4	800.0	801.2	794.1	790.5
10°	763.3	768.0	772.7	783.4	790.5	791.7	792.9	796.4	798.8	789.3	784.6
12.5°	745.5	752.6	759.7	771.5	779.8	781.0	784.6	787.0	788.1	779.8	773.9
15°	725.3	734.8	741.9	755.0	764.4	766.8	770.4	773.9	773.9	764.4	758.5
17.5°	700.4	708.7	718.2	731.3	741.9	744.3	749.0	752.6	752.6	743.1	734.8
20°	669.6	679.1	687.4	701.6	713.5	717.0	721.8	725.3	725.3	717.0	706.4
22.5°	637.6	647.1	655.4	668.4	680.3	683.8	687.4	692.1	691.0	683.8	674.4
25°	599.7	608.0	613.9	627.0	636.4	640.0	644.7	648.3	647.1	640.0	631.7
27.5°	553.5	559.4	560.6	568.9	577.2	580.7	584.3	587.8	586.7	580.7	573.6
30°	500.1	499.0	493.0	493.0	496.6	499.0	501.3	503.7	502.5	499.0	494.2
32.5°	432.6	424.3	408.9	400.6	397.0	397.0	397.0	399.4	398.2	397.0	397.0
35°	360.3	342.5	318.8	301.0	291.6	288.0	285.6	288.0	286.8	288.0	292.7
37.5°	301.0	275.0	243.0	219.3	203.8	196.7	192.0	193.2	193.2	196.7	205.0
40°	257.2	224.0	188.4	158.8	141.0	131.6	125.6	125.6	126.8	131.6	142.2
42.5°	224.0	187.3	148.1	119.7	98.4	88.9	83.0	81.8	83.0	88.9	99.6
45°	197.9	158.8	119.7	88.9	71.1	60.4	55.7	54.5	55.7	61.6	71.1
47.5°	175.4	136.3	99.6	68.7	51.0	42.7	37.9	36.7	39.1	43.9	52.1
50°	156.4	118.5	81.8	54.5	39.1	30.8	27.3	26.1	27.3	32.0	39.1
52.5°	138.7	103.1	68.7	42.7	29.6	23.7	20.1	19.0	20.1	23.7	30.8
55°	124.4	91.3	59.3	35.6	23.7	19.0	16.6	15.4	16.6	19.0	24.9
57.5°	111.4	80.6	51.0	29.6	20.1	15.4	13.0	13.0	13.0	15.4	20.1
60°	99.6	71.1	43.9	24.9	16.6	13.0	10.7	10.7	10.7	13.0	16.6
62.5°	88.9	62.8	37.9	21.3	14.2	10.7	9.5	9.5	9.5	10.7	14.2
65°	75.9	53.3	32.0	17.8	11.9	9.5	8.3	7.1	8.3	9.5	11.9
67.5°	62.8	43.9	26.1	14.2	9.5	7.1	5.9	5.9	5.9	7.1	9.5
70°	48.6	34.4	20.1	10.7	7.1	5.9	4.7	4.7	4.7	5.9	7.1
72.5°	33.2	23.7	14.2	8.3	5.9	4.7	3.6	3.6	3.6	4.7	5.9
75°	21.3	15.4	9.5	5.9	3.6	3.6	2.4	2.4	2.4	3.6	3.6
77.5°	13.0	9.5	5.9	3.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4
80°	7.1	5.9	3.6	2.4	2.4	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	3.6	3.6	2.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
85°	1.2	1.2	1.2	1.2	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



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6	784.6
2.5°	782.2	784.6	785.8	781.0	782.2	783.4	776.3	777.5	773.9	781.0	777.5
5°	785.8	787.0	788.1	781.0	779.8	778.7	770.4	769.2	764.4	770.4	766.8
7.5°	787.0	784.6	784.6	773.9	770.4	766.8	756.1	752.6	746.7	749.0	744.3
10°	781.0	776.3	772.7	759.7	753.8	747.8	734.8	730.1	721.8	723.0	717.0
12.5°	768.0	762.1	756.1	741.9	734.8	726.5	713.5	706.4	698.1	698.1	691.0
15°	751.4	744.3	737.2	723.0	713.5	705.2	689.8	682.7	674.4	673.2	667.3
17.5°	727.7	719.4	712.3	695.7	686.2	676.7	662.5	654.2	645.9	645.9	638.8
20°	699.3	689.8	681.5	666.1	656.6	648.3	631.7	624.6	617.5	616.3	610.4
22.5°	666.1	656.6	649.5	635.3	624.6	616.3	602.1	596.1	589.0	587.8	580.7
25°	624.6	616.3	609.2	597.3	587.8	580.7	567.7	560.6	555.8	555.8	549.9
27.5°	568.9	561.8	560.6	551.1	544.0	539.3	528.6	523.8	517.9	517.9	510.8
30°	494.2	495.4	500.1	497.8	495.4	493.0	483.6	482.4	475.3	474.1	465.8
32.5°	403.0	411.3	424.3	431.4	435.0	437.3	435.0	432.6	426.7	425.5	416.0
35°	305.8	322.4	343.7	357.9	369.8	378.1	381.6	381.6	379.3	378.1	369.8
37.5°	221.6	246.5	275.0	298.7	317.6	333.0	340.1	344.9	344.9	344.9	341.3
40°	162.4	192.0	225.2	256.0	279.7	299.8	310.5	318.8	321.2	324.7	322.4
42.5°	120.9	152.9	188.4	224.0	251.3	273.8	288.0	297.5	303.4	307.0	307.0
45°	92.4	124.4	161.2	199.1	227.6	252.4	266.7	277.3	283.3	288.0	288.0
47.5°	71.1	101.9	138.7	176.6	206.2	231.1	245.3	254.8	260.7	265.5	265.5
50°	55.7	84.1	119.7	156.4	186.1	209.8	222.8	232.3	237.0	240.6	241.8
52.5°	45.0	71.1	105.5	141.0	168.3	189.6	200.3	208.6	213.3	215.7	216.9
55°	36.7	61.6	93.6	125.6	151.7	171.9	181.3	187.3	190.8	193.2	193.2
57.5°	30.8	53.3	83.0	113.8	138.7	154.1	162.4	167.1	169.5	171.9	171.9
60°	26.1	46.2	73.5	101.9	124.4	138.7	144.6	148.1	150.5	151.7	151.7
62.5°	22.5	39.1	64.0	90.1	110.2	123.3	128.0	130.4	131.6	131.6	132.7
65°	19.0	33.2	54.5	78.2	94.8	106.7	110.2	111.4	111.4	112.6	113.8
67.5°	14.2	26.1	43.9	64.0	78.2	87.7	91.3	91.3	91.3	91.3	92.4
70°	11.9	20.1	33.2	48.6	60.4	67.6	69.9	69.9	69.9	69.9	71.1
72.5°	8.3	14.2	23.7	34.4	43.9	48.6	48.6	49.8	48.6	48.6	51.0
75°	5.9	9.5	15.4	22.5	27.3	30.8	32.0	32.0	32.0	32.0	33.2
77.5°	3.6	5.9	9.5	13.0	17.8	19.0	20.1	20.1	20.1	20.1	21.3
80°	2.4	3.6	5.9	8.3	9.5	10.7	11.9	11.9	11.9	11.9	11.9
82.5°	1.2	2.4	3.6	3.6	4.7	5.9	5.9	5.9	5.9	5.9	7.1
85°	0.0	1.2	1.2	2.4	2.4	2.4	2.4	2.4	2.4	2.4	3.6
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):**

	165°	170°	175°	180°
0°	784.6	784.6	784.6	784.6
2.5°	770.4	778.7	772.7	778.7
5°	758.5	765.6	758.5	763.3
7.5°	734.8	740.7	733.6	740.7
10°	706.4	712.3	705.2	711.1
12.5°	680.3	685.0	677.9	685.0
15°	656.6	661.3	654.2	660.1
17.5°	629.3	632.9	627.0	632.9
20°	600.9	604.4	599.7	605.6
22.5°	572.4	577.2	571.3	577.2
25°	540.4	544.0	538.1	545.2
27.5°	502.5	504.9	499.0	502.5
30°	456.3	457.5	452.7	459.8
32.5°	407.7	407.7	400.6	407.7
35°	362.7	361.5	356.7	361.5
37.5°	334.2	334.2	330.7	333.0
40°	317.6	318.8	314.1	318.8
42.5°	303.4	305.8	302.2	305.8
45°	285.6	288.0	284.4	289.2
47.5°	263.1	265.5	263.1	266.7
50°	238.2	240.6	238.2	241.8
52.5°	213.3	215.7	213.3	215.7
55°	190.8	192.0	189.6	192.0
57.5°	169.5	170.7	168.3	170.7
60°	149.3	151.7	149.3	151.7
62.5°	131.6	132.7	132.7	133.9
65°	112.6	117.3	116.1	117.3
67.5°	93.6	97.2	97.2	98.4
70°	72.3	74.7	77.0	78.2
72.5°	51.0	54.5	55.7	56.9
75°	33.2	36.7	36.7	37.9
77.5°	21.3	23.7	23.7	23.7
80°	13.0	14.2	13.0	14.2
82.5°	7.1	7.1	7.1	8.3
85°	3.6	3.6	3.6	3.6
87.5°	1.2	1.2	1.2	1.2
90°	0.0	0.0	0.0	0.0



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— 0°-180°    - - 45°-225°    - - - - 90°-270°















(END OF REPORT)