

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: P135644

Luminaire Tested: **LD6A10D010TE ERM6A10927 6LM111H**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P135644  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23372)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: io LED  
Catalog Number: LD6A10D010TE ERM6A10927 6LM111H  
Description: PORTFOLIO 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL WASH LUMINAIRE  
SEMI-SPECULAR CLEAR TRIM AND SPECULAR CLEAR KICKER  
Light Source: (1) HIGH LUMEN LED 2700K  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 963.9 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 0.96 / 0.92  
Luminous Opening: Circular (Dia: 0.46' x H: 0')  
CIE Type: Direct

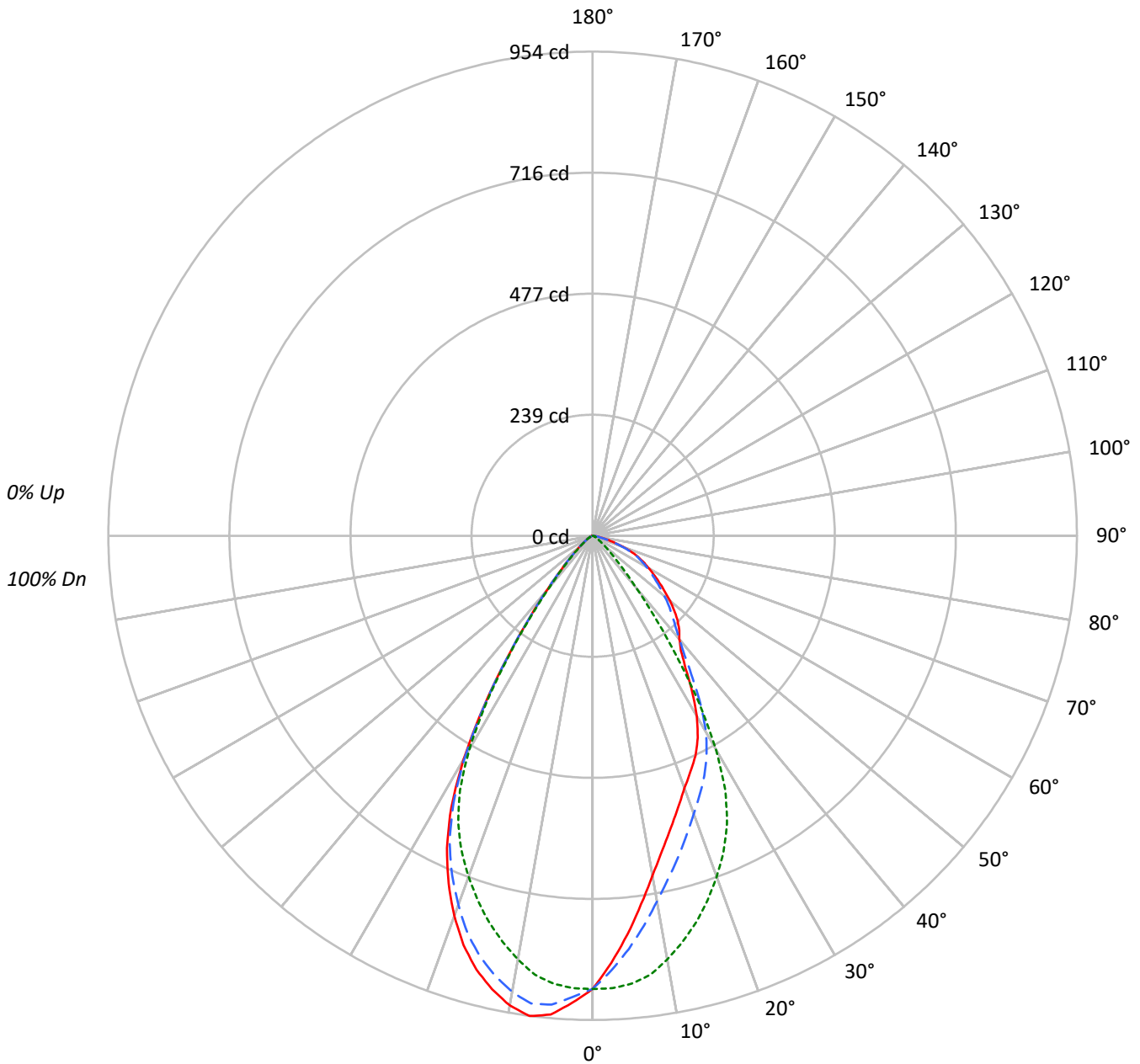
Input Watts (W): 14  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20				20	
RC	80				70				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				100
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93	91				91
2	106	100	95	91	103	98	94	90	95	91	88	92	89	86	89	87	84	83				83
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77	75				75
4	93	85	78	73	91	83	77	73	81	76	72	79	75	71	77	73	70	68				68
5	88	78	72	67	86	77	71	66	75	70	66	74	69	65	72	68	64	63				63
6	83	73	66	61	81	72	65	61	70	65	60	69	64	60	67	63	59	58				58
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55	53				53
8	74	63	57	52	73	63	56	52	62	56	52	60	55	51	59	55	51	50				50
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46				46
10	67	56	49	45	65	55	49	45	54	49	45	54	48	45	53	48	45	43				43

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

	0°	90°	180°
0°	58260	58260	58260
5°	51619	58011	62019
10°	44988	56131	62259
15°	40188	53237	59761
20°	36699	49599	55299
25°	34459	45077	48885
30°	30902	36612	38247
35°	25391	22659	23240
40°	22646	11140	11761
45°	21848	5554	5942
50°	20137	2954	3157
55°	18188	1774	1888
60°	16662	1227	1227
65°	15237	957	803
70°	12284	782	591
75°	7587	529	252
80°	4283	376	0
85°	2321	0	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.9	8.5
10°-20°	212.7	22.1
20°-30°	270.7	28.1
30°-40°	193.9	20.1
40°-50°	96.7	10.0
50°-60°	58.6	6.1
60°-70°	35.8	3.7
70°-80°	12.3	1.3
80°-90°	1.3	0.1
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°	565.2	58.6
0°-40°	759.1	78.8
0°-60°	914.4	94.9
0°-90°	963.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	963.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	893	893	893	893	893	
5°	788	817	886	927	947	72
15°	595	654	788	858	885	167
25°	479	521	626	667	679	218
35°	319	344	284	292	292	204
45°	237	221	60	66	64	181
55°	160	151	16	17	17	144
65°	99	96	6	5	5	96
75°	30	27	2	1	1	35
85°	3	2	0	0	0	4
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°	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0
2.5°	842.2	843.2	845.3	843.2	844.2	849.4	847.3	848.4	851.5	856.7	853.6
5°	788.2	789.2	794.3	791.3	793.3	799.6	799.6	803.7	810.0	817.2	817.2
7.5°	732.1	734.1	739.4	737.2	740.4	748.7	749.7	756.0	764.2	774.7	779.8
10°	679.1	681.2	686.4	685.4	689.5	697.8	702.0	708.2	718.6	731.0	737.2
12.5°	634.4	636.5	640.7	640.7	645.9	654.2	658.4	666.7	677.0	690.5	698.9
15°	595.0	598.2	602.3	602.3	607.4	615.8	620.9	628.3	639.7	654.2	663.5
17.5°	560.7	561.8	565.9	565.9	571.1	579.4	584.7	591.9	603.3	616.8	627.2
20°	528.6	529.6	533.7	534.8	539.0	546.2	551.4	558.7	569.1	582.6	591.9
22.5°	503.6	505.7	508.8	509.9	512.0	519.2	525.5	530.6	540.0	551.4	560.7
25°	478.7	479.7	482.9	483.9	487.0	492.2	496.4	501.6	509.9	521.2	528.6
27.5°	448.6	451.7	452.8	453.8	456.9	461.0	465.2	469.4	476.6	486.0	492.2
30°	410.2	411.2	414.3	416.4	419.5	423.7	428.9	433.0	439.3	446.5	450.6
32.5°	365.5	366.6	369.7	371.8	376.9	381.1	385.3	388.4	392.5	396.7	396.7
35°	318.8	321.9	323.0	326.1	331.2	335.4	338.6	339.6	341.7	343.7	336.4
37.5°	285.6	287.6	289.7	291.8	296.0	299.1	301.1	301.1	300.1	298.0	288.7
40°	265.9	266.9	269.0	270.0	274.1	276.2	276.2	274.1	270.0	264.8	250.2
42.5°	252.4	253.4	254.4	255.5	257.5	258.6	257.5	253.4	248.2	240.9	224.3
45°	236.8	237.8	238.9	238.9	240.9	240.9	239.9	235.7	229.5	221.1	203.5
47.5°	218.0	219.1	220.1	221.1	222.2	222.2	221.1	217.0	210.8	203.5	184.8
50°	198.4	199.4	200.4	200.4	202.5	202.5	201.4	197.3	192.1	184.8	168.2
52.5°	178.6	179.7	179.7	181.8	181.8	181.8	180.7	176.5	172.4	167.2	151.7
55°	159.9	160.9	160.9	163.0	164.0	163.0	162.0	158.9	154.7	150.6	138.1
57.5°	143.3	144.3	144.3	145.4	146.4	145.4	144.3	142.3	140.2	136.0	125.7
60°	127.7	128.8	128.8	129.8	129.8	128.8	128.8	126.7	124.6	122.6	113.2
62.5°	113.2	113.2	113.2	114.2	114.2	113.2	113.2	111.1	110.1	109.1	101.8
65°	98.7	98.7	98.7	98.7	98.7	96.6	96.6	95.6	94.5	95.6	89.3
67.5°	82.1	82.1	81.0	81.0	81.0	78.9	78.9	78.9	77.8	78.9	73.7
70°	64.4	64.4	63.3	63.3	62.3	60.2	60.2	60.2	59.2	60.2	57.1
72.5°	45.7	46.7	44.6	44.6	43.6	41.5	42.6	41.5	42.6	42.6	40.5
75°	30.1	31.1	29.1	29.1	28.0	27.0	27.0	27.0	28.0	27.0	26.0
77.5°	18.7	19.7	18.7	18.7	17.6	16.6	16.6	16.6	16.6	16.6	15.6
80°	11.4	11.4	11.4	10.4	10.4	9.4	9.4	9.4	9.4	9.4	8.3
82.5°	6.2	6.2	6.2	6.2	6.2	5.2	5.2	5.2	5.2	5.2	4.1
85°	3.1	3.1	3.1	3.1	3.1	2.1	2.1	2.1	2.1	2.1	2.1
87.5°	1.0	1.0	1.0	1.0	1.0	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):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0
2.5°	862.9	867.1	863.9	876.4	874.3	883.7	882.7	892.0	890.9	892.0	894.0
5°	829.7	838.0	839.1	854.7	855.7	870.2	873.3	885.8	887.9	892.0	897.2
7.5°	793.3	805.8	810.0	827.6	833.8	849.4	855.7	872.3	876.4	883.7	889.9
10°	753.9	768.5	774.7	795.4	803.7	821.4	829.7	847.3	853.6	861.9	869.2
12.5°	716.5	732.1	740.4	762.2	773.6	791.3	800.6	819.3	825.6	835.9	843.2
15°	681.2	697.8	707.1	729.0	740.4	760.1	769.5	788.2	795.4	805.8	813.1
17.5°	644.9	661.5	671.9	692.6	707.1	723.8	734.1	752.9	760.1	769.5	776.7
20°	609.6	626.2	635.5	656.3	669.8	686.4	695.8	714.4	719.6	729.0	735.2
22.5°	576.3	591.9	600.2	622.0	633.4	648.0	657.3	673.9	680.1	687.4	691.6
25°	543.1	556.6	562.8	581.6	590.8	604.3	611.7	626.2	632.4	638.7	643.8
27.5°	505.7	513.0	515.1	529.6	536.8	549.3	552.5	565.9	571.1	575.3	579.4
30°	459.0	460.0	453.8	461.0	464.1	473.5	473.5	486.0	490.1	493.2	497.4
32.5°	399.8	393.5	379.0	376.9	374.9	380.1	377.9	388.4	392.5	394.6	397.7
35°	334.3	320.8	297.0	287.6	281.4	280.4	277.2	284.5	287.6	289.7	291.8
37.5°	277.2	257.5	227.4	210.8	200.4	196.3	192.1	196.3	198.4	200.4	202.5
40°	235.7	210.8	175.5	154.7	140.2	133.9	128.8	130.8	132.9	135.0	136.0
42.5°	205.6	177.5	139.2	114.2	99.7	92.4	87.2	88.2	89.3	90.3	92.4
45°	182.8	152.7	113.2	86.2	71.7	64.4	60.2	60.2	61.2	62.3	63.3
47.5°	164.0	131.9	92.4	66.5	53.0	45.7	41.5	41.5	42.6	42.6	43.6
50°	146.4	114.2	75.8	52.0	39.5	33.2	30.1	29.1	30.1	30.1	31.1
52.5°	131.9	100.7	63.3	41.5	30.1	24.9	21.8	21.8	21.8	21.8	21.8
55°	118.4	88.2	53.0	33.2	23.9	19.7	16.6	15.6	15.6	15.6	15.6
57.5°	108.0	78.9	45.7	28.0	19.7	15.6	13.5	12.5	12.5	12.5	12.5
60°	97.6	69.6	39.5	22.9	15.6	13.5	11.4	9.4	9.4	9.4	9.4
62.5°	87.2	60.2	33.2	19.7	13.5	10.4	9.4	7.3	7.3	7.3	7.3
65°	75.8	52.0	28.0	15.6	10.4	8.3	7.3	6.2	6.2	5.2	5.2
67.5°	62.3	41.5	22.9	13.5	9.4	7.3	6.2	5.2	4.1	4.1	4.1
70°	47.7	31.1	17.6	10.4	7.3	6.2	4.1	4.1	3.1	3.1	3.1
72.5°	34.2	21.8	12.5	8.3	5.2	4.1	4.1	3.1	3.1	3.1	2.1
75°	21.8	14.5	8.3	5.2	4.1	3.1	3.1	2.1	2.1	2.1	2.1
77.5°	13.5	9.4	6.2	4.1	3.1	2.1	2.1	2.1	1.0	1.0	1.0
80°	7.3	5.2	3.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0
82.5°	4.1	3.1	2.1	1.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0
85°	2.1	1.0	1.0	1.0	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



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0	893.0
2.5°	900.3	905.5	902.4	904.5	913.8	909.6	916.9	916.9	925.3	925.3	919.0
5°	906.5	912.8	913.8	916.9	929.4	927.3	935.6	937.6	947.0	949.1	943.9
7.5°	902.4	909.6	912.8	918.0	930.4	929.4	938.7	942.9	951.2	954.3	950.1
10°	882.7	890.9	895.1	900.3	913.8	912.8	923.1	928.4	935.6	938.7	935.6
12.5°	856.7	866.0	870.2	875.4	888.9	887.9	898.3	903.4	909.6	913.8	910.7
15°	827.6	833.8	841.1	846.3	858.8	857.7	868.2	873.3	878.5	883.7	880.5
17.5°	790.2	796.5	803.7	807.9	820.3	820.3	828.7	832.8	840.1	844.2	840.1
20°	747.6	755.0	760.1	763.2	774.7	773.6	782.0	786.1	792.3	795.4	792.3
22.5°	703.0	709.2	713.4	715.5	724.9	723.8	730.0	734.1	739.4	742.5	739.4
25°	652.1	656.3	659.4	660.4	668.8	666.7	675.0	675.0	679.1	682.3	679.1
27.5°	586.7	589.8	591.9	590.8	597.1	593.9	601.2	596.1	604.3	606.4	603.3
30°	502.6	504.6	506.7	502.6	506.7	502.6	508.8	501.6	508.8	512.0	508.8
32.5°	402.9	402.9	405.0	399.8	401.9	397.7	400.8	398.8	400.8	403.9	400.8
35°	296.0	296.0	298.0	295.0	296.0	291.8	293.9	291.8	292.8	295.0	293.9
37.5°	205.6	204.5	207.7	205.6	206.6	204.5	205.6	203.5	204.5	205.6	204.5
40°	139.2	139.2	141.2	140.2	141.2	140.2	141.2	140.2	140.2	140.2	139.2
42.5°	93.5	94.5	95.6	95.6	96.6	95.6	96.6	95.6	95.6	95.6	94.5
45°	64.4	64.4	65.5	65.5	66.5	66.5	66.5	65.5	65.5	65.5	65.5
47.5°	44.6	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	45.7	44.6
50°	31.1	32.2	32.2	32.2	32.2	32.2	32.2	31.1	31.1	31.1	31.1
52.5°	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9	21.8	21.8
55°	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
57.5°	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
60°	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
62.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
65°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
67.5°	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
70°	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1
72.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
75°	2.1	2.1	2.1	2.1	2.1	1.0	1.0	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
80°	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	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	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):**

	165°	170°	175°	180°
0°	893.0	893.0	893.0	893.0
2.5°	915.9	924.2	921.1	921.1
5°	940.8	950.1	948.1	947.0
7.5°	948.1	956.4	954.3	954.3
10°	933.5	941.9	939.8	939.8
12.5°	909.6	916.9	915.9	914.9
15°	879.5	886.8	885.8	884.8
17.5°	839.1	847.3	846.3	845.3
20°	790.2	797.5	797.5	796.5
22.5°	737.2	742.5	743.5	741.5
25°	677.0	681.2	681.2	679.1
27.5°	601.2	604.3	604.3	603.3
30°	507.7	508.8	509.9	507.7
32.5°	398.8	398.8	400.8	398.8
35°	290.7	290.7	292.8	291.8
37.5°	202.5	202.5	203.5	202.5
40°	138.1	138.1	139.2	138.1
42.5°	94.5	93.5	94.5	94.5
45°	64.4	64.4	65.5	64.4
47.5°	44.6	44.6	44.6	44.6
50°	31.1	31.1	31.1	31.1
52.5°	21.8	21.8	21.8	21.8
55°	15.6	16.6	16.6	16.6
57.5°	11.4	12.5	12.5	12.5
60°	9.4	9.4	9.4	9.4
62.5°	7.3	7.3	7.3	7.3
65°	5.2	5.2	5.2	5.2
67.5°	4.1	4.1	4.1	4.1
70°	3.1	3.1	3.1	3.1
72.5°	2.1	2.1	2.1	2.1
75°	1.0	1.0	1.0	1.0
77.5°	1.0	1.0	1.0	1.0
80°	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0



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















(END OF REPORT)