

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: P135883

Luminaire Tested: **LD6A10D010TE ERM6A10840 6LM121H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135883
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 ERM6A10840 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 4000K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1187.0 lumens
Efficiency: N/A
Efficacy: 84.8 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

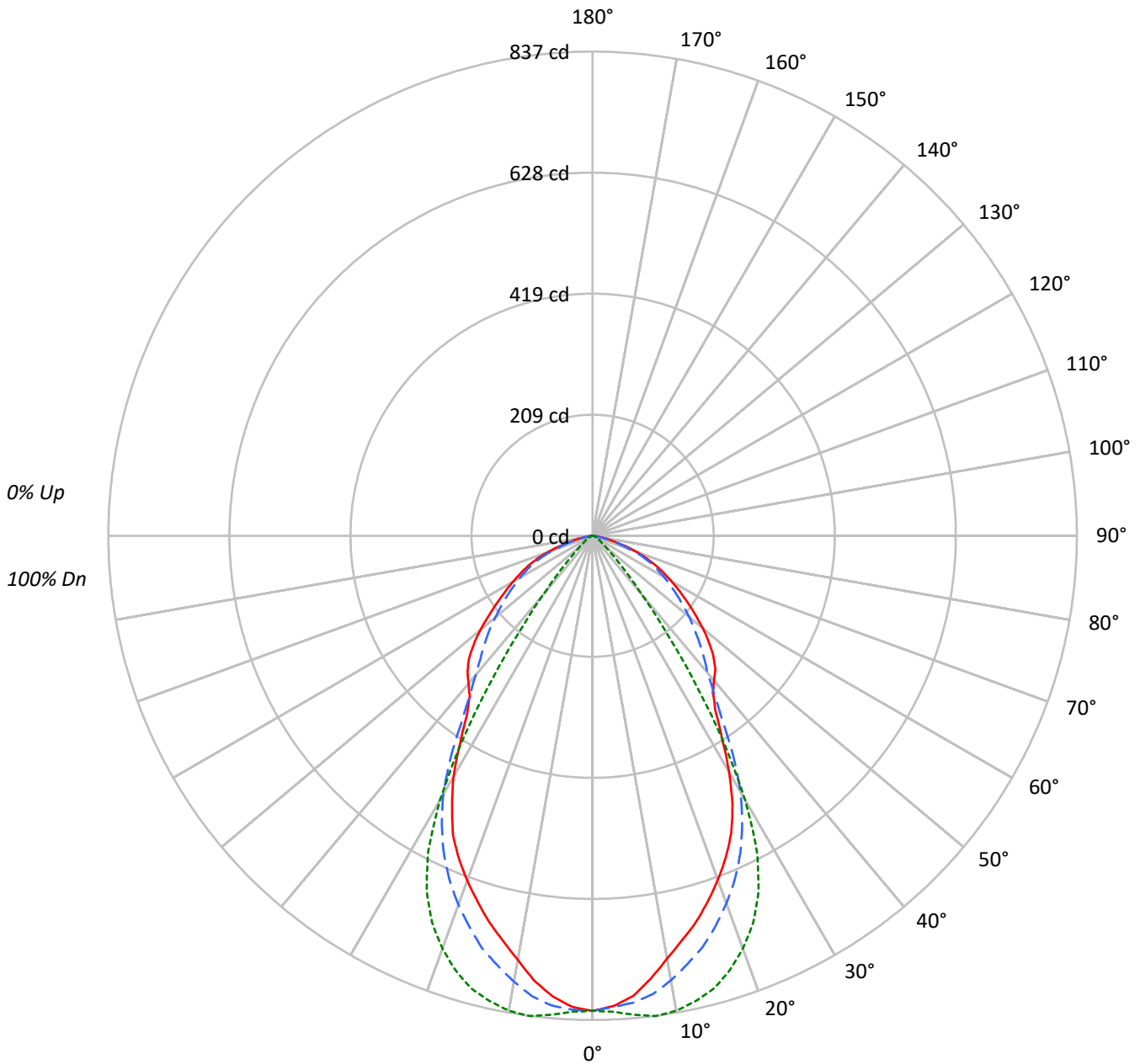
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	105	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°	53582	53582	53582
5°	52320	54435	52320
10°	49149	55230	49308
15°	46672	54716	46672
20°	43927	52709	44010
25°	40808	48849	41082
30°	35512	39716	36258
35°	29444	24013	30137
40°	27790	11199	28420
45°	27246	5268	27928
50°	25181	2771	25689
55°	22715	1831	22862
60°	20564	1461	20720
65°	18386	1142	18957
70°	15146	954	15622
75°	10007	630	10007
80°	5598	451	5598
85°	3743	0	2770



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.6	6.5
10°-20°	207.8	17.5
20°-30°	277.8	23.4
30°-40°	229.7	19.4
40°-50°	164.8	13.9
50°-60°	121.1	10.2
60°-70°	78.2	6.6
70°-80°	27.7	2.3
80°-90°	3.2	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°	562.2	47.4
0°-40°	791.9	66.7
0°-60°	1077.9	90.8
0°-90°	1187.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1187.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	821	821	821	821	821	
5°	799	810	831	815	799	74
15°	691	736	810	738	691	194
25°	567	604	679	608	571	258
35°	370	392	302	396	378	238
45°	295	260	57	264	303	226
55°	200	177	16	180	201	179
65°	119	110	7	112	123	117
75°	40	32	2	32	40	45
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°	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3
2.5°	813.8	807.6	812.6	807.6	808.8	813.8	815.1	817.5	818.8	815.1	815.1
5°	798.9	792.7	798.9	794.0	796.4	802.6	803.9	808.8	811.3	810.1	812.6
7.5°	771.6	766.7	772.9	769.1	772.9	781.6	785.3	791.5	796.4	798.9	802.6
10°	741.9	736.9	743.1	739.4	745.6	755.5	759.2	766.7	774.1	780.3	786.5
12.5°	715.8	710.8	714.6	713.3	719.5	728.2	734.4	743.1	751.8	758.0	766.7
15°	691.0	686.0	691.0	688.5	693.5	703.4	709.6	718.3	728.2	735.7	745.6
17.5°	662.5	657.5	661.2	660.0	664.9	673.6	679.8	688.5	698.4	707.1	717.0
20°	632.7	627.7	631.4	629.0	633.9	643.9	648.8	658.7	667.4	676.1	684.8
22.5°	601.7	596.7	601.7	598.0	605.4	611.6	616.6	626.5	633.9	642.6	650.1
25°	566.9	562.0	565.7	563.2	568.2	575.6	579.3	589.3	595.5	604.2	611.6
27.5°	523.5	517.3	524.8	519.8	526.0	532.2	535.9	544.6	552.1	559.5	565.7
30°	471.4	466.5	473.9	470.2	477.6	482.6	487.5	496.2	502.4	511.1	512.4
32.5°	416.8	414.3	420.6	418.1	425.5	430.5	434.2	442.9	447.8	452.8	449.1
35°	369.7	367.2	373.4	372.2	378.4	382.1	385.8	390.8	390.8	392.0	382.1
37.5°	341.2	339.9	344.9	343.6	348.6	352.3	352.3	353.6	351.1	344.9	330.0
40°	326.3	325.0	328.7	327.5	331.2	332.5	331.2	328.7	321.3	308.9	289.1
42.5°	313.9	311.4	313.9	312.6	315.1	316.3	312.6	308.9	299.0	284.1	260.5
45°	295.3	292.8	296.5	294.0	296.5	296.5	292.8	287.8	276.6	260.5	235.7
47.5°	272.9	270.4	274.2	271.7	274.2	274.2	270.4	265.5	254.3	238.2	213.4
50°	248.1	245.6	248.1	246.9	249.4	250.6	245.6	241.9	232.0	217.1	192.3
52.5°	223.3	220.8	223.3	223.3	224.5	224.5	220.8	218.3	209.7	196.0	173.7
55°	199.7	197.2	201.0	199.7	201.0	201.0	197.2	194.8	188.6	177.4	156.3
57.5°	177.4	176.2	178.6	177.4	177.4	177.4	174.9	173.7	168.7	158.8	141.4
60°	157.6	155.1	156.3	156.3	156.3	157.6	155.1	153.8	150.1	142.7	126.5
62.5°	137.7	136.5	137.7	136.5	136.5	137.7	136.5	135.2	132.7	126.5	112.9
65°	119.1	116.6	119.1	117.9	117.9	117.9	116.6	116.6	114.1	110.4	98.0
67.5°	99.2	98.0	99.2	98.0	96.8	96.8	95.5	95.5	94.3	91.8	80.6
70°	79.4	76.9	78.2	75.7	76.9	74.4	74.4	73.2	72.0	70.7	62.0
72.5°	58.3	57.1	57.1	54.6	54.6	53.3	52.1	52.1	50.9	50.9	44.7
75°	39.7	39.7	38.5	36.0	37.2	34.7	34.7	34.7	33.5	32.3	28.5
77.5°	26.1	24.8	24.8	23.6	23.6	21.1	22.3	21.1	21.1	19.8	17.4
80°	14.9	14.9	14.9	13.6	13.6	12.4	12.4	12.4	11.2	11.2	9.9
82.5°	8.7	8.7	8.7	7.4	7.4	7.4	7.4	6.2	6.2	6.2	5.0
85°	5.0	3.7	3.7	3.7	3.7	3.7	3.7	2.5	2.5	2.5	2.5
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°	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3
2.5°	820.0	818.8	817.5	822.5	823.7	820.0	820.0	823.7	826.2	820.0	818.8
5°	818.8	820.0	820.0	826.2	829.9	827.5	827.5	831.2	833.7	826.2	823.7
7.5°	812.6	816.3	818.8	827.5	833.7	832.4	833.7	837.4	838.6	831.2	827.5
10°	798.9	803.9	808.8	820.0	827.5	828.7	829.9	833.7	836.1	826.2	821.3
12.5°	780.3	787.8	795.2	807.6	816.3	817.5	821.3	823.7	825.0	816.3	810.1
15°	759.2	769.1	776.6	790.2	800.2	802.6	806.4	810.1	810.1	800.2	794.0
17.5°	733.2	741.9	751.8	765.4	776.6	779.1	784.0	787.8	787.8	777.8	769.1
20°	700.9	710.8	719.5	734.4	746.8	750.5	755.5	759.2	759.2	750.5	739.4
22.5°	667.4	677.3	686.0	699.7	712.1	715.8	719.5	724.5	723.2	715.8	705.9
25°	627.7	636.4	642.6	656.3	666.2	669.9	674.9	678.6	677.3	669.9	661.2
27.5°	579.3	585.5	586.8	595.5	604.2	607.9	611.6	615.3	614.1	607.9	600.4
30°	523.5	522.3	516.1	516.1	519.8	522.3	524.8	527.2	526.0	522.3	517.3
32.5°	452.8	444.1	428.0	419.3	415.6	415.6	415.6	418.1	416.8	415.6	415.6
35°	377.1	358.5	333.7	315.1	305.2	301.5	299.0	301.5	300.2	301.5	306.4
37.5°	315.1	287.8	254.3	229.5	213.4	205.9	201.0	202.2	202.2	205.9	214.6
40°	269.2	234.5	197.2	166.2	147.6	137.7	131.5	131.5	132.7	137.7	148.9
42.5°	234.5	196.0	155.1	125.3	103.0	93.0	86.8	85.6	86.8	93.0	104.2
45°	207.2	166.2	125.3	93.0	74.4	63.3	58.3	57.1	58.3	64.5	74.4
47.5°	183.6	142.7	104.2	72.0	53.3	44.7	39.7	38.5	40.9	45.9	54.6
50°	163.8	124.1	85.6	57.1	40.9	32.3	28.5	27.3	28.5	33.5	40.9
52.5°	145.1	107.9	72.0	44.7	31.0	24.8	21.1	19.8	21.1	24.8	32.3
55°	130.3	95.5	62.0	37.2	24.8	19.8	17.4	16.1	17.4	19.8	26.1
57.5°	116.6	84.4	53.3	31.0	21.1	16.1	13.6	13.6	13.6	16.1	21.1
60°	104.2	74.4	45.9	26.1	17.4	13.6	11.2	11.2	11.2	13.6	17.4
62.5°	93.0	65.7	39.7	22.3	14.9	11.2	9.9	9.9	9.9	11.2	14.9
65°	79.4	55.8	33.5	18.6	12.4	9.9	8.7	7.4	8.7	9.9	12.4
67.5°	65.7	45.9	27.3	14.9	9.9	7.4	6.2	6.2	6.2	7.4	9.9
70°	50.9	36.0	21.1	11.2	7.4	6.2	5.0	5.0	5.0	6.2	7.4
72.5°	34.7	24.8	14.9	8.7	6.2	5.0	3.7	3.7	3.7	5.0	6.2
75°	22.3	16.1	9.9	6.2	3.7	3.7	2.5	2.5	2.5	3.7	3.7
77.5°	13.6	9.9	6.2	3.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5
80°	7.4	6.2	3.7	2.5	2.5	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	3.7	3.7	2.5	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°	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3	821.3
2.5°	818.8	821.3	822.5	817.5	818.8	820.0	812.6	813.8	810.1	817.5	813.8
5°	822.5	823.7	825.0	817.5	816.3	815.1	806.4	805.1	800.2	806.4	802.6
7.5°	823.7	821.3	821.3	810.1	806.4	802.6	791.5	787.8	781.6	784.0	779.1
10°	817.5	812.6	808.8	795.2	789.0	782.8	769.1	764.2	755.5	756.7	750.5
12.5°	803.9	797.7	791.5	776.6	769.1	760.5	746.8	739.4	730.7	730.7	723.2
15°	786.5	779.1	771.6	756.7	746.8	738.1	722.0	714.6	705.9	704.6	698.4
17.5°	761.7	753.0	745.6	728.2	718.3	708.4	693.5	684.8	676.1	676.1	668.7
20°	731.9	722.0	713.3	697.2	687.3	678.6	661.2	653.8	646.3	645.1	638.9
22.5°	697.2	687.3	679.8	664.9	653.8	645.1	630.2	624.0	616.6	615.3	607.9
25°	653.8	645.1	637.6	625.2	615.3	607.9	594.2	586.8	581.8	581.8	575.6
27.5°	595.5	588.0	586.8	576.9	569.4	564.5	553.3	548.3	542.1	542.1	534.7
30°	517.3	518.6	523.5	521.0	518.6	516.1	506.2	504.9	497.5	496.2	487.5
32.5°	421.8	430.5	444.1	451.6	455.3	457.8	455.3	452.8	446.6	445.4	435.4
35°	320.1	337.4	359.8	374.7	387.1	395.7	399.5	399.5	397.0	395.7	387.1
37.5°	232.0	258.0	287.8	312.6	332.5	348.6	356.0	361.0	361.0	361.0	357.3
40°	170.0	201.0	235.7	268.0	292.8	313.9	325.0	333.7	336.2	339.9	337.4
42.5°	126.5	160.0	197.2	234.5	263.0	286.6	301.5	311.4	317.6	321.3	321.3
45°	96.8	130.3	168.7	208.4	238.2	264.2	279.1	290.3	296.5	301.5	301.5
47.5°	74.4	106.7	145.1	184.8	215.9	241.9	256.8	266.7	272.9	277.9	277.9
50°	58.3	88.1	125.3	163.8	194.8	219.6	233.2	243.2	248.1	251.8	253.1
52.5°	47.1	74.4	110.4	147.6	176.2	198.5	209.7	218.3	223.3	225.8	227.0
55°	38.5	64.5	98.0	131.5	158.8	179.9	189.8	196.0	199.7	202.2	202.2
57.5°	32.3	55.8	86.8	119.1	145.1	161.3	170.0	174.9	177.4	179.9	179.9
60°	27.3	48.4	76.9	106.7	130.3	145.1	151.3	155.1	157.6	158.8	158.8
62.5°	23.6	40.9	67.0	94.3	115.4	129.0	134.0	136.5	137.7	137.7	138.9
65°	19.8	34.7	57.1	81.9	99.2	111.7	115.4	116.6	116.6	117.9	119.1
67.5°	14.9	27.3	45.9	67.0	81.9	91.8	95.5	95.5	95.5	95.5	96.8
70°	12.4	21.1	34.7	50.9	63.3	70.7	73.2	73.2	73.2	73.2	74.4
72.5°	8.7	14.9	24.8	36.0	45.9	50.9	50.9	52.1	50.9	50.9	53.3
75°	6.2	9.9	16.1	23.6	28.5	32.3	33.5	33.5	33.5	33.5	34.7
77.5°	3.7	6.2	9.9	13.6	18.6	19.8	21.1	21.1	21.1	21.1	22.3
80°	2.5	3.7	6.2	8.7	9.9	11.2	12.4	12.4	12.4	12.4	12.4
82.5°	1.2	2.5	3.7	3.7	5.0	6.2	6.2	6.2	6.2	6.2	7.4
85°	0.0	1.2	1.2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	3.7
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°	821.3	821.3	821.3	821.3
2.5°	806.4	815.1	808.8	815.1
5°	794.0	801.4	794.0	798.9
7.5°	769.1	775.4	767.9	775.4
10°	739.4	745.6	738.1	744.3
12.5°	712.1	717.0	709.6	717.0
15°	687.3	692.2	684.8	691.0
17.5°	658.7	662.5	656.3	662.5
20°	629.0	632.7	627.7	633.9
22.5°	599.2	604.2	598.0	604.2
25°	565.7	569.4	563.2	570.7
27.5°	526.0	528.5	522.3	526.0
30°	477.6	478.9	473.9	481.3
32.5°	426.8	426.8	419.3	426.8
35°	379.6	378.4	373.4	378.4
37.5°	349.8	349.8	346.1	348.6
40°	332.5	333.7	328.7	333.7
42.5°	317.6	320.1	316.3	320.1
45°	299.0	301.5	297.7	302.7
47.5°	275.4	277.9	275.4	279.1
50°	249.4	251.8	249.4	253.1
52.5°	223.3	225.8	223.3	225.8
55°	199.7	201.0	198.5	201.0
57.5°	177.4	178.6	176.2	178.6
60°	156.3	158.8	156.3	158.8
62.5°	137.7	138.9	138.9	140.2
65°	117.9	122.8	121.6	122.8
67.5°	98.0	101.7	101.7	103.0
70°	75.7	78.2	80.6	81.9
72.5°	53.3	57.1	58.3	59.5
75°	34.7	38.5	38.5	39.7
77.5°	22.3	24.8	24.8	24.8
80°	13.6	14.9	13.6	14.9
82.5°	7.4	7.4	7.4	8.7
85°	3.7	3.7	3.7	3.7
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)