

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: P135918

Luminaire Tested: **LD6A15D010TE ERM6A15935 6LM121H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P135918
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: LD6A15D010TE ERM6A15935 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 3500K
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1427.5 lumens
Efficiency: N/A
Efficacy: 63.2 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

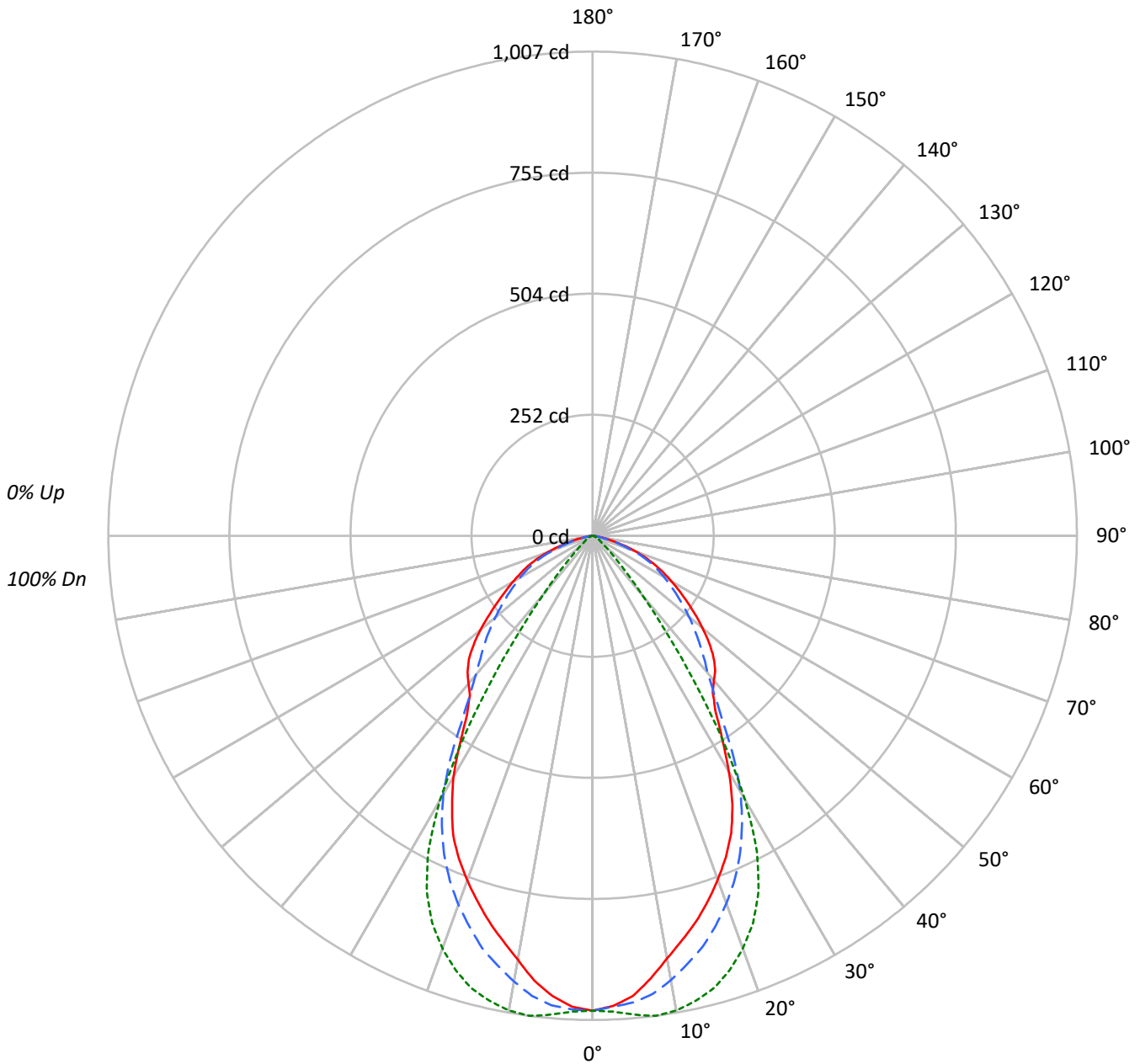
Input Watts (W): 22.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89			89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79			79
3	96	88	81	76	94	86	80	75	84	78	74	81	77	73	79	75	72	70			70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62			62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56			56
6	78	67	60	54	77	66	59	54	65	58	54	63	57	53	62	57	53	51			51
7	74	62	55	49	72	61	54	49	60	53	49	59	53	49	57	52	48	47			47
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44	43			43
9	65	54	46	42	64	53	46	41	52	46	41	51	45	41	50	45	41	39			39
10	62	50	43	38	61	50	43	38	49	43	38	48	42	38	47	42	38	36			36

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	64438	64438	64438
5°	62923	65470	62923
10°	59106	66419	59304
15°	56127	65799	56127
20°	52827	63394	52932
25°	49079	58747	49403
30°	42714	47769	43603
35°	35410	28871	36246
40°	33410	13465	34185
45°	32754	6329	33593
50°	30287	3329	30896
55°	27321	2207	27492
60°	24713	1748	24922
65°	22106	1374	22801
70°	18217	1145	18789
75°	12024	731	12024
80°	6725	564	6725
85°	4491	0	3368



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.1	6.5
10°-20°	249.9	17.5
20°-30°	334.1	23.4
30°-40°	276.2	19.4
40°-50°	198.2	13.9
50°-60°	145.7	10.2
60°-70°	94.1	6.6
70°-80°	33.3	2.3
80°-90°	3.9	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°	676.2	47.4
0°-40°	952.4	66.7
0°-60°	1296.3	90.8
0°-90°	1427.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1427.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	988	988	988	988	988	
5°	961	974	1000	980	961	89
15°	831	885	974	888	831	233
25°	682	727	816	731	686	310
35°	445	472	362	476	455	286
45°	355	313	69	318	364	271
55°	240	213	19	216	242	216
65°	143	133	9	134	148	141
75°	48	39	3	39	48	54
85°	6	3	0	3	4	7
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°	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7
2.5°	978.7	971.3	977.3	971.3	972.8	978.7	980.2	983.2	984.7	980.2	980.2
5°	960.8	953.3	960.8	954.9	957.8	965.3	966.8	972.8	975.7	974.2	977.3
7.5°	928.0	922.0	929.5	925.1	929.5	940.0	944.4	951.9	957.8	960.8	965.3
10°	892.2	886.2	893.6	889.2	896.7	908.6	913.1	922.0	930.9	938.4	945.9
12.5°	860.9	854.9	859.4	857.9	865.4	875.8	883.2	893.6	904.1	911.6	922.0
15°	831.0	825.0	831.0	828.1	834.0	845.9	853.4	863.8	875.8	884.7	896.7
17.5°	796.8	790.8	795.2	793.7	799.7	810.1	817.6	828.1	840.0	850.5	862.3
20°	760.9	754.9	759.5	756.4	762.4	774.4	780.3	792.2	802.7	813.2	823.6
22.5°	723.6	717.6	723.6	719.1	728.1	735.5	741.5	753.5	762.4	772.8	781.8
25°	681.8	675.8	680.3	677.4	683.3	692.3	696.7	708.7	716.2	726.6	735.5
27.5°	629.6	622.1	631.1	625.2	632.6	640.1	644.5	655.0	663.9	672.9	680.3
30°	567.0	561.0	569.9	565.5	574.4	580.4	586.3	596.8	604.3	614.7	616.1
32.5°	501.3	498.4	505.8	502.8	511.7	517.7	522.2	532.6	538.6	544.6	540.1
35°	444.6	441.6	449.1	447.6	455.1	459.5	464.0	470.0	470.0	471.5	459.5
37.5°	410.3	408.8	414.7	413.3	419.2	423.8	423.8	425.2	422.2	414.7	396.9
40°	392.3	390.9	395.4	393.9	398.3	399.8	398.3	395.4	386.5	371.5	347.6
42.5°	377.4	374.5	377.4	376.0	379.0	380.5	376.0	371.5	359.6	341.7	313.3
45°	355.0	352.1	356.6	353.6	356.6	356.6	352.1	346.1	332.7	313.3	283.5
47.5°	328.2	325.2	329.7	326.8	329.7	329.7	325.2	319.3	305.9	286.4	256.6
50°	298.4	295.4	298.4	296.9	299.9	301.4	295.4	290.9	279.0	261.1	231.3
52.5°	268.6	265.6	268.6	268.6	270.0	270.0	265.6	262.6	252.2	235.8	208.9
55°	240.2	237.2	241.7	240.2	241.7	241.7	237.2	234.2	226.8	213.4	188.0
57.5°	213.4	211.8	214.9	213.4	213.4	213.4	210.4	208.9	202.9	191.0	170.1
60°	189.4	186.5	188.0	188.0	188.0	189.4	186.5	185.0	180.5	171.6	152.1
62.5°	165.6	164.1	165.6	164.1	164.1	165.6	164.1	162.6	159.6	152.1	135.8
65°	143.2	140.3	143.2	141.7	141.7	141.7	140.3	140.3	137.2	132.8	117.9
67.5°	119.4	117.9	119.4	117.9	116.4	116.4	114.8	114.8	113.4	110.4	97.0
70°	95.5	92.5	94.0	91.0	92.5	89.5	89.5	88.0	86.6	85.0	74.6
72.5°	70.1	68.6	68.6	65.7	65.7	64.2	62.6	62.6	61.2	61.2	53.7
75°	47.7	47.7	46.2	43.3	44.8	41.8	41.8	41.8	40.2	38.8	34.4
77.5°	31.3	29.8	29.8	28.4	28.4	25.3	26.9	25.3	25.3	23.9	20.9
80°	17.9	17.9	17.9	16.4	16.4	14.9	14.9	14.9	13.4	13.4	12.0
82.5°	10.4	10.4	10.4	8.9	8.9	8.9	8.9	7.5	7.5	7.5	6.0
85°	6.0	4.5	4.5	4.5	4.5	4.5	4.5	2.9	2.9	2.9	2.9
87.5°	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	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°	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7
2.5°	986.2	984.7	983.2	989.2	990.6	986.2	986.2	990.6	993.7	986.2	984.7
5°	984.7	986.2	986.2	993.7	998.1	995.1	995.1	999.7	1002.6	993.7	990.6
7.5°	977.3	981.7	984.7	995.1	1002.6	1001.1	1002.6	1007.1	1008.6	999.7	995.1
10°	960.8	966.8	972.8	986.2	995.1	996.6	998.1	1002.6	1005.5	993.7	987.7
12.5°	938.4	947.4	956.4	971.3	981.7	983.2	987.7	990.6	992.2	981.7	974.2
15°	913.1	925.1	934.0	950.4	962.4	965.3	969.8	974.2	974.2	962.4	954.9
17.5°	881.8	892.2	904.1	920.5	934.0	936.9	942.9	947.4	947.4	935.5	925.1
20°	843.0	854.9	865.4	883.2	898.2	902.7	908.6	913.1	913.1	902.7	889.2
22.5°	802.7	814.6	825.0	841.4	856.3	860.9	865.4	871.3	869.8	860.9	848.9
25°	754.9	765.4	772.8	789.3	801.2	805.7	811.6	816.1	814.6	805.7	795.2
27.5°	696.7	704.2	705.7	716.2	726.6	731.1	735.5	740.0	738.5	731.1	722.2
30°	629.6	628.1	620.7	620.7	625.2	628.1	631.1	634.1	632.6	628.1	622.1
32.5°	544.6	534.1	514.7	504.2	499.8	499.8	499.8	502.8	501.3	499.8	499.8
35°	453.6	431.2	401.4	379.0	367.0	362.5	359.6	362.5	361.0	362.5	368.5
37.5°	379.0	346.1	305.9	276.0	256.6	247.7	241.7	243.2	243.2	247.7	258.2
40°	323.7	282.0	237.2	199.9	177.6	165.6	158.1	158.1	159.6	165.6	179.0
42.5°	282.0	235.8	186.5	150.7	123.9	111.9	104.4	103.0	104.4	111.9	125.3
45°	249.1	199.9	150.7	111.9	89.5	76.1	70.1	68.6	70.1	77.5	89.5
47.5°	220.9	171.6	125.3	86.6	64.2	53.7	47.7	46.2	49.3	55.2	65.7
50°	196.9	149.2	103.0	68.6	49.3	38.8	34.4	32.8	34.4	40.2	49.3
52.5°	174.5	129.8	86.6	53.7	37.3	29.8	25.3	23.9	25.3	29.8	38.8
55°	156.7	114.8	74.6	44.8	29.8	23.9	20.9	19.4	20.9	23.9	31.3
57.5°	140.3	101.5	64.2	37.3	25.3	19.4	16.4	16.4	16.4	19.4	25.3
60°	125.3	89.5	55.2	31.3	20.9	16.4	13.4	13.4	13.4	16.4	20.9
62.5°	111.9	79.1	47.7	26.9	17.9	13.4	12.0	12.0	12.0	13.4	17.9
65°	95.5	67.1	40.2	22.4	14.9	12.0	10.4	8.9	10.4	12.0	14.9
67.5°	79.1	55.2	32.8	17.9	12.0	8.9	7.5	7.5	7.5	8.9	12.0
70°	61.2	43.3	25.3	13.4	8.9	7.5	6.0	6.0	6.0	7.5	8.9
72.5°	41.8	29.8	17.9	10.4	7.5	6.0	4.5	4.5	4.5	6.0	7.5
75°	26.9	19.4	12.0	7.5	4.5	4.5	2.9	2.9	2.9	4.5	4.5
77.5°	16.4	12.0	7.5	4.5	2.9	2.9	2.9	2.9	2.9	2.9	2.9
80°	8.9	7.5	4.5	2.9	2.9	1.5	1.5	1.5	1.5	1.5	1.5
82.5°	4.5	4.5	2.9	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
85°	1.5	1.5	1.5	1.5	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°	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7	987.7
2.5°	984.7	987.7	989.2	983.2	984.7	986.2	977.3	978.7	974.2	983.2	978.7
5°	989.2	990.6	992.2	983.2	981.7	980.2	969.8	968.2	962.4	969.8	965.3
7.5°	990.6	987.7	987.7	974.2	969.8	965.3	951.9	947.4	940.0	942.9	936.9
10°	983.2	977.3	972.8	956.4	948.9	941.4	925.1	919.1	908.6	910.1	902.7
12.5°	966.8	959.3	951.9	934.0	925.1	914.6	898.2	889.2	878.7	878.7	869.8
15°	945.9	936.9	928.0	910.1	898.2	887.8	868.3	859.4	848.9	847.4	840.0
17.5°	916.0	905.6	896.7	875.8	863.8	851.9	834.0	823.6	813.2	813.2	804.2
20°	880.3	868.3	857.9	838.5	826.5	816.1	795.2	786.3	777.3	775.9	768.4
22.5°	838.5	826.5	817.6	799.7	786.3	775.9	757.9	750.4	741.5	740.0	731.1
25°	786.3	775.9	766.9	752.0	740.0	731.1	714.7	705.7	699.8	699.8	692.3
27.5°	716.2	707.2	705.7	693.8	684.9	678.9	665.4	659.4	652.0	652.0	643.0
30°	622.1	623.6	629.6	626.6	623.6	620.7	608.7	607.2	598.3	596.8	586.3
32.5°	507.3	517.7	534.1	543.1	547.5	550.6	547.5	544.6	537.1	535.7	523.7
35°	384.9	405.8	432.7	450.6	465.5	476.0	480.4	480.4	477.4	476.0	465.5
37.5°	279.0	310.3	346.1	376.0	399.8	419.2	428.2	434.2	434.2	434.2	429.6
40°	204.4	241.7	283.5	322.3	352.1	377.4	390.9	401.4	404.3	408.8	405.8
42.5°	152.1	192.5	237.2	282.0	316.3	344.6	362.5	374.5	381.9	386.5	386.5
45°	116.4	156.7	202.9	250.7	286.4	317.7	335.7	349.2	356.6	362.5	362.5
47.5°	89.5	128.3	174.5	222.3	259.6	290.9	308.8	320.8	328.2	334.2	334.2
50°	70.1	105.9	150.7	196.9	234.2	264.1	280.4	292.4	298.4	302.8	304.4
52.5°	56.7	89.5	132.8	177.6	211.8	238.7	252.2	262.6	268.6	271.5	273.0
55°	46.2	77.5	117.9	158.1	191.0	216.3	228.3	235.8	240.2	243.2	243.2
57.5°	38.8	67.1	104.4	143.2	174.5	194.0	204.4	210.4	213.4	216.3	216.3
60°	32.8	58.2	92.5	128.3	156.7	174.5	182.0	186.5	189.4	191.0	191.0
62.5°	28.4	49.3	80.6	113.4	138.8	155.2	161.2	164.1	165.6	165.6	167.1
65°	23.9	41.8	68.6	98.5	119.4	134.3	138.8	140.3	140.3	141.7	143.2
67.5°	17.9	32.8	55.2	80.6	98.5	110.4	114.8	114.8	114.8	114.8	116.4
70°	14.9	25.3	41.8	61.2	76.1	85.0	88.0	88.0	88.0	88.0	89.5
72.5°	10.4	17.9	29.8	43.3	55.2	61.2	61.2	62.6	61.2	61.2	64.2
75°	7.5	12.0	19.4	28.4	34.4	38.8	40.2	40.2	40.2	40.2	41.8
77.5°	4.5	7.5	12.0	16.4	22.4	23.9	25.3	25.3	25.3	25.3	26.9
80°	2.9	4.5	7.5	10.4	12.0	13.4	14.9	14.9	14.9	14.9	14.9
82.5°	1.5	2.9	4.5	4.5	6.0	7.5	7.5	7.5	7.5	7.5	8.9
85°	0.0	1.5	1.5	2.9	2.9	2.9	2.9	2.9	2.9	2.9	4.5
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°	987.7	987.7	987.7	987.7
2.5°	969.8	980.2	972.8	980.2
5°	954.9	963.8	954.9	960.8
7.5°	925.1	932.5	923.5	932.5
10°	889.2	896.7	887.8	895.2
12.5°	856.3	862.3	853.4	862.3
15°	826.5	832.5	823.6	831.0
17.5°	792.2	796.8	789.3	796.8
20°	756.4	760.9	754.9	762.4
22.5°	720.6	726.6	719.1	726.6
25°	680.3	684.9	677.4	686.3
27.5°	632.6	635.6	628.1	632.6
30°	574.4	575.9	569.9	578.8
32.5°	513.3	513.3	504.2	513.3
35°	456.5	455.1	449.1	455.1
37.5°	420.7	420.7	416.3	419.2
40°	399.8	401.4	395.4	401.4
42.5°	381.9	384.9	380.5	384.9
45°	359.6	362.5	358.1	364.1
47.5°	331.2	334.2	331.2	335.7
50°	299.9	302.8	299.9	304.4
52.5°	268.6	271.5	268.6	271.5
55°	240.2	241.7	238.7	241.7
57.5°	213.4	214.9	211.8	214.9
60°	188.0	191.0	188.0	191.0
62.5°	165.6	167.1	167.1	168.6
65°	141.7	147.7	146.3	147.7
67.5°	117.9	122.3	122.3	123.9
70°	91.0	94.0	97.0	98.5
72.5°	64.2	68.6	70.1	71.7
75°	41.8	46.2	46.2	47.7
77.5°	26.9	29.8	29.8	29.8
80°	16.4	17.9	16.4	17.9
82.5°	8.9	8.9	8.9	10.4
85°	4.5	4.5	4.5	4.5
87.5°	1.5	1.5	1.5	1.5
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)