

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: P136962

Luminaire Tested: **LDSQ6A10D010TE ESQ6A10935 6LSQLWW1LI**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P136962
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P23675)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LDSQ6A10D010TE ESQ6A10935 6LSQLWW1LI
Description: PORTFOLIO LED SQUARE 6 INCH 50 DEGREE CUTOFF RECESSED SINGLE WALL
WASH LUMINAIRE
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: 829.6 lumens
Efficiency: N/A
Efficacy: 59.3 lumens/watt
Spacing Criteria (0/90/45): 1.03 / 1.06 / 1.13
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
CIE Type: Direct

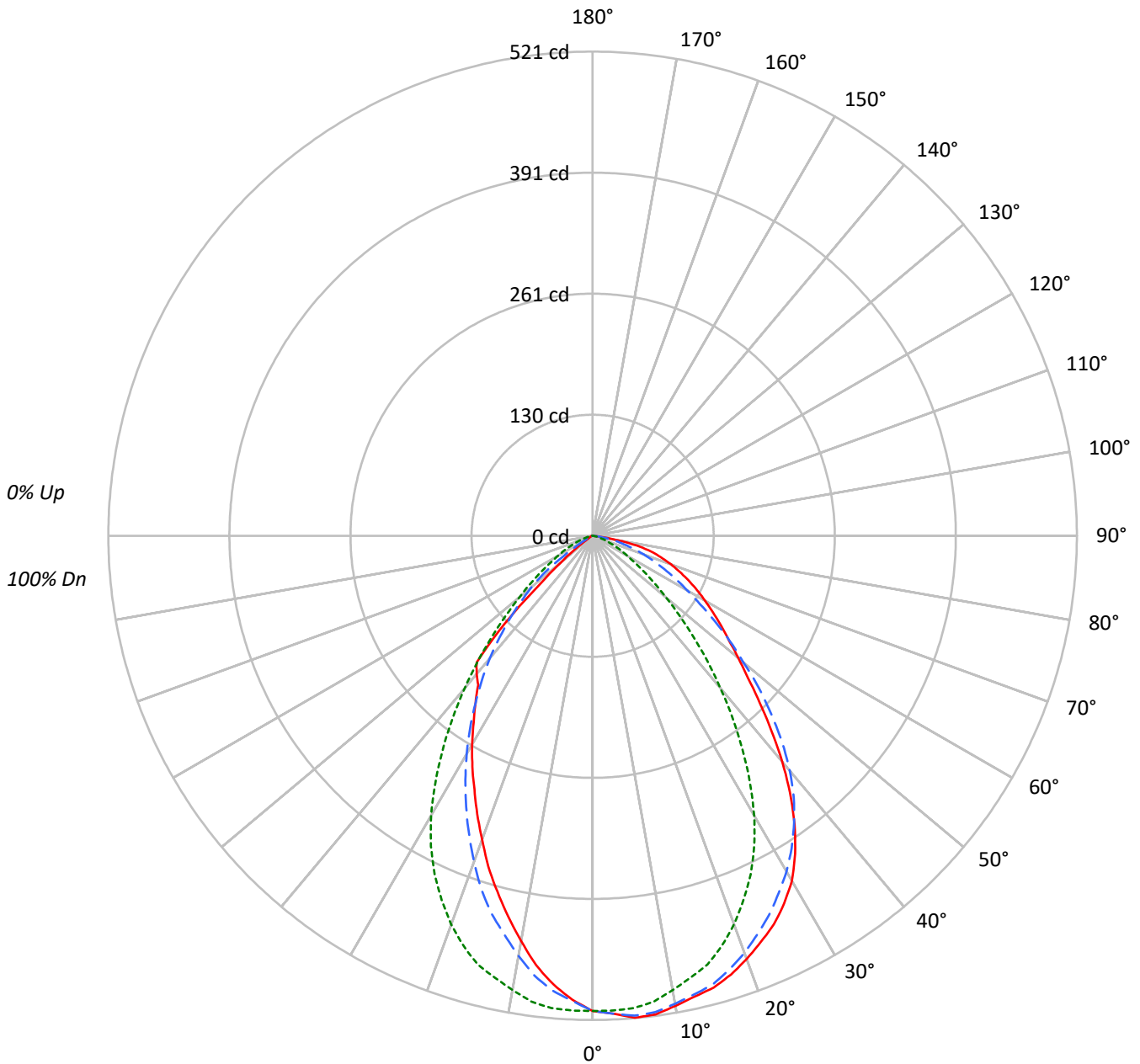
Input Watts (W): 14
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	83	78	74	81	76	73	78	75	71	70																			
4	89	80	72	67	87	78	71	66	76	70	65	74	69	65	72	67	64	62																			
5	83	72	65	59	81	71	64	59	69	63	58	68	62	58	66	61	57	55																			
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50																			
7	73	61	53	48	71	60	53	48	59	52	48	58	52	47	56	51	47	45																			
8	68	56	49	44	67	56	49	44	55	48	43	53	47	43	52	47	43	41																			
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39	38																			
10	61	49	42	37	59	48	41	37	47	41	37	46	41	37	46	40	36	35																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	22014	22014	22014
5°	22500	22047	20944
10°	22455	21698	19359
15°	22430	21289	17665
20°	22204	20389	15922
25°	21920	19102	14300
30°	21318	17276	12886
35°	19915	14785	11548
40°	17834	12017	10909
45°	15496	9267	8141
50°	13698	6852	2961
55°	12648	5059	698
60°	12004	3703	405
65°	11604	2720	234
70°	11267	1901	151
75°	10830	1164	200
80°	6620	570	298
85°	0	0	593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	5.8
10°-20°	129.8	15.6
20°-30°	178.8	21.6
30°-40°	183.7	22.1
40°-50°	143.5	17.3
50°-60°	80.7	9.7
60°-70°	43.9	5.3
70°-80°	19.6	2.4
80°-90°	1.8	0.2
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°	356.3	42.9
0°-40°	540.0	65.1
0°-60°	764.2	92.1
0°-90°	829.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	829.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	511	511	511	511	511	
5°	521	518	510	492	485	49
15°	503	500	478	421	396	142
25°	461	450	402	322	301	212
35°	379	378	281	220	220	235
45°	254	272	152	126	134	198
55°	168	160	67	38	9	152
65°	114	85	27	4	2	113
75°	65	34	7	1	1	66
85°	0	1	0	1	1	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°	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3
2.5°	514.8	518.3	517.1	519.5	520.6	520.6	520.6	516.0	517.1	514.8	514.8
5°	520.6	523.0	521.8	524.1	525.3	525.3	525.3	520.6	521.8	518.3	518.3
7.5°	519.5	521.8	520.6	523.0	525.3	525.3	524.1	520.6	520.6	517.1	517.1
10°	513.6	516.0	516.0	517.1	519.5	519.5	518.3	514.8	514.8	511.3	511.3
12.5°	507.8	511.3	510.1	512.5	513.6	513.6	513.6	509.0	509.0	505.5	505.5
15°	503.2	506.6	505.5	507.8	509.0	509.0	507.8	504.3	503.2	499.7	499.7
17.5°	495.1	498.6	496.3	498.6	500.9	499.7	498.6	495.1	493.9	489.3	489.3
20°	484.6	486.9	485.8	486.9	489.3	489.3	488.1	483.4	482.3	477.6	476.4
22.5°	473.0	475.3	474.1	475.3	477.6	476.4	475.3	470.7	468.4	463.7	462.5
25°	461.4	463.7	462.5	463.7	466.0	464.9	462.5	457.9	455.5	449.7	448.5
27.5°	446.2	448.5	447.4	449.7	452.0	450.9	448.5	443.9	440.5	433.5	432.3
30°	428.8	431.2	430.0	431.2	433.5	433.5	431.2	427.7	424.2	417.2	413.7
32.5°	405.6	409.1	407.9	411.4	413.7	413.7	413.7	409.1	405.6	398.6	393.9
35°	378.9	382.3	381.2	384.6	388.1	390.5	391.6	389.3	387.0	377.7	371.9
37.5°	348.7	352.1	351.0	355.6	360.2	363.7	366.1	364.9	363.7	355.6	348.7
40°	317.3	319.6	319.6	323.0	330.0	334.7	338.2	338.2	337.0	330.0	324.2
42.5°	284.8	288.2	288.2	292.8	298.6	304.5	306.8	309.1	310.3	302.1	296.3
45°	254.5	256.9	256.9	260.3	267.3	273.1	276.6	278.9	280.1	271.9	266.1
47.5°	226.7	228.9	230.1	234.7	238.2	242.9	246.4	247.5	248.7	242.9	235.9
50°	204.5	205.7	206.8	210.3	212.7	216.2	218.5	219.7	219.7	211.5	205.7
52.5°	184.8	185.9	185.9	189.4	191.8	194.1	194.1	194.1	192.9	185.9	176.6
55°	168.5	169.6	169.6	172.0	173.1	174.3	173.1	170.8	168.5	160.4	151.1
57.5°	153.4	154.6	154.6	155.7	155.7	155.7	153.4	151.1	146.4	137.1	129.0
60°	139.4	140.6	140.6	141.7	141.7	140.6	137.1	132.5	126.7	117.4	109.2
62.5°	126.7	127.9	127.9	127.9	127.9	125.5	120.9	115.0	108.0	101.1	93.0
65°	113.9	115.0	113.9	115.0	113.9	110.4	104.6	98.8	91.8	84.8	77.8
67.5°	101.1	102.3	101.1	101.1	98.8	95.3	89.5	83.6	77.8	70.9	63.9
70°	89.5	89.5	88.3	87.1	83.6	80.1	74.4	69.8	63.9	58.1	52.3
72.5°	76.7	77.8	75.6	73.3	69.8	65.1	60.4	55.8	51.1	45.3	40.7
75°	65.1	65.1	61.6	59.3	55.8	52.3	47.6	43.0	38.4	33.7	30.2
77.5°	48.8	48.8	45.3	44.2	40.7	38.4	33.7	30.2	26.7	24.4	20.9
80°	26.7	26.7	25.6	24.4	23.2	22.1	19.7	18.6	16.2	14.0	11.7
82.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	5.8	4.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	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):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3
2.5°	513.6	516.0	512.5	516.0	514.8	507.8	514.8	511.3	509.0	511.3	507.8
5°	517.1	518.3	514.8	518.3	516.0	509.0	513.6	510.1	507.8	509.0	504.3
7.5°	516.0	517.1	513.6	516.0	512.5	505.5	510.1	505.5	502.1	502.1	496.3
10°	510.1	511.3	506.6	509.0	505.5	497.4	502.1	496.3	492.8	490.4	484.6
12.5°	504.3	504.3	500.9	502.1	498.6	490.4	492.8	486.9	482.3	479.9	471.9
15°	497.4	497.4	493.9	495.1	490.4	482.3	484.6	477.6	471.9	468.4	459.0
17.5°	486.9	486.9	482.3	483.4	477.6	469.5	471.9	462.5	456.7	450.9	441.6
20°	473.0	471.9	467.2	467.2	461.4	452.0	454.4	445.0	437.0	431.2	420.7
22.5°	459.0	456.7	452.0	450.9	443.9	433.5	434.7	424.2	416.0	409.1	397.4
25°	442.8	439.3	433.5	431.2	424.2	413.7	413.7	402.1	393.9	384.6	373.1
27.5°	426.5	421.8	413.7	410.3	400.9	389.3	388.1	376.6	367.2	357.9	345.2
30°	406.8	400.9	390.5	385.8	375.4	362.6	359.1	347.5	337.0	326.5	316.1
32.5°	384.6	377.7	366.1	359.1	346.3	332.4	328.9	315.0	305.6	295.1	283.6
35°	361.4	352.1	339.4	330.0	316.1	302.1	295.1	281.3	271.9	261.4	252.2
37.5°	337.0	325.4	310.3	299.8	283.6	270.8	261.4	247.5	238.2	228.9	220.8
40°	311.5	297.5	281.3	267.3	251.0	238.2	227.8	213.8	205.7	197.6	190.6
42.5°	283.6	268.4	251.0	235.9	218.5	205.7	194.1	182.5	174.3	166.2	160.4
45°	253.4	238.2	219.7	204.5	187.1	174.3	163.9	152.2	145.2	138.3	133.7
47.5°	222.0	208.0	189.4	174.3	158.1	146.4	136.0	125.5	118.5	113.9	110.4
50°	191.8	177.8	161.6	146.4	131.3	120.9	111.5	102.3	96.5	91.8	88.3
52.5°	163.9	151.1	136.0	123.2	109.2	98.8	90.6	83.6	77.8	73.3	69.8
55°	139.4	127.9	113.9	102.3	90.6	81.3	74.4	67.4	62.8	56.9	53.4
57.5°	117.4	106.9	95.3	84.8	73.3	66.3	60.4	53.4	48.8	45.3	40.7
60°	100.0	90.6	79.0	69.8	60.4	54.6	48.8	43.0	39.5	34.9	31.4
62.5°	83.6	75.6	66.3	56.9	48.8	44.2	39.5	34.9	30.2	26.7	23.2
65°	69.8	61.6	53.4	45.3	39.5	34.9	31.4	26.7	23.2	19.7	16.2
67.5°	56.9	49.9	41.9	36.0	31.4	27.9	24.4	19.7	17.4	14.0	11.7
70°	45.3	39.5	32.5	27.9	24.4	20.9	17.4	15.1	11.7	9.3	7.0
72.5°	34.9	30.2	24.4	20.9	18.6	15.1	12.8	10.5	8.2	7.0	4.7
75°	25.6	20.9	17.4	15.1	12.8	10.5	8.2	7.0	5.8	3.5	2.3
77.5°	17.4	14.0	11.7	9.3	8.2	7.0	4.7	4.7	3.5	2.3	1.2
80°	10.5	7.0	5.8	4.7	3.5	3.5	2.3	2.3	1.2	1.2	0.0
82.5°	3.5	2.3	1.2	1.2	1.2	1.2	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):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3	511.3
2.5°	503.2	505.5	503.2	505.5	505.5	500.9	502.1	502.1	498.6	498.6	499.7
5°	498.6	498.6	496.3	497.4	497.4	491.6	491.6	491.6	486.9	485.8	485.8
7.5°	490.4	489.3	484.6	484.6	483.4	477.6	475.3	474.1	469.5	468.4	467.2
10°	477.6	475.3	469.5	468.4	466.0	459.0	455.5	453.2	448.5	446.2	446.2
12.5°	463.7	461.4	454.4	452.0	447.4	439.3	435.8	433.5	426.5	423.0	423.0
15°	449.7	446.2	438.2	433.5	428.8	420.7	416.0	412.5	405.6	402.1	400.9
17.5°	431.2	426.5	418.3	412.5	406.8	398.6	393.9	388.1	382.3	378.9	376.6
20°	409.1	403.3	392.8	388.1	382.3	373.1	367.2	363.7	356.7	353.2	352.1
22.5°	385.8	378.9	368.4	362.6	355.6	347.5	344.0	338.2	332.4	330.0	327.7
25°	360.2	354.4	342.8	337.0	330.0	321.9	318.5	313.8	309.1	308.0	304.5
27.5°	332.4	326.5	317.3	310.3	304.5	296.3	292.8	289.4	284.8	283.6	282.4
30°	303.3	297.5	288.2	282.4	276.6	270.8	267.3	263.8	260.3	260.3	260.3
32.5°	273.1	267.3	260.3	254.5	249.9	245.2	242.9	239.4	237.0	238.2	239.4
35°	241.7	238.2	231.2	227.8	224.3	219.7	218.5	216.2	213.8	215.0	215.0
37.5°	211.5	209.2	204.5	201.0	198.7	195.3	195.3	192.9	190.6	192.9	192.9
40°	182.5	180.1	176.6	175.5	173.1	172.0	170.8	170.8	169.6	172.0	176.6
42.5°	154.6	153.4	151.1	149.9	148.7	147.6	148.7	148.7	151.1	159.2	168.5
45°	129.0	129.0	126.7	126.7	125.5	125.5	126.7	130.2	137.1	146.4	147.6
47.5°	105.8	105.8	103.5	103.5	103.5	103.5	108.0	113.9	112.7	108.0	97.6
50°	84.8	83.6	82.5	82.5	82.5	84.8	87.1	80.1	70.9	60.4	54.6
52.5°	66.3	63.9	62.8	62.8	63.9	63.9	56.9	46.5	39.5	36.0	31.4
55°	49.9	47.6	45.3	45.3	44.2	38.4	30.2	26.7	20.9	18.6	16.2
57.5°	36.0	34.9	31.4	29.0	24.4	19.7	16.2	11.7	10.5	8.2	7.0
60°	26.7	24.4	20.9	17.4	14.0	10.5	7.0	5.8	5.8	4.7	4.7
62.5°	19.7	17.4	14.0	10.5	7.0	4.7	4.7	4.7	3.5	3.5	3.5
65°	14.0	11.7	8.2	5.8	3.5	3.5	3.5	3.5	3.5	2.3	2.3
67.5°	9.3	7.0	3.5	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
70°	5.8	3.5	1.2	2.3	1.2	1.2	2.3	2.3	2.3	2.3	1.2
72.5°	2.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
75°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
85°	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.2	1.2	1.2
87.5°	0.0	0.0	0.0	0.0	0.0	1.2	1.2	0.0	0.0	0.0	1.2
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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CATALOG NUMBER: LDSQ6A10D010TE ESQ6A10935 6LSQLWW1LI

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	511.3	511.3	511.3	511.3
2.5°	497.4	497.4	498.6	499.7
5°	483.4	484.6	484.6	484.6
7.5°	464.9	464.9	466.0	466.0
10°	441.6	441.6	442.8	442.8
12.5°	419.5	418.3	419.5	419.5
15°	397.4	396.3	396.3	396.3
17.5°	373.1	371.9	371.9	373.1
20°	348.7	347.5	347.5	347.5
22.5°	324.2	324.2	324.2	324.2
25°	302.1	301.0	301.0	301.0
27.5°	280.1	280.1	280.1	280.1
30°	258.0	258.0	259.2	259.2
32.5°	238.2	238.2	238.2	238.2
35°	215.0	217.3	218.5	219.7
37.5°	194.1	197.6	201.0	202.2
40°	181.3	188.3	192.9	194.1
42.5°	175.5	181.3	183.6	184.8
45°	144.1	138.3	134.8	133.7
47.5°	88.3	80.1	75.6	74.4
50°	51.1	47.6	45.3	44.2
52.5°	27.9	24.4	23.2	23.2
55°	14.0	11.7	10.5	9.3
57.5°	5.8	5.8	5.8	5.8
60°	4.7	4.7	4.7	4.7
62.5°	3.5	3.5	3.5	3.5
65°	2.3	2.3	2.3	2.3
67.5°	2.3	2.3	2.3	2.3
70°	1.2	1.2	1.2	1.2
72.5°	1.2	1.2	1.2	1.2
75°	1.2	1.2	1.2	1.2
77.5°	1.2	1.2	1.2	1.2
80°	1.2	1.2	1.2	1.2
82.5°	1.2	1.2	0.0	1.2
85°	1.2	1.2	1.2	1.2
87.5°	0.0	1.2	0.0	1.2
90°	0.0	0.0	0.0	0.0



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













(END OF REPORT)