

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: P212693

Luminaire Tested: **LD4B10D010 EU4B10208030 4LBSWLI1**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P212693
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29201)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B10D010 EU4B10208030 4LBSWLI1
Description: PORTFOLIO 4 INCH SINGLE WALLWASH RECESSED DOWNLIGHT, WITH SPECULAR CLEAR TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 974.5 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.3 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

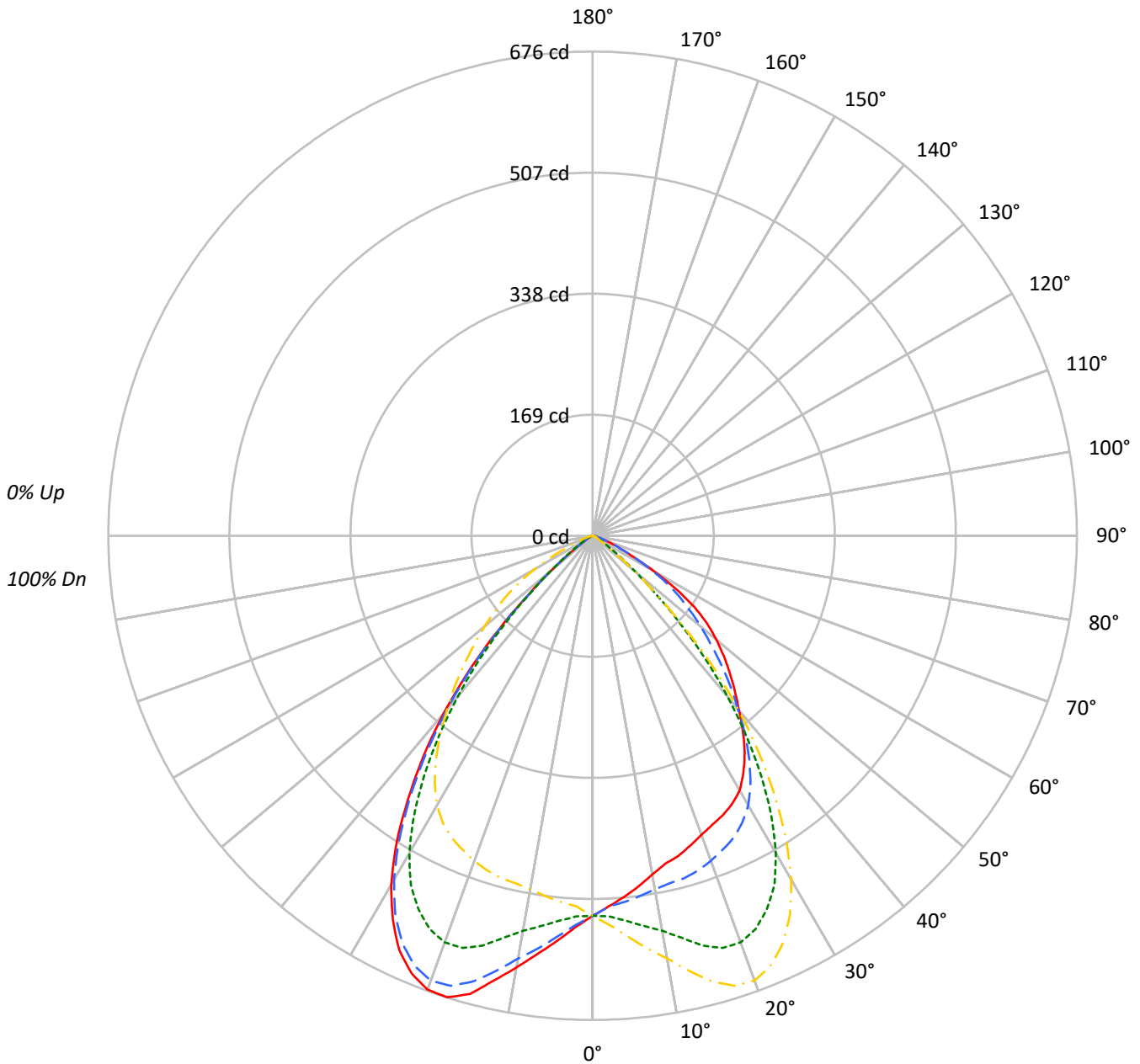
Input Watts (W): 10.05
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	112	109	106	103	110	107	104	102	103	100	99	99	97	96	95	94	93	91																			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82																			
3	98	90	84	80	96	89	83	79	86	81	78	84	80	76	81	78	75	73																			
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66																			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	60																			
6	80	70	62	57	79	69	62	57	67	61	56	66	60	56	64	59	56	54																			
7	75	64	57	52	74	63	57	52	62	56	51	61	55	51	59	55	51	49																			
8	71	59	52	47	69	59	52	47	57	51	47	56	51	47	55	50	46	45																			
9	66	55	48	43	65	54	48	43	53	47	43	52	47	43	52	46	43	41																			
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°	270°
0°	65435	65435	65435	65435
5°	62651	66824	70291	66824
10°	60132	70139	76627	70139
15°	59073	75622	84574	75622
20°	58320	79295	88497	79295
25°	58562	78310	86898	78310
30°	58495	72866	80058	72866
35°	55729	61842	67639	61842
40°	51123	47065	51912	47065
45°	47185	29951	32271	29951
50°	43176	14526	14123	14526
55°	37375	6322	4516	6322
60°	24200	3108	2072	3108
65°	12696	2043	1634	2043
70°	6816	1515	1262	1515
75°	3670	1334	1001	1334
80°	2486	994	497	994
85°	1981	991	0	991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.7	5.3
10°-20°	161.8	16.6
20°-30°	251.6	25.8
30°-40°	254.1	26.1
40°-50°	160.9	16.5
50°-60°	67.5	6.9
60°-70°	21.4	2.2
70°-80°	4.9	0.5
80°-90°	0.7	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°	465.1	47.7
0°-40°	719.2	73.8
0°-60°	947.5	97.2
0°-90°	974.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	974.5	100.0

CANDELA DISTRIBUTION:

	0°	90°	180°	270°	360°	Flux
0°	530	530	530	530	530	
5°	506	540	568	540	506	48
15°	463	592	662	592	463	130
25°	430	575	638	575	430	198
35°	370	411	449	411	370	230
45°	270	172	185	172	270	209
55°	174	29	21	29	174	150
65°	44	7	6	7	44	48
75°	8	3	2	3	8	9
85°	1	1	0	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5
2.5°	517.9	513.0	517.2	518.6	518.6	517.9	519.3	517.9	515.8	524.2	517.9
5°	506.0	502.5	506.0	507.4	508.1	508.8	510.2	510.2	509.5	517.2	513.0
7.5°	493.4	491.3	494.1	496.2	499.0	498.3	500.4	501.1	502.5	511.6	507.4
10°	480.1	478.0	481.5	482.9	486.4	487.1	488.5	490.6	493.4	502.5	501.1
12.5°	468.9	468.2	470.3	473.1	476.6	477.3	478.7	482.2	486.4	496.2	496.9
15°	462.6	461.9	464.0	466.8	469.6	471.0	472.4	477.3	481.5	492.0	494.8
17.5°	453.5	453.5	455.6	458.4	461.9	463.3	465.4	470.3	475.9	486.4	489.9
20°	444.3	445.0	446.4	449.2	452.8	454.2	456.3	461.2	467.5	478.0	482.9
22.5°	436.6	438.7	439.4	441.5	445.0	447.1	447.8	453.5	459.1	468.2	474.5
25°	430.3	433.1	433.1	434.5	438.7	439.4	440.1	445.7	450.6	459.1	465.4
27.5°	421.9	424.7	424.7	426.8	429.6	431.0	431.0	435.9	440.8	447.1	452.1
30°	410.7	412.8	412.8	413.5	416.3	417.7	417.0	421.9	425.4	429.6	434.5
32.5°	391.8	395.3	393.9	396.0	397.4	398.8	397.4	401.6	404.4	408.6	410.0
35°	370.1	372.9	370.8	372.2	375.0	375.0	374.3	377.1	378.5	380.6	381.3
37.5°	344.8	346.9	345.5	346.2	347.6	348.3	346.9	349.7	349.7	350.4	349.0
40°	317.5	321.0	318.9	318.9	320.3	321.0	318.9	320.3	321.7	318.2	315.4
42.5°	293.7	297.2	295.1	295.1	295.1	295.8	293.0	293.7	293.7	288.8	284.5
45°	270.5	273.3	271.2	269.1	269.8	270.5	267.7	267.0	264.9	259.3	253.0
47.5°	248.1	250.9	248.1	246.7	246.7	246.7	243.2	241.1	238.3	230.6	222.9
50°	225.0	227.8	225.7	224.3	222.9	222.9	220.1	217.3	213.1	205.3	196.9
52.5°	201.1	203.2	201.1	199.7	198.3	198.3	194.8	192.7	187.8	180.1	171.0
55°	173.8	175.2	173.1	171.7	171.0	171.0	168.2	166.1	161.9	155.6	147.2
57.5°	137.4	140.2	136.7	138.1	138.1	137.4	135.3	134.6	133.2	127.6	121.2
60°	98.1	98.1	97.4	100.2	99.5	100.9	99.5	100.2	100.9	96.7	92.5
62.5°	64.5	66.6	65.2	66.6	68.0	68.0	67.3	68.7	70.1	68.0	65.9
65°	43.5	43.5	43.5	44.2	44.2	44.9	44.2	44.9	45.6	44.9	43.5
67.5°	28.7	29.4	28.7	29.4	28.7	29.4	29.4	29.4	30.1	29.4	28.7
70°	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	19.6	18.9	18.2
72.5°	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
75°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
77.5°	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	2.8	3.5	2.8	2.8
82.5°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	0.7	1.4	0.7	0.7
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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5
2.5°	521.4	519.3	529.8	520.7	525.6	524.9	525.6	529.8	529.8	531.9	531.2
5°	518.6	516.5	528.4	521.4	527.0	527.0	529.1	535.5	535.5	539.7	540.4
7.5°	514.4	515.1	527.7	523.5	529.8	530.5	534.1	541.8	543.9	549.5	552.3
10°	509.5	512.3	525.6	524.2	532.6	533.3	540.4	549.5	552.3	560.0	564.9
12.5°	507.4	512.3	527.7	529.1	537.6	541.1	548.8	560.7	565.6	574.7	581.7
15°	506.7	513.7	530.5	535.5	545.3	550.2	560.7	574.7	580.3	592.2	600.6
17.5°	503.2	512.3	530.5	538.3	548.8	553.7	567.0	583.1	590.1	603.4	613.2
20°	496.9	506.7	524.9	534.8	546.0	553.0	566.3	583.1	590.1	604.1	615.3
22.5°	488.5	498.3	515.8	527.0	536.9	544.6	558.6	574.7	581.0	594.3	605.5
25°	478.0	487.8	502.5	513.7	522.8	529.8	541.8	558.6	562.8	575.4	587.3
27.5°	463.3	472.4	483.6	494.1	502.5	508.1	518.6	533.3	536.9	549.5	559.3
30°	443.6	449.2	459.1	466.1	472.4	478.0	485.7	499.0	500.4	511.6	520.7
32.5°	417.0	419.8	426.8	430.3	435.9	438.0	444.3	455.6	454.2	464.7	472.4
35°	384.8	386.2	386.2	390.4	391.8	392.5	397.4	403.7	401.6	410.7	416.3
37.5°	349.7	349.0	344.8	344.8	345.5	343.4	345.5	348.3	345.5	352.5	357.4
40°	314.0	309.8	302.1	297.9	295.8	295.1	290.9	294.4	287.3	292.3	295.8
42.5°	279.6	272.6	260.7	252.3	248.8	245.3	238.3	238.3	229.2	232.7	233.4
45°	244.6	232.7	216.6	208.9	199.7	194.1	185.0	175.9	169.6	171.7	169.6
47.5°	212.4	198.3	179.4	166.1	155.6	147.9	135.3	124.8	118.4	115.6	112.8
50°	184.3	170.3	148.6	131.8	121.2	112.1	99.5	87.6	79.9	75.7	73.6
52.5°	159.1	144.4	123.4	105.8	94.6	86.2	72.2	60.3	51.9	47.0	44.2
55°	135.3	121.9	102.3	86.2	75.7	67.3	53.3	42.1	34.3	29.4	25.9
57.5°	111.4	99.5	83.4	68.0	58.9	51.2	39.2	29.4	23.1	18.9	16.1
60°	85.5	76.4	63.1	51.2	43.5	37.1	28.0	20.3	16.1	12.6	11.2
62.5°	60.3	54.7	44.9	36.4	31.5	26.6	19.6	14.7	11.2	9.1	8.4
65°	40.6	36.4	30.8	24.5	21.0	18.2	14.0	10.5	8.4	7.0	6.3
67.5°	26.6	24.5	20.3	16.8	14.7	12.6	9.8	7.7	6.3	5.6	4.9
70°	17.5	16.1	13.3	11.2	10.5	9.1	7.0	5.6	4.9	4.2	4.2
72.5°	11.2	9.8	9.1	7.7	7.0	6.3	4.9	4.2	3.5	3.5	3.5
75°	7.0	6.3	5.6	4.9	4.9	4.2	3.5	3.5	2.8	2.8	2.8
77.5°	4.2	4.2	3.5	3.5	2.8	2.8	2.8	2.1	2.1	2.1	2.1
80°	2.8	2.8	2.1	2.1	2.1	2.1	1.4	1.4	1.4	1.4	1.4
82.5°	1.4	1.4	1.4	1.4	1.4	1.4	0.7	0.7	0.7	0.7	0.7
85°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5
2.5°	534.8	536.2	534.8	539.0	531.9	539.7	536.9	538.3	543.9	541.8	543.9
5°	545.3	548.1	548.1	553.0	546.7	555.8	553.0	555.8	561.4	561.4	564.2
7.5°	558.6	562.1	563.5	568.4	562.1	573.3	570.5	574.0	581.0	581.0	583.1
10°	572.6	576.8	579.6	585.2	578.2	590.8	588.0	592.9	599.2	599.9	603.4
12.5°	590.1	595.7	599.2	604.1	599.2	611.8	609.0	613.9	622.4	623.1	627.3
15°	609.7	616.8	621.0	626.6	621.0	635.0	632.2	637.8	644.1	646.9	651.1
17.5°	622.4	630.8	634.3	640.6	635.0	649.0	645.5	653.2	658.8	660.2	665.1
20°	624.5	632.2	637.1	642.0	637.1	651.1	647.6	653.9	660.9	662.3	665.8
22.5°	615.3	621.7	627.3	631.5	627.3	641.3	636.4	643.4	649.7	651.1	653.9
25°	594.3	602.0	607.6	611.1	606.9	620.3	616.0	622.4	628.0	630.8	631.5
27.5°	564.9	571.9	577.5	579.6	576.8	589.4	583.8	591.5	596.4	597.8	599.9
30°	524.9	531.2	536.9	538.3	536.2	545.3	542.5	549.5	554.4	555.8	557.2
32.5°	475.9	482.2	485.7	487.1	485.0	494.1	491.3	496.9	502.5	502.5	502.5
35°	420.5	426.1	428.2	432.4	427.5	436.6	433.8	438.7	443.6	443.6	444.3
37.5°	360.9	365.1	366.5	370.8	365.8	374.3	372.2	376.4	380.6	379.9	381.3
40°	297.2	301.4	302.8	306.3	302.1	309.1	307.7	311.9	315.4	315.4	315.4
42.5°	235.5	238.3	238.3	241.8	237.6	243.9	243.9	246.7	250.2	249.5	249.5
45°	171.0	170.3	171.7	171.0	171.0	176.6	176.6	178.0	180.8	179.4	180.1
47.5°	113.5	114.2	111.4	113.5	110.7	115.6	115.6	115.6	117.7	116.3	117.7
50°	72.2	70.1	68.7	68.7	68.0	71.5	70.1	70.8	72.2	70.8	72.2
52.5°	40.6	39.9	38.5	39.2	37.8	38.5	38.5	38.5	39.2	38.5	39.9
55°	23.8	21.7	21.0	21.0	20.3	21.0	20.3	20.3	20.3	19.6	20.3
57.5°	14.0	13.3	12.6	12.6	11.9	11.9	11.9	11.9	11.9	11.9	11.9
60°	9.8	9.1	9.1	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
62.5°	7.7	7.0	7.0	7.0	6.3	6.3	6.3	6.3	6.3	7.0	6.3
65°	5.6	5.6	5.6	5.6	5.6	5.6	4.9	5.6	5.6	5.6	5.6
67.5°	4.9	4.9	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	1.4	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
85°	0.0	0.7	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):

	150°	155°	157.5°	160°	165°	170°	175°	180°	185°	190°	195°
0°	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5
2.5°	546.0	543.2	536.9	541.1	541.8	539.0	542.5	546.7	542.5	539.0	541.8
5°	566.3	564.2	558.6	562.1	562.8	562.1	564.2	567.7	564.2	562.1	562.8
7.5°	586.6	585.2	578.9	583.1	584.5	583.1	585.2	588.7	585.2	583.1	584.5
10°	606.2	605.5	599.2	604.8	605.5	604.1	606.2	611.8	606.2	604.1	605.5
12.5°	628.7	630.1	623.1	629.4	630.1	628.7	631.5	635.7	631.5	628.7	630.1
15°	654.6	653.9	648.3	653.2	654.6	653.2	656.7	662.3	656.7	653.2	654.6
17.5°	667.2	667.2	663.0	667.9	668.6	668.6	671.4	675.6	671.4	668.6	668.6
20°	667.9	668.6	663.7	669.3	669.3	669.3	672.1	674.2	672.1	669.3	669.3
22.5°	656.7	657.4	652.5	657.4	657.4	658.1	659.5	660.9	659.5	658.1	657.4
25°	635.0	635.7	631.5	635.7	635.0	635.0	636.4	638.5	636.4	635.0	635.0
27.5°	602.7	603.4	597.8	602.7	602.0	601.3	603.4	604.1	603.4	601.3	602.0
30°	560.0	560.7	555.8	560.0	559.3	558.6	561.4	562.1	561.4	558.6	559.3
32.5°	508.8	507.4	503.9	507.4	506.7	506.7	508.1	510.2	508.1	506.7	506.7
35°	447.1	447.1	445.0	447.8	445.7	448.5	448.5	449.2	448.5	448.5	445.7
37.5°	384.1	384.1	382.7	384.1	383.4	386.2	386.2	388.3	386.2	386.2	383.4
40°	318.2	318.2	316.8	318.2	320.3	320.3	319.6	322.4	319.6	320.3	320.3
42.5°	251.6	251.6	250.9	254.4	254.4	254.4	252.3	255.1	252.3	254.4	254.4
45°	182.9	181.5	180.8	180.8	181.5	184.3	181.5	185.0	181.5	184.3	181.5
47.5°	116.3	117.0	117.7	119.8	118.4	117.7	117.7	119.8	117.7	117.7	118.4
50°	71.5	72.2	72.2	73.6	71.5	72.9	72.2	73.6	72.2	72.9	71.5
52.5°	39.2	39.2	39.2	40.6	39.2	39.9	39.2	40.6	39.2	39.9	39.2
55°	20.3	20.3	20.3	21.0	20.3	20.3	20.3	21.0	20.3	20.3	20.3
57.5°	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
60°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
62.5°	7.0	6.3	6.3	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
65°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
67.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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):

	200°	202.5°	205°	210°	215°	220°	225°	230°	235°	240°	245°
0°	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5
2.5°	541.1	536.9	543.2	546.0	543.9	541.8	543.9	538.3	536.9	539.7	531.9
5°	562.1	558.6	564.2	566.3	564.2	561.4	561.4	555.8	553.0	555.8	546.7
7.5°	583.1	578.9	585.2	586.6	583.1	581.0	581.0	574.0	570.5	573.3	562.1
10°	604.8	599.2	605.5	606.2	603.4	599.9	599.2	592.9	588.0	590.8	578.2
12.5°	629.4	623.1	630.1	628.7	627.3	623.1	622.4	613.9	609.0	611.8	599.2
15°	653.2	648.3	653.9	654.6	651.1	646.9	644.1	637.8	632.2	635.0	621.0
17.5°	667.9	663.0	667.2	667.2	665.1	660.2	658.8	653.2	645.5	649.0	635.0
20°	669.3	663.7	668.6	667.9	665.8	662.3	660.9	653.9	647.6	651.1	637.1
22.5°	657.4	652.5	657.4	656.7	653.9	651.1	649.7	643.4	636.4	641.3	627.3
25°	635.7	631.5	635.7	635.0	631.5	630.8	628.0	622.4	616.0	620.3	606.9
27.5°	602.7	597.8	603.4	602.7	599.9	597.8	596.4	591.5	583.8	589.4	576.8
30°	560.0	555.8	560.7	560.0	557.2	555.8	554.4	549.5	542.5	545.3	536.2
32.5°	507.4	503.9	507.4	508.8	502.5	502.5	502.5	496.9	491.3	494.1	485.0
35°	447.8	445.0	447.1	447.1	444.3	443.6	443.6	438.7	433.8	436.6	427.5
37.5°	384.1	382.7	384.1	384.1	381.3	379.9	380.6	376.4	372.2	374.3	365.8
40°	318.2	316.8	318.2	318.2	315.4	315.4	315.4	311.9	307.7	309.1	302.1
42.5°	254.4	250.9	251.6	251.6	249.5	249.5	250.2	246.7	243.9	243.9	237.6
45°	180.8	180.8	181.5	182.9	180.1	179.4	180.8	178.0	176.6	176.6	171.0
47.5°	119.8	117.7	117.0	116.3	117.7	116.3	117.7	115.6	115.6	115.6	110.7
50°	73.6	72.2	72.2	71.5	72.2	70.8	72.2	70.8	70.1	71.5	68.0
52.5°	40.6	39.2	39.2	39.2	39.9	38.5	39.2	38.5	38.5	38.5	37.8
55°	21.0	20.3	20.3	20.3	20.3	19.6	20.3	20.3	20.3	21.0	20.3
57.5°	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9
60°	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
62.5°	7.0	6.3	6.3	7.0	6.3	7.0	6.3	6.3	6.3	6.3	6.3
65°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	4.9	5.6	5.6
67.5°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
70°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
72.5°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
75°	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
77.5°	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
80°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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):

	247.5°	250°	255°	260°	265°	270°	275°	280°	285°	290°	292.5°
0°	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5
2.5°	539.0	534.8	536.2	534.8	531.2	531.9	529.8	529.8	525.6	524.9	525.6
5°	553.0	548.1	548.1	545.3	540.4	539.7	535.5	535.5	529.1	527.0	527.0
7.5°	568.4	563.5	562.1	558.6	552.3	549.5	543.9	541.8	534.1	530.5	529.8
10°	585.2	579.6	576.8	572.6	564.9	560.0	552.3	549.5	540.4	533.3	532.6
12.5°	604.1	599.2	595.7	590.1	581.7	574.7	565.6	560.7	548.8	541.1	537.6
15°	626.6	621.0	616.8	609.7	600.6	592.2	580.3	574.7	560.7	550.2	545.3
17.5°	640.6	634.3	630.8	622.4	613.2	603.4	590.1	583.1	567.0	553.7	548.8
20°	642.0	637.1	632.2	624.5	615.3	604.1	590.1	583.1	566.3	553.0	546.0
22.5°	631.5	627.3	621.7	615.3	605.5	594.3	581.0	574.7	558.6	544.6	536.9
25°	611.1	607.6	602.0	594.3	587.3	575.4	562.8	558.6	541.8	529.8	522.8
27.5°	579.6	577.5	571.9	564.9	559.3	549.5	536.9	533.3	518.6	508.1	502.5
30°	538.3	536.9	531.2	524.9	520.7	511.6	500.4	499.0	485.7	478.0	472.4
32.5°	487.1	485.7	482.2	475.9	472.4	464.7	454.2	455.6	444.3	438.0	435.9
35°	432.4	428.2	426.1	420.5	416.3	410.7	401.6	403.7	397.4	392.5	391.8
37.5°	370.8	366.5	365.1	360.9	357.4	352.5	345.5	348.3	345.5	343.4	345.5
40°	306.3	302.8	301.4	297.2	295.8	292.3	287.3	294.4	290.9	295.1	295.8
42.5°	241.8	238.3	238.3	235.5	233.4	232.7	229.2	238.3	238.3	245.3	248.8
45°	171.0	171.7	170.3	171.0	169.6	171.7	169.6	175.9	185.0	194.1	199.7
47.5°	113.5	111.4	114.2	113.5	112.8	115.6	118.4	124.8	135.3	147.9	155.6
50°	68.7	68.7	70.1	72.2	73.6	75.7	79.9	87.6	99.5	112.1	121.2
52.5°	39.2	38.5	39.9	40.6	44.2	47.0	51.9	60.3	72.2	86.2	94.6
55°	21.0	21.0	21.7	23.8	25.9	29.4	34.3	42.1	53.3	67.3	75.7
57.5°	12.6	12.6	13.3	14.0	16.1	18.9	23.1	29.4	39.2	51.2	58.9
60°	8.4	9.1	9.1	9.8	11.2	12.6	16.1	20.3	28.0	37.1	43.5
62.5°	7.0	7.0	7.0	7.7	8.4	9.1	11.2	14.7	19.6	26.6	31.5
65°	5.6	5.6	5.6	5.6	6.3	7.0	8.4	10.5	14.0	18.2	21.0
67.5°	4.2	4.2	4.9	4.9	4.9	5.6	6.3	7.7	9.8	12.6	14.7
70°	3.5	3.5	3.5	3.5	4.2	4.2	4.9	5.6	7.0	9.1	10.5
72.5°	2.8	2.8	2.8	2.8	3.5	3.5	3.5	4.2	4.9	6.3	7.0
75°	2.1	2.1	2.1	2.1	2.8	2.8	2.8	3.5	3.5	4.2	4.9
77.5°	1.4	1.4	1.4	1.4	2.1	2.1	2.1	2.1	2.8	2.8	2.8
80°	0.7	0.7	0.7	1.4	1.4	1.4	1.4	1.4	1.4	2.1	2.1
82.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.4
85°	0.0	0.0	0.7	0.0	0.7	0.7	0.7	0.7	0.7	0.7	0.7
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):

	295°	300°	305°	310°	315°	320°	325°	330°	335°	337.5°	340°
0°	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5	530.5
2.5°	520.7	529.8	519.3	521.4	517.9	524.2	515.8	517.9	519.3	517.9	518.6
5°	521.4	528.4	516.5	518.6	513.0	517.2	509.5	510.2	510.2	508.8	508.1
7.5°	523.5	527.7	515.1	514.4	507.4	511.6	502.5	501.1	500.4	498.3	499.0
10°	524.2	525.6	512.3	509.5	501.1	502.5	493.4	490.6	488.5	487.1	486.4
12.5°	529.1	527.7	512.3	507.4	496.9	496.2	486.4	482.2	478.7	477.3	476.6
15°	535.5	530.5	513.7	506.7	494.8	492.0	481.5	477.3	472.4	471.0	469.6
17.5°	538.3	530.5	512.3	503.2	489.9	486.4	475.9	470.3	465.4	463.3	461.9
20°	534.8	524.9	506.7	496.9	482.9	478.0	467.5	461.2	456.3	454.2	452.8
22.5°	527.0	515.8	498.3	488.5	474.5	468.2	459.1	453.5	447.8	447.1	445.0
25°	513.7	502.5	487.8	478.0	465.4	459.1	450.6	445.7	440.1	439.4	438.7
27.5°	494.1	483.6	472.4	463.3	452.1	447.1	440.8	435.9	431.0	431.0	429.6
30°	466.1	459.1	449.2	443.6	434.5	429.6	425.4	421.9	417.0	417.7	416.3
32.5°	430.3	426.8	419.8	417.0	410.0	408.6	404.4	401.6	397.4	398.8	397.4
35°	390.4	386.2	386.2	384.8	381.3	380.6	378.5	377.1	374.3	375.0	375.0
37.5°	344.8	344.8	349.0	349.7	349.0	350.4	349.7	349.7	346.9	348.3	347.6
40°	297.9	302.1	309.8	314.0	315.4	318.2	321.7	320.3	318.9	321.0	320.3
42.5°	252.3	260.7	272.6	279.6	284.5	288.8	293.7	293.7	293.0	295.8	295.1
45°	208.9	216.6	232.7	244.6	253.0	259.3	264.9	267.0	267.7	270.5	269.8
47.5°	166.1	179.4	198.3	212.4	222.9	230.6	238.3	241.1	243.2	246.7	246.7
50°	131.8	148.6	170.3	184.3	196.9	205.3	213.1	217.3	220.1	222.9	222.9
52.5°	105.8	123.4	144.4	159.1	171.0	180.1	187.8	192.7	194.8	198.3	198.3
55°	86.2	102.3	121.9	135.3	147.2	155.6	161.9	166.1	168.2	171.0	171.0
57.5°	68.0	83.4	99.5	111.4	121.2	127.6	133.2	134.6	135.3	137.4	138.1
60°	51.2	63.1	76.4	85.5	92.5	96.7	100.9	100.2	99.5	100.9	99.5
62.5°	36.4	44.9	54.7	60.3	65.9	68.0	70.1	68.7	67.3	68.0	68.0
65°	24.5	30.8	36.4	40.6	43.5	44.9	45.6	44.9	44.2	44.9	44.2
67.5°	16.8	20.3	24.5	26.6	28.7	29.4	30.1	29.4	29.4	29.4	28.7
70°	11.2	13.3	16.1	17.5	18.2	18.9	19.6	18.9	18.9	18.9	18.9
72.5°	7.7	9.1	9.8	11.2	11.9	11.9	11.9	11.9	11.9	11.9	11.9
75°	4.9	5.6	6.3	7.0	7.7	7.7	7.7	7.7	7.7	7.7	7.7
77.5°	3.5	3.5	4.2	4.2	4.9	4.9	4.9	4.9	4.9	4.9	4.9
80°	2.1	2.1	2.8	2.8	2.8	2.8	3.5	2.8	3.5	3.5	3.5
82.5°	1.4	1.4	1.4	1.4	2.1	2.1	2.1	2.1	2.1	2.1	2.1
85°	0.7	0.7	0.7	0.7	0.7	0.7	1.4	0.7	1.4	1.4	1.4
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):

	345°	350°	355°	360°
0°	530.5	530.5	530.5	530.5
2.5°	518.6	517.2	513.0	517.9
5°	507.4	506.0	502.5	506.0
7.5°	496.2	494.1	491.3	493.4
10°	482.9	481.5	478.0	480.1
12.5°	473.1	470.3	468.2	468.9
15°	466.8	464.0	461.9	462.6
17.5°	458.4	455.6	453.5	453.5
20°	449.2	446.4	445.0	444.3
22.5°	441.5	439.4	438.7	436.6
25°	434.5	433.1	433.1	430.3
27.5°	426.8	424.7	424.7	421.9
30°	413.5	412.8	412.8	410.7
32.5°	396.0	393.9	395.3	391.8
35°	372.2	370.8	372.9	370.1
37.5°	346.2	345.5	346.9	344.8
40°	318.9	318.9	321.0	317.5
42.5°	295.1	295.1	297.2	293.7
45°	269.1	271.2	273.3	270.5
47.5°	246.7	248.1	250.9	248.1
50°	224.3	225.7	227.8	225.0
52.5°	199.7	201.1	203.2	201.1
55°	171.7	173.1	175.2	173.8
57.5°	138.1	136.7	140.2	137.4
60°	100.2	97.4	98.1	98.1
62.5°	66.6	65.2	66.6	64.5
65°	44.2	43.5	43.5	43.5
67.5°	29.4	28.7	29.4	28.7
70°	18.9	18.9	18.9	18.9
72.5°	11.9	11.9	11.9	11.9
75°	7.7	7.7	7.7	7.7
77.5°	4.9	4.9	4.9	4.9
80°	3.5	3.5	3.5	3.5
82.5°	2.1	2.1	2.1	2.1
85°	1.4	1.4	1.4	1.4
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° - · - · 135°-315°





















(END OF REPORT)