

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: P274349

Luminaire Tested: **LD4B10DE010W2N2765 EU4B1020W2N902765 4LBLWW0H**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P274349
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1712-453-12)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: io LED
Catalog Number: LD4B10DE010W2N2765 EU4B1020W2N902765 4LBLWW0H
Description: PORTFOLIO 4" W2N RN DOWNLIGHT, LENSED WALLWASH WITH HAZE FINISH
Light Source: W2N 2700K-6500K CCT TUNING RANGE
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 797.4 lumens
Efficiency: N/A
Efficacy: 57.0 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.03 / 1.12
Luminous Opening: Circular (Dia: 0.38' x H: 0')
CIE Type: Direct

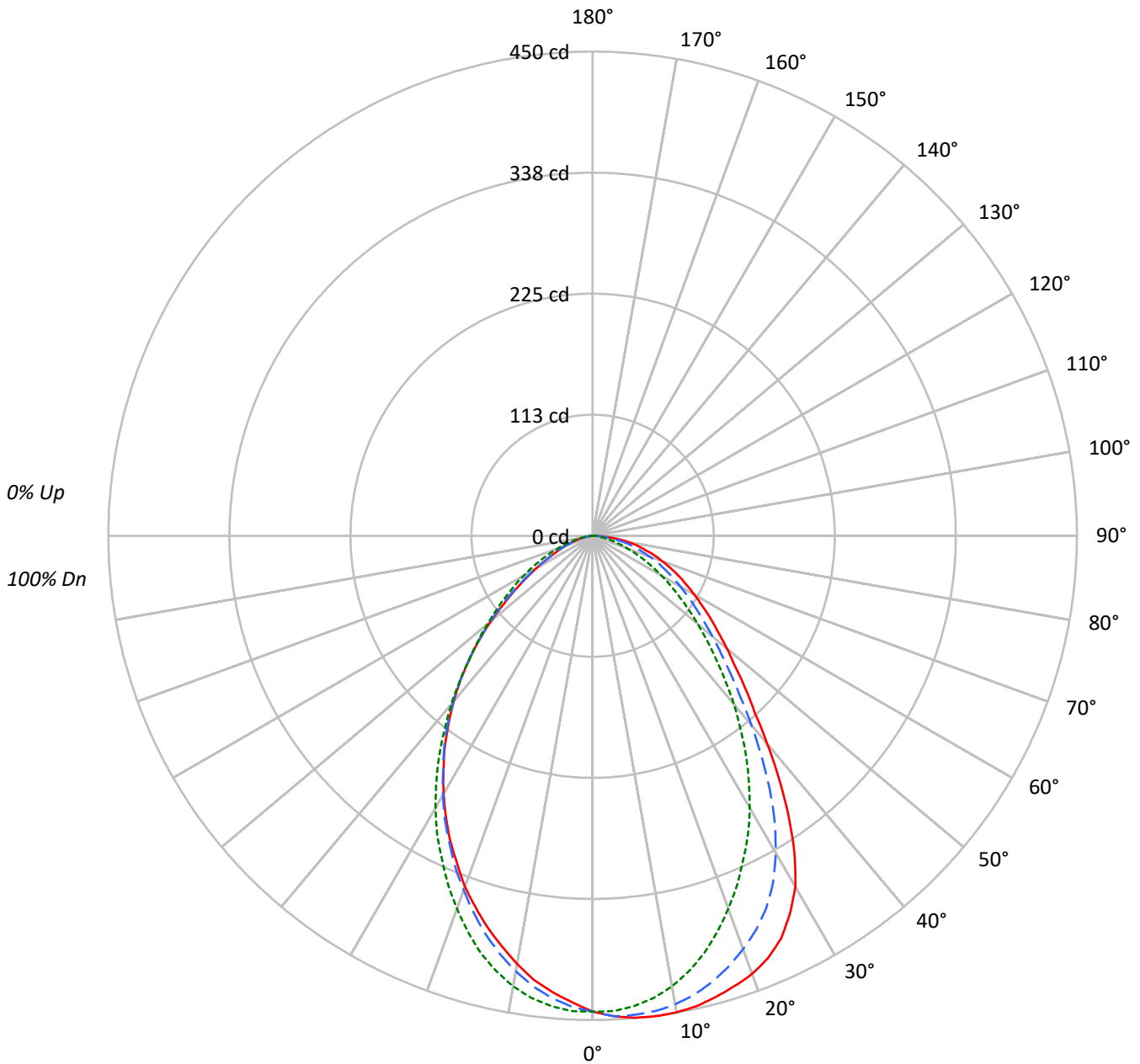
Input Watts (W): 14
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





TEST NUMBER: P274349

CATALOG NUMBER: LD4B10DE010W2N2765 EU4B1020W2N902765 4LBLWW0H

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	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88				88				
2	102	95	89	85	100	93	88	84	90	85	82	87	83	80	84	81	78	76				76				
3	94	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67				67				
4	88	77	69	63	85	76	69	63	73	67	62	71	66	61	69	64	61	59				59				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52				52				
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47				47				
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42				42				
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38				38				
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35				
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	43096	43096	43096
5°	43994	42928	41666
10°	44503	42078	39990
15°	44757	40500	38028
20°	44949	38239	35988
25°	44476	35626	33647
30°	42414	32849	31161
35°	37715	29541	28494
40°	32111	25966	25534
45°	27662	22314	22218
50°	24653	19286	18664
55°	22649	16651	14918
60°	21226	14326	11675
65°	20386	12084	9109
70°	19576	9688	7380
75°	18940	7682	5648
80°	19082	5332	3424
85°	15990	3802	1565



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.4	5.2
10°-20°	113.8	14.3
20°-30°	159.2	20.0
30°-40°	163.6	20.5
40°-50°	132.8	16.7
50°-60°	93.5	11.7
60°-70°	57.6	7.2
70°-80°	28.8	3.6
80°-90°	6.8	0.9
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°	314.4	39.4
0°-40°	478.0	59.9
0°-60°	704.2	88.3
0°-90°	797.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	797.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	442	442	442	442	442	
5°	450	447	439	431	426	43
15°	444	429	401	384	377	125
25°	414	382	331	315	313	189
35°	317	286	248	241	240	197
45°	201	181	162	162	161	156
55°	133	117	98	90	88	120
65°	88	74	52	40	40	87
75°	50	40	20	15	15	54
85°	14	10	3	2	1	17
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°	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2
2.5°	447.0	447.7	445.6	447.7	444.9	446.3	447.0	445.6	444.3	447.0	447.0
5°	449.7	449.7	447.7	450.4	447.0	447.7	449.0	447.0	444.9	447.7	447.0
7.5°	450.4	450.4	447.7	450.4	447.0	447.7	448.3	446.3	444.3	446.3	445.6
10°	449.7	449.0	447.0	449.7	446.3	446.3	447.0	444.9	441.5	443.6	442.2
12.5°	447.7	447.7	444.9	447.7	442.9	442.9	443.6	440.8	438.1	438.1	436.8
15°	443.6	443.6	440.8	442.9	438.8	438.8	438.1	435.4	432.0	432.0	429.3
17.5°	438.8	438.8	436.1	438.1	433.4	433.4	432.7	428.6	423.8	423.2	419.8
20°	433.4	433.4	430.0	431.3	425.9	425.9	425.2	420.4	415.0	413.6	408.9
22.5°	425.2	425.2	421.8	422.5	417.0	416.4	415.7	410.2	404.8	402.8	396.6
25°	413.6	413.0	410.2	410.2	404.8	403.4	402.1	396.6	391.2	387.1	381.7
27.5°	396.6	397.3	393.9	394.6	387.8	386.4	385.7	378.9	372.8	368.7	363.3
30°	376.9	374.9	371.5	371.5	366.0	365.3	364.0	357.8	351.0	346.3	340.2
32.5°	349.0	348.3	344.9	344.9	338.8	338.8	336.1	330.0	323.8	321.1	315.0
35°	317.0	316.3	313.6	313.6	308.2	308.9	306.1	301.4	295.3	291.2	286.4
37.5°	284.4	283.7	281.0	281.7	276.9	276.9	274.9	270.1	265.3	263.3	257.2
40°	252.4	251.7	248.3	250.4	246.3	244.9	244.2	240.8	235.4	232.7	229.3
42.5°	223.1	223.8	220.4	221.8	218.4	217.0	216.3	213.6	209.5	206.8	203.4
45°	200.7	199.3	198.0	198.0	194.6	193.9	193.2	189.8	187.1	184.4	181.0
47.5°	179.6	178.2	176.9	177.6	174.8	174.2	172.8	170.1	166.7	165.3	161.9
50°	162.6	161.9	159.9	159.9	157.2	156.5	155.1	153.1	149.7	147.6	144.9
52.5°	146.9	146.9	144.9	144.2	142.2	141.5	140.8	138.1	135.4	132.7	129.9
55°	133.3	132.7	131.3	131.3	128.6	127.9	127.2	124.5	121.8	119.7	117.0
57.5°	120.4	120.4	119.1	119.1	117.0	115.7	115.7	112.9	109.5	108.2	104.8
60°	108.9	108.9	107.5	107.5	105.4	105.4	104.1	101.4	99.3	96.6	93.9
62.5°	98.0	98.6	97.3	96.6	94.6	93.9	93.9	91.8	88.4	86.4	83.7
65°	88.4	87.8	87.1	86.4	84.4	83.7	83.7	81.0	78.9	76.2	74.2
67.5°	78.2	78.2	76.9	76.9	75.5	74.8	73.5	71.4	69.4	67.4	65.3
70°	68.7	68.7	68.0	68.0	66.0	65.3	64.6	62.6	60.5	58.5	55.8
72.5°	59.9	59.2	58.5	58.5	57.1	56.5	55.8	53.7	51.7	49.7	47.6
75°	50.3	50.3	49.7	49.7	48.3	47.6	47.6	46.3	43.5	42.2	39.5
77.5°	42.2	42.2	41.5	41.5	40.1	40.1	39.5	37.4	36.1	34.0	32.7
80°	34.0	33.3	33.3	32.7	31.3	31.3	30.6	29.9	27.9	26.5	24.5
82.5°	23.8	23.8	23.8	23.1	22.5	22.5	21.8	20.4	19.0	18.4	16.3
85°	14.3	14.3	13.6	12.9	13.6	12.9	12.2	11.6	10.9	10.2	9.5
87.5°	6.1	6.1	5.4	5.4	5.4	5.4	5.4	4.8	4.1	4.1	3.4
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°	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2
2.5°	442.9	444.9	444.3	443.6	442.2	442.2	442.2	441.5	442.2	442.2	440.8
5°	442.9	444.3	443.6	442.2	440.8	440.8	440.2	438.8	438.8	438.8	436.1
7.5°	440.8	442.2	440.2	438.8	437.4	436.1	436.1	434.0	434.0	433.4	430.6
10°	436.8	437.4	434.7	433.4	431.3	430.6	429.3	426.6	425.9	425.2	422.5
12.5°	430.6	431.3	427.9	425.2	422.5	421.8	420.4	417.0	415.7	414.3	410.9
15°	421.8	421.8	417.7	414.3	411.6	410.9	407.5	404.1	402.8	401.4	396.6
17.5°	411.6	410.9	405.5	402.1	398.7	397.3	393.9	389.8	387.1	385.7	381.7
20°	400.7	398.7	392.5	389.1	385.1	383.0	379.6	374.2	371.5	368.7	364.7
22.5°	387.8	385.1	378.3	373.5	369.4	367.4	362.6	357.8	353.8	351.0	346.3
25°	372.1	368.7	361.3	355.1	351.7	349.7	344.9	339.5	335.4	331.3	327.2
27.5°	353.8	349.7	342.2	336.1	332.7	329.3	325.9	319.8	316.3	312.9	308.2
30°	331.3	326.6	319.8	314.3	310.2	307.5	303.4	298.0	293.9	291.9	287.1
32.5°	306.8	301.4	295.3	289.8	287.8	284.4	281.0	275.5	272.1	270.1	266.7
35°	279.6	275.5	268.7	264.6	261.2	259.9	257.2	251.7	250.4	248.3	244.2
37.5°	251.0	247.6	242.9	239.5	236.8	235.4	232.7	229.3	227.2	225.2	223.1
40°	224.5	221.8	217.7	215.0	211.6	209.5	209.5	205.5	204.1	204.1	202.1
42.5°	198.7	197.3	193.9	189.8	189.1	187.1	186.4	184.4	183.0	182.3	181.6
45°	176.9	174.8	171.4	169.4	167.4	167.4	165.3	163.3	162.6	161.9	161.2
47.5°	157.8	155.1	152.4	150.4	149.0	148.3	146.3	144.9	144.2	144.2	143.5
50°	140.8	138.8	136.1	134.0	132.7	131.3	129.9	128.6	127.9	127.2	127.2
52.5°	126.5	123.8	121.1	119.1	117.0	116.3	115.0	113.6	112.9	112.3	111.6
55°	113.6	111.6	108.2	106.1	104.1	104.1	102.0	100.0	98.6	98.0	97.3
57.5°	101.4	99.3	95.9	93.9	92.5	91.2	89.8	88.4	87.1	85.7	84.4
60°	90.5	88.4	85.0	82.3	81.6	80.3	78.9	76.2	74.8	73.5	72.1
62.5°	80.3	77.6	74.8	72.1	71.4	70.1	68.0	66.0	64.0	62.6	60.5
65°	70.8	68.7	65.3	63.3	61.2	60.5	58.5	55.8	53.7	52.4	50.3
67.5°	61.9	59.2	55.8	53.7	52.4	51.0	49.0	46.9	44.9	42.9	40.8
70°	53.1	51.0	47.6	45.6	44.2	42.9	40.8	38.1	36.1	34.0	32.7
72.5°	44.9	42.2	39.5	37.4	36.1	34.7	32.7	30.6	28.6	27.2	25.2
75°	37.4	34.7	32.7	29.9	29.3	27.9	25.9	23.8	21.8	20.4	19.0
77.5°	29.9	27.9	25.2	23.8	22.5	21.1	19.7	17.7	16.3	14.3	12.9
80°	22.5	20.4	18.4	17.0	15.6	15.0	13.6	12.2	10.9	9.5	8.8
82.5°	15.0	13.6	11.6	10.9	10.2	9.5	8.2	7.5	6.8	6.1	5.4
85°	8.2	7.5	6.8	5.4	5.4	4.8	4.1	4.1	3.4	3.4	2.7
87.5°	3.4	2.7	2.7	2.0	2.0	2.0	1.4	1.4	1.4	0.7	0.7
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°	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2
2.5°	441.5	438.8	438.8	438.8	436.8	437.4	438.1	438.8	438.1	436.1	438.1
5°	436.8	434.0	434.0	432.7	431.3	431.3	431.3	432.0	431.3	429.3	430.0
7.5°	430.6	427.2	426.6	425.2	423.8	423.2	423.2	423.2	422.5	419.8	421.1
10°	421.1	417.7	416.4	415.7	413.6	413.0	412.3	411.6	410.9	408.2	409.6
12.5°	409.6	406.8	404.1	403.4	401.4	400.0	399.3	399.3	398.0	395.3	396.6
15°	395.9	391.9	389.8	388.5	386.4	385.1	383.7	384.4	383.7	381.0	381.7
17.5°	379.6	375.5	373.5	372.8	370.1	368.7	368.1	368.1	367.4	364.7	365.3
20°	361.9	357.8	356.5	355.1	353.8	352.4	351.7	351.0	350.4	347.6	349.7
22.5°	344.2	339.5	337.4	337.4	334.7	334.0	333.4	334.0	333.4	330.6	332.0
25°	325.9	321.1	319.8	317.7	316.3	315.7	315.7	315.7	315.0	313.6	315.0
27.5°	305.5	302.1	300.0	299.3	298.0	297.3	296.6	297.3	297.3	295.3	296.6
30°	285.1	282.3	281.0	280.3	278.3	277.6	278.3	278.3	278.3	276.2	278.3
32.5°	264.6	262.6	261.9	259.9	258.5	258.5	258.5	259.2	258.5	257.2	259.2
35°	244.2	241.5	240.8	240.2	240.2	238.8	240.2	239.5	240.8	238.8	240.2
37.5°	222.5	221.1	220.4	220.4	219.1	219.7	219.7	219.7	221.1	219.1	220.4
40°	202.1	200.7	200.7	200.7	200.0	200.0	200.0	200.7	201.4	200.0	201.4
42.5°	181.6	181.0	181.0	180.3	179.6	180.3	181.0	181.0	181.6	180.3	181.0
45°	161.9	161.2	161.9	161.2	161.2	160.6	161.2	161.9	161.9	161.2	161.2
47.5°	143.5	143.5	142.9	142.9	142.9	142.9	142.9	142.9	142.9	141.5	142.9
50°	127.2	125.9	126.5	125.9	125.9	125.2	125.2	124.5	123.8	123.1	123.1
52.5°	111.6	110.2	110.2	109.5	108.9	108.9	108.2	107.5	106.8	105.4	105.4
55°	96.6	95.2	94.6	93.9	93.2	92.5	91.8	91.2	89.8	89.1	89.1
57.5°	83.0	81.6	80.3	80.3	78.9	78.2	76.9	75.5	74.8	73.5	73.5
60°	70.8	69.4	67.4	66.7	66.0	64.6	62.6	61.9	61.2	59.9	60.5
62.5°	59.2	57.1	55.1	54.4	53.7	52.4	51.0	49.7	49.0	49.7	49.7
65°	48.3	46.3	44.9	43.5	42.9	41.5	40.8	40.1	40.1	40.1	40.8
67.5°	38.8	36.7	35.4	34.7	33.3	32.7	32.7	32.7	32.7	32.7	32.7
70°	30.6	29.3	27.9	26.5	26.5	25.9	25.9	25.9	25.9	25.9	25.9
72.5°	23.1	21.8	21.1	21.1	20.4	20.4	20.4	20.4	19.7	19.7	20.4
75°	17.0	16.3	15.6	15.6	15.6	15.0	15.0	15.0	15.0	15.0	15.0
77.5°	12.2	11.6	11.6	10.9	10.9	10.9	10.9	10.9	10.9	10.2	10.2
80°	8.2	7.5	7.5	7.5	7.5	6.8	6.8	6.8	6.8	6.8	6.8
82.5°	4.8	4.8	4.8	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
85°	2.7	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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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CATALOG NUMBER: LD4B10DE010W2N2765 EU4B1020W2N902765 4LBLWW0H

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	442.2	442.2	442.2	442.2	442.2	442.2	442.2	442.2
2.5°	434.0	436.8	437.4	435.4	436.1	434.7	435.4	434.0
5°	426.6	428.6	429.3	427.9	427.9	426.6	427.2	425.9
7.5°	417.0	419.1	419.8	418.4	418.4	417.0	417.0	416.4
10°	406.2	406.8	408.2	406.2	406.8	405.5	405.5	404.1
12.5°	392.5	393.9	395.3	393.2	393.2	392.5	392.5	390.5
15°	378.3	379.6	380.3	378.9	378.9	378.3	377.6	376.9
17.5°	363.3	364.0	365.3	363.3	364.7	363.3	363.3	361.9
20°	346.3	348.3	349.0	347.0	347.6	347.0	347.0	347.0
22.5°	330.0	331.3	332.0	330.6	331.3	330.0	330.6	329.3
25°	312.9	313.6	314.3	312.9	314.3	313.6	312.9	312.9
27.5°	295.3	295.9	296.6	295.3	296.6	295.9	296.6	295.3
30°	276.2	277.6	278.9	277.6	278.3	277.6	277.6	276.9
32.5°	257.2	258.5	259.9	258.5	259.9	258.5	259.2	257.8
35°	239.5	240.2	240.8	239.5	240.2	240.2	240.2	239.5
37.5°	219.7	221.1	221.1	220.4	221.8	221.1	221.1	219.7
40°	200.7	201.4	202.1	200.7	201.4	200.7	201.4	200.7
42.5°	181.0	182.3	183.0	181.6	181.6	181.6	181.0	181.6
45°	160.6	161.9	163.3	161.2	161.9	161.9	161.9	161.2
47.5°	142.2	142.2	142.9	142.2	142.9	141.5	142.9	142.2
50°	123.1	123.1	124.5	123.1	123.1	123.1	123.1	123.1
52.5°	104.8	105.4	105.4	104.1	104.8	104.1	104.8	104.1
55°	87.8	87.8	88.4	87.8	87.8	87.8	87.8	87.8
57.5°	72.8	73.5	73.5	72.8	73.5	72.8	72.8	72.8
60°	60.5	60.5	60.5	59.9	60.5	59.9	60.5	59.9
62.5°	49.0	49.7	49.7	49.0	49.7	49.0	49.0	49.0
65°	40.1	40.1	40.1	40.1	40.1	40.1	40.1	39.5
67.5°	32.0	32.0	32.7	32.0	32.7	32.7	32.7	32.7
70°	25.9	25.9	25.9	25.9	25.9	25.9	25.9	25.9
72.5°	19.7	19.7	20.4	19.7	19.7	19.7	19.7	19.7
75°	15.0	15.0	15.0	15.0	15.0	14.3	14.3	15.0
77.5°	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.9
80°	6.8	6.8	6.8	6.8	6.1	6.1	6.8	6.1
82.5°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
85°	2.0	2.0	1.4	1.4	1.4	1.4	1.4	1.4
87.5°	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



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













(END OF REPORT)