

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: PORTFOLIO

Report Number: P880533

Luminaire Tested: **LD4C08D010 EU4089030 4LBDWNH**

Issue Date: 10/4/2024

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P880533
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P251940)
Test Lab: INNOVATION CENTER
Issue Date: 10/4/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C08D010 EU4089030 4LBDWNH
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3000K, 90CRI LEDS AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

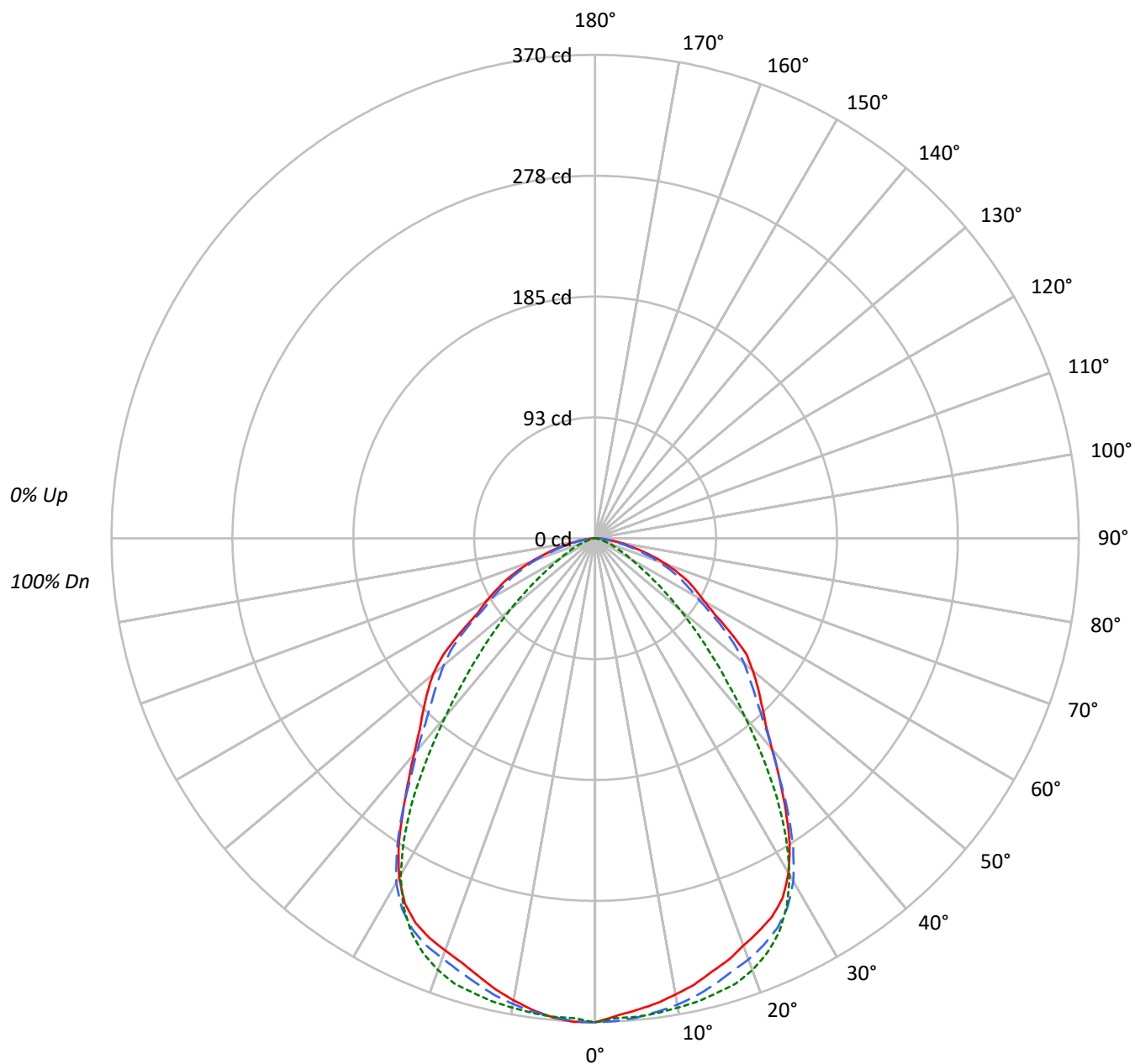
Lumens per Lamp: N/A
Luminaire Lumens: 754.0 lumens
Efficiency: N/A
Efficacy: 76.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.87
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

TEST NUMBER: P880533

CATALOG NUMBER: LD4C08D010 EU4089030 4LBDWNH

Luminous Intensity Polar Plot





TEST NUMBER: P880533

CATALOG NUMBER: LD4C08D010 EU4089030 4LBDWNH

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88		
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76		
3	94	85	78	72	92	84	77	72	81	75	70	78	73	69	76	72	68	66		
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58		
5	81	69	61	55	79	68	61	55	66	60	54	64	58	54	63	57	53	51		
6	75	63	55	49	73	62	55	49	60	54	49	59	53	48	57	52	48	46		
7	70	58	50	44	68	57	49	44	56	49	44	54	48	43	53	47	43	41		
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37		
9	62	49	41	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34		
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	45517	45517	45517
5°	44704	45333	45407
10°	44223	45508	44797
15°	43714	45813	44070
20°	43366	45981	43889
25°	43350	45126	44041
30°	41962	42203	42529
35°	38124	36339	38469
40°	33727	28611	34545
45°	31291	21787	32281
50°	30064	16131	30943
55°	27223	11116	26859
60°	23662	7568	23539
65°	22878	5465	21715
70°	20690	3700	18427
75°	17041	2421	14620
80°	13725	1627	10895
85°	11277	846	7189



TEST NUMBER: P880533

CATALOG NUMBER: LD4C08D010 EU4089030 4LBDWNH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.0	4.6
10°-20°	100.0	13.3
20°-30°	151.1	20.0
30°-40°	158.1	21.0
40°-50°	128.0	17.0
50°-60°	93.1	12.4
60°-70°	57.4	7.6
70°-80°	26.0	3.4
80°-90°	5.3	0.7
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°	286.0	37.9
0°-40°	444.1	58.9
0°-60°	665.3	88.2
0°-90°	754.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	754.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	370	370	370	370	370	
5°	362	368	368	368	368	34
15°	344	353	360	352	346	97
25°	320	329	333	331	325	147
35°	254	258	242	258	256	158
45°	180	174	125	177	186	140
55°	127	119	52	120	125	113
65°	79	71	19	70	75	77
75°	36	31	5	27	31	39
85°	8	6	1	5	5	9
90°	0	0	0	0	0	



TEST NUMBER: P880533

CATALOG NUMBER: LD4C08D010 EU4089030 4LBDWNH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5
2.5°	365.9	365.9	369.4	373.3	369.9	366.5	368.8	367.6	371.6	371.6	369.9
5°	362.5	363.6	366.5	369.9	367.1	363.6	366.5	365.4	369.4	369.4	368.2
7.5°	359.1	359.6	363.1	367.1	364.2	360.8	363.1	362.5	365.9	366.5	365.4
10°	354.5	355.1	358.5	362.5	359.6	356.8	359.1	358.5	363.1	363.1	362.5
12.5°	350.0	350.5	354.0	357.4	354.5	351.7	354.0	354.0	358.5	359.1	358.5
15°	343.7	344.8	347.7	351.1	349.4	346.0	348.3	348.3	352.3	353.4	353.4
17.5°	338.6	339.1	342.0	345.4	343.1	340.3	342.5	342.5	346.5	347.7	347.7
20°	331.7	332.9	335.7	339.1	337.4	335.1	336.9	336.9	341.4	342.5	343.1
22.5°	326.0	327.2	329.4	334.0	331.1	329.4	331.7	331.1	336.3	336.9	336.9
25°	319.8	320.9	323.8	326.6	324.9	323.2	324.9	324.9	328.9	329.4	329.4
27.5°	310.6	311.2	314.0	316.9	315.2	312.9	315.2	314.6	318.6	319.2	318.6
30°	295.8	297.0	298.1	302.1	300.4	298.7	300.9	299.8	303.8	303.8	303.2
32.5°	277.0	277.0	279.3	282.1	279.9	278.7	280.4	281.0	283.9	283.9	282.1
35°	254.2	255.4	257.0	258.8	257.0	255.9	257.6	257.0	260.5	259.3	257.6
37.5°	231.4	232.0	233.7	236.0	233.7	232.0	232.5	232.0	234.8	234.8	232.0
40°	210.3	211.5	212.6	214.9	212.6	211.5	212.0	210.3	213.8	212.6	210.9
42.5°	193.2	193.8	195.5	196.6	194.4	193.8	194.4	193.2	194.9	193.8	190.4
45°	180.1	180.1	180.7	182.4	180.1	179.5	179.5	178.4	180.1	177.8	174.4
47.5°	168.7	169.3	169.9	171.0	169.3	167.6	168.2	165.9	167.0	165.3	160.7
50°	157.3	158.4	159.0	160.2	158.4	157.3	157.9	155.6	155.6	152.8	148.8
52.5°	145.9	146.5	145.9	147.0	145.9	144.2	144.8	142.5	142.5	139.1	135.1
55°	127.1	127.7	128.3	129.4	128.3	126.5	127.7	126.0	126.0	123.7	119.1
57.5°	108.3	108.9	109.4	110.0	110.0	108.9	109.4	108.3	107.7	106.0	102.6
60°	96.3	96.3	96.3	96.9	96.3	95.8	95.8	94.6	94.6	92.3	88.9
62.5°	87.2	87.8	87.8	88.3	87.8	87.2	86.7	85.5	84.9	82.7	79.8
65°	78.7	78.7	78.1	79.2	78.7	78.1	78.1	76.9	75.8	73.5	70.7
67.5°	68.4	69.0	68.4	69.0	69.0	68.4	67.8	66.7	66.1	64.4	61.0
70°	57.6	57.6	57.6	58.2	57.6	57.6	58.2	56.4	55.9	53.6	50.7
72.5°	46.7	47.3	47.3	46.7	47.3	46.2	46.2	46.2	45.6	43.3	40.5
75°	35.9	36.5	36.5	37.1	36.5	35.9	35.9	35.3	34.8	33.1	30.8
77.5°	26.8	26.8	27.3	27.3	27.3	26.8	26.8	25.7	25.7	24.5	22.2
80°	19.4	19.4	18.8	19.4	19.4	18.8	18.8	18.2	18.2	17.1	15.4
82.5°	12.5	13.1	13.1	13.1	13.1	12.5	12.5	12.5	12.0	11.4	10.3
85°	8.0	8.0	8.0	8.0	8.6	8.0	8.6	8.0	8.0	6.8	6.3
87.5°	3.4	3.4	3.4	4.0	4.0	3.4	3.4	3.4	3.4	3.4	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P880533

CATALOG NUMBER: LD4C08D010 EU4089030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5
2.5°	369.9	370.5	368.8	371.0	369.4	369.9	370.5	369.9	367.6	367.6	373.9
5°	367.6	368.8	367.1	369.9	368.8	368.8	369.9	369.4	367.1	367.6	373.3
7.5°	365.4	367.1	365.9	368.8	367.1	367.1	368.2	368.2	365.9	366.5	371.6
10°	361.9	364.2	363.6	366.5	364.8	364.8	366.5	366.5	364.2	364.8	369.9
12.5°	359.1	361.4	360.8	363.6	362.5	363.1	363.6	364.8	361.9	363.1	367.6
15°	354.5	356.8	356.8	359.6	358.5	359.6	360.8	362.5	360.2	360.2	364.8
17.5°	349.4	352.3	352.3	354.5	354.5	355.1	357.4	359.1	356.8	357.4	361.4
20°	343.7	347.1	347.1	350.0	349.4	350.5	352.3	354.0	351.7	351.7	356.2
22.5°	338.0	340.9	341.4	343.1	343.1	343.7	345.4	346.5	343.7	343.7	348.3
25°	330.0	332.9	333.4	334.6	333.4	333.4	334.6	335.7	332.9	332.9	336.9
27.5°	319.2	322.0	322.0	321.5	320.3	320.9	320.3	320.9	318.0	317.5	321.5
30°	303.2	304.9	304.9	304.4	302.7	302.7	300.9	301.5	297.5	297.5	300.9
32.5°	281.6	283.3	282.1	281.0	278.7	277.6	276.4	275.9	271.9	271.9	275.9
35°	255.9	257.0	255.4	253.1	250.2	248.5	246.8	244.5	241.7	242.3	244.5
37.5°	229.7	229.7	227.4	222.9	220.6	217.7	214.9	214.9	210.3	209.8	211.5
40°	207.5	205.2	201.2	194.9	190.9	188.1	184.1	181.8	178.4	178.4	181.3
42.5°	187.5	183.0	177.8	169.3	165.3	161.9	156.8	154.5	150.5	149.9	151.6
45°	169.9	165.3	157.9	148.8	143.6	139.7	132.2	129.4	126.0	125.4	126.5
47.5°	155.6	150.5	141.4	129.4	124.3	119.1	111.7	107.7	104.9	103.2	104.9
50°	143.1	136.2	126.5	114.0	107.2	102.6	93.5	89.5	85.5	84.4	84.9
52.5°	129.4	122.5	112.3	99.2	92.9	86.1	77.5	71.8	68.4	66.7	68.4
55°	114.6	107.7	97.5	84.4	77.5	71.3	62.1	57.6	53.6	51.9	53.6
57.5°	98.6	92.3	83.2	70.1	63.8	58.2	49.6	45.0	41.0	39.9	41.0
60°	84.9	79.8	70.7	58.2	53.0	46.7	39.3	34.8	31.3	30.8	31.3
62.5°	75.8	70.1	61.6	49.6	44.4	39.3	32.5	27.9	25.1	24.5	25.1
65°	66.7	60.4	52.4	42.2	37.1	33.1	26.2	22.2	19.4	18.8	19.4
67.5°	56.4	50.7	43.9	34.8	30.8	26.8	21.1	17.1	14.8	14.3	14.8
70°	46.7	41.6	34.8	27.9	23.9	21.1	15.9	13.1	10.8	10.3	10.8
72.5°	37.1	32.5	26.8	21.1	18.8	15.9	12.5	9.7	8.0	7.4	8.0
75°	28.5	25.1	20.5	15.4	13.7	12.0	8.6	6.8	5.7	5.1	5.7
77.5°	19.9	17.7	14.3	11.4	9.7	8.6	6.3	4.6	4.0	3.4	4.0
80°	13.7	12.0	9.7	7.4	6.3	5.1	4.0	2.8	2.3	2.3	2.3
82.5°	9.1	7.4	5.7	4.6	4.0	3.4	2.3	1.7	1.7	1.2	1.2
85°	5.1	4.6	3.4	2.8	2.3	1.7	1.2	1.2	0.6	0.6	0.6
87.5°	2.3	1.7	1.2	1.2	0.6	0.6	0.6	0.6	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



TEST NUMBER: P880533

CATALOG NUMBER: LD4C08D010 EU4089030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5
2.5°	372.2	370.5	372.8	370.5	369.4	370.5	369.4	372.8	369.9	367.6	369.9
5°	371.6	369.4	371.6	369.9	368.2	368.8	367.6	371.0	367.6	365.9	367.1
7.5°	370.5	368.8	369.9	368.2	366.5	367.1	365.9	368.8	365.4	363.6	364.8
10°	368.8	367.1	367.6	366.5	364.8	364.8	363.6	365.9	361.9	359.6	360.8
12.5°	366.5	364.2	365.4	363.6	361.4	361.4	360.2	361.9	357.9	355.7	356.2
15°	363.6	361.4	361.4	359.6	357.4	357.4	355.1	356.8	352.3	350.0	350.0
17.5°	360.2	357.4	357.4	355.7	352.8	352.3	350.5	352.3	347.1	344.8	344.8
20°	355.1	352.8	352.3	351.1	348.3	347.7	345.4	346.0	342.0	340.3	339.7
22.5°	348.3	346.0	346.5	344.8	342.5	342.0	339.7	341.4	337.4	335.7	336.3
25°	336.3	335.1	336.3	335.7	334.0	334.0	332.9	334.0	330.6	329.4	330.0
27.5°	322.6	322.0	322.6	322.6	321.5	321.5	321.5	323.2	319.8	319.2	319.2
30°	302.7	302.7	303.2	303.8	303.8	304.9	304.4	306.6	304.4	303.2	304.4
32.5°	276.4	278.7	280.4	280.4	280.4	281.6	282.7	284.4	282.1	282.7	282.7
35°	246.8	248.5	249.7	252.5	250.8	254.8	255.9	258.2	257.6	258.8	258.2
37.5°	213.8	216.0	218.3	222.3	221.7	226.3	228.5	233.1	232.0	234.3	235.4
40°	183.0	186.4	189.8	192.7	194.9	199.5	204.0	209.8	211.5	213.2	213.8
42.5°	153.3	156.8	162.4	166.4	169.9	177.3	183.5	190.4	192.1	195.5	196.6
45°	129.4	132.2	139.1	144.2	147.0	157.9	165.3	173.8	176.7	180.7	182.4
47.5°	107.2	112.3	119.1	125.4	129.4	140.8	150.5	159.6	163.6	168.2	170.4
50°	87.8	93.5	102.6	108.3	114.0	126.5	137.4	147.0	151.0	156.2	158.4
52.5°	71.8	78.1	86.7	92.9	99.2	112.3	123.7	132.8	137.9	141.4	144.8
55°	56.4	63.3	71.8	78.7	83.8	98.0	107.7	116.8	120.3	123.1	124.8
57.5°	43.9	49.0	57.6	63.3	69.5	82.1	91.8	98.6	101.4	104.9	106.0
60°	34.2	39.3	47.3	53.0	58.7	70.7	80.4	87.2	90.1	92.9	94.6
62.5°	27.3	32.5	39.9	45.0	50.2	61.0	69.5	76.4	79.8	82.7	84.4
65°	21.7	26.2	32.5	37.6	41.6	51.3	59.8	66.1	69.5	72.4	74.1
67.5°	17.1	21.1	26.8	30.2	34.2	42.2	49.6	55.3	58.2	61.6	63.3
70°	13.1	15.9	21.1	23.9	26.8	33.6	39.3	45.0	47.9	50.2	51.3
72.5°	9.7	12.0	15.9	18.2	19.9	25.7	30.2	34.2	36.5	38.8	39.9
75°	6.8	8.6	11.4	13.1	14.3	18.2	22.2	25.1	26.8	28.5	30.2
77.5°	4.6	5.7	7.4	8.6	9.7	12.5	14.8	17.1	18.8	20.5	21.1
80°	2.8	4.0	5.1	5.7	6.3	8.0	10.3	11.4	12.5	13.7	14.3
82.5°	1.7	2.3	2.8	3.4	4.0	5.1	6.3	7.4	8.0	9.1	9.7
85°	0.6	1.2	1.2	1.7	1.7	2.8	3.4	4.0	4.6	5.1	5.7
87.5°	0.0	0.0	0.6	0.6	0.6	0.6	1.2	1.2	1.2	1.2	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



TEST NUMBER: P880533

CATALOG NUMBER: LD4C08D010 EU4089030 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	370.5	370.5	370.5	370.5	370.5	370.5	370.5	370.5
2.5°	372.2	370.5	369.4	368.8	372.8	367.6	369.9	370.5
5°	369.9	368.2	367.1	366.5	369.9	365.4	367.1	368.2
7.5°	366.5	365.4	363.6	363.1	366.5	361.4	363.6	364.2
10°	362.5	360.8	359.6	359.1	361.9	356.8	359.1	359.1
12.5°	357.4	356.2	354.0	354.0	356.2	351.7	353.4	353.4
15°	350.5	349.4	347.1	347.1	349.4	344.8	346.5	346.5
17.5°	344.8	343.7	342.0	341.4	343.7	339.1	340.9	340.3
20°	340.3	339.1	336.9	336.9	338.6	334.0	335.7	335.7
22.5°	336.3	335.7	333.4	333.4	335.7	331.1	332.3	331.1
25°	330.0	329.4	327.2	327.7	328.9	324.3	326.0	324.9
27.5°	319.8	319.8	317.5	316.9	318.6	314.6	315.8	315.2
30°	303.8	304.4	301.5	301.5	302.1	298.7	300.4	299.8
32.5°	282.1	282.7	280.4	279.9	281.6	278.7	279.9	279.9
35°	258.2	258.8	257.0	257.0	258.8	257.0	257.0	256.5
37.5°	234.3	235.4	234.3	234.8	236.0	234.3	235.4	234.8
40°	214.9	216.0	214.3	215.4	216.6	214.9	216.6	215.4
42.5°	197.2	198.9	197.8	198.9	200.1	198.9	200.1	198.4
45°	184.1	185.3	184.7	185.3	186.4	185.8	186.4	185.8
47.5°	171.6	173.8	172.7	173.8	175.5	174.4	175.5	173.8
50°	160.2	161.9	161.3	162.4	163.0	162.4	163.6	161.9
52.5°	145.3	147.0	146.5	146.5	147.6	146.5	147.6	146.5
55°	126.0	126.5	126.5	127.1	126.5	126.0	126.5	125.4
57.5°	107.2	108.3	106.6	108.3	107.7	107.2	107.2	106.0
60°	95.2	96.9	95.8	96.9	96.3	96.3	96.3	95.8
62.5°	85.5	86.7	85.5	86.1	86.1	86.1	85.5	84.9
65°	74.7	76.4	75.2	75.8	75.2	74.7	75.2	74.7
67.5°	63.8	64.4	64.4	63.8	63.8	63.8	63.8	62.7
70°	51.9	52.4	51.9	53.0	52.4	51.9	52.4	51.3
72.5°	40.5	41.0	40.5	41.0	40.5	40.5	40.5	40.5
75°	30.2	30.8	30.8	30.8	30.8	30.8	29.7	30.8
77.5°	21.7	21.7	21.7	22.2	21.7	21.7	21.7	21.7
80°	14.8	14.8	14.8	15.4	14.8	15.4	14.8	15.4
82.5°	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
85°	5.1	5.7	5.7	5.1	5.1	5.1	5.1	5.1
87.5°	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)