

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: P880536

Luminaire Tested: **LD4C08D010 EU4089050 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: P880536
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 EU4089050 4LBDWNH
Description: 4 INCH 800 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND 4LBDWN TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

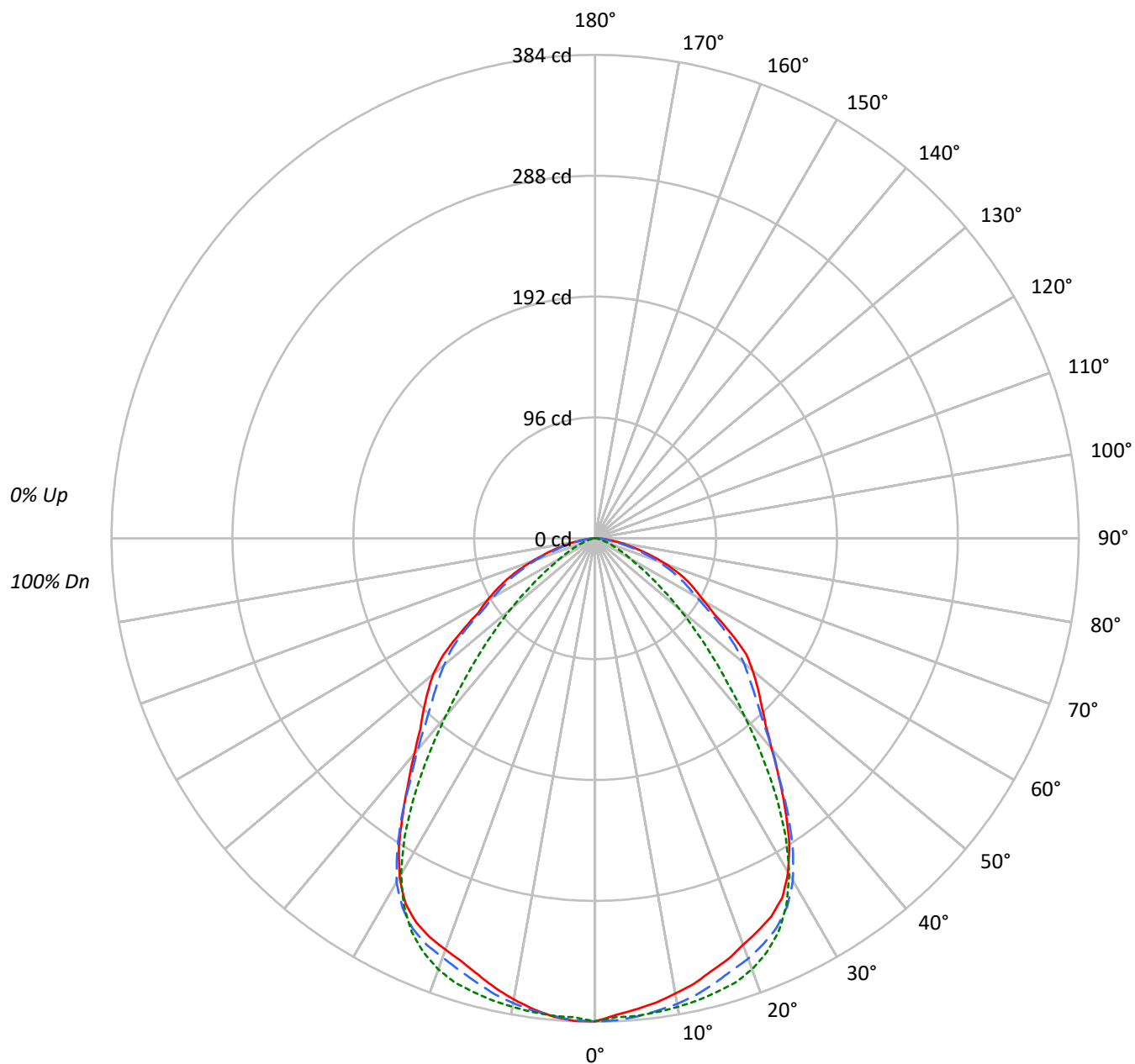
Lumens per Lamp: N/A
Luminaire Lumens: 781.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.18 / 1.19
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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: P880536

CATALOG NUMBER: LD4C08D010 EU4089050 4LBDWNH

Luminous Intensity Polar Plot





TEST NUMBER: P880536

CATALOG NUMBER: LD4C08D010 EU4089050 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°	47139	47139	47139
5°	46308	46961	47035
10°	45808	47143	46394
15°	45279	47454	45648
20°	44922	47628	45458
25°	44895	46739	45614
30°	43466	43721	44047
35°	39489	37629	39849
40°	34945	29637	35795
45°	32420	22569	33445
50°	31154	16704	32052
55°	28209	11502	27823
60°	24522	7838	24374
65°	23692	5669	22471
70°	21408	3808	19073
75°	17658	2516	15142
80°	14220	1698	11249
85°	11700	846	7471



TEST NUMBER: P880536

CATALOG NUMBER: LD4C08D010 EU4089050 4LBDWNH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.2	4.6
10°-20°	103.6	13.3
20°-30°	156.5	20.0
30°-40°	163.8	21.0
40°-50°	132.6	17.0
50°-60°	96.5	12.4
60°-70°	59.5	7.6
70°-80°	26.9	3.4
80°-90°	5.5	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°	296.3	37.9
0°-40°	460.0	58.9
0°-60°	689.2	88.2
0°-90°	781.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	781.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	384	384	384	384	384	
5°	376	381	381	381	381	36
15°	356	366	373	365	359	101
25°	331	341	345	342	336	152
35°	263	267	251	267	266	164
45°	187	181	130	183	192	145
55°	132	123	54	125	130	117
65°	82	73	20	72	77	80
75°	37	32	5	28	32	40
85°	8	6	1	5	5	10
90°	0	0	0	0	0	



TEST NUMBER: P880536

CATALOG NUMBER: LD4C08D010 EU4089050 4LBDWNH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7
2.5°	379.0	379.0	382.6	386.7	383.2	379.6	382.0	380.8	384.9	384.9	383.2
5°	375.5	376.7	379.6	383.2	380.2	376.7	379.6	378.4	382.6	382.6	381.4
7.5°	371.9	372.5	376.1	380.2	377.2	373.7	376.1	375.5	379.0	379.6	378.4
10°	367.2	367.8	371.4	375.5	372.5	369.6	371.9	371.4	376.1	376.1	375.5
12.5°	362.5	363.1	366.6	370.2	367.2	364.3	366.6	366.6	371.4	371.9	371.4
15°	356.0	357.2	360.1	363.7	361.9	358.4	360.7	360.7	364.9	366.0	366.0
17.5°	350.7	351.3	354.2	357.8	355.4	352.4	354.8	354.8	358.9	360.1	360.1
20°	343.6	344.8	347.7	351.3	349.5	347.1	348.9	348.9	353.6	354.8	355.4
22.5°	337.7	338.9	341.2	346.0	343.0	341.2	343.6	343.0	348.3	348.9	348.9
25°	331.2	332.4	335.3	338.3	336.5	334.8	336.5	336.5	340.6	341.2	341.2
27.5°	321.8	322.3	325.3	328.3	326.5	324.1	326.5	325.9	330.0	330.6	330.0
30°	306.4	307.6	308.8	312.9	311.1	309.3	311.7	310.5	314.7	314.7	314.1
32.5°	286.9	286.9	289.3	292.2	289.9	288.7	290.5	291.1	294.0	294.0	292.2
35°	263.3	264.5	266.3	268.0	266.3	265.1	266.9	266.3	269.8	268.6	266.9
37.5°	239.7	240.3	242.1	244.4	242.1	240.3	240.9	240.3	243.2	243.2	240.3
40°	217.9	219.1	220.2	222.6	220.2	219.1	219.6	217.9	221.4	220.2	218.4
42.5°	200.1	200.7	202.5	203.7	201.3	200.7	201.3	200.1	201.9	200.7	197.2
45°	186.6	186.6	187.2	188.9	186.6	186.0	186.0	184.8	186.6	184.2	180.7
47.5°	174.8	175.3	176.0	177.1	175.3	173.6	174.2	171.8	173.0	171.2	166.5
50°	163.0	164.1	164.7	165.9	164.1	163.0	163.5	161.2	161.2	158.2	154.1
52.5°	151.2	151.7	151.2	152.3	151.2	149.4	150.0	147.6	147.6	144.1	139.9
55°	131.7	132.2	132.9	134.0	132.9	131.1	132.2	130.5	130.5	128.1	123.4
57.5°	112.2	112.8	113.4	113.9	113.9	112.8	113.4	112.2	111.6	109.8	106.3
60°	99.8	99.8	99.8	100.4	99.8	99.2	99.2	98.0	98.0	95.6	92.1
62.5°	90.3	90.9	90.9	91.5	90.9	90.3	89.8	88.6	88.0	85.6	82.6
65°	81.5	81.5	80.9	82.1	81.5	80.9	80.9	79.7	78.5	76.2	73.2
67.5°	70.8	71.4	70.8	71.4	71.4	70.8	70.3	69.1	68.5	66.7	63.2
70°	59.6	59.6	59.6	60.2	59.6	59.6	60.2	58.5	57.9	55.5	52.5
72.5°	48.4	49.0	49.0	48.4	49.0	47.8	47.8	47.8	47.2	44.9	41.9
75°	37.2	37.8	37.8	38.4	37.8	37.2	37.2	36.6	36.0	34.2	31.9
77.5°	27.7	27.7	28.3	28.3	28.3	27.7	27.7	26.6	26.6	25.4	23.0
80°	20.1	20.1	19.5	20.1	20.1	19.5	19.5	18.9	18.9	17.7	15.9
82.5°	13.0	13.6	13.6	13.6	13.6	13.0	13.0	13.0	12.4	11.8	10.6
85°	8.3	8.3	8.3	8.3	8.9	8.3	8.9	8.3	8.3	7.1	6.5
87.5°	3.6	3.6	3.6	4.1	4.1	3.6	3.6	3.6	3.6	3.6	2.9
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: P880536

CATALOG NUMBER: LD4C08D010 EU4089050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7
2.5°	383.2	383.7	382.0	384.3	382.6	383.2	383.7	383.2	380.8	380.8	387.3
5°	380.8	382.0	380.2	383.2	382.0	382.0	383.2	382.6	380.2	380.8	386.7
7.5°	378.4	380.2	379.0	382.0	380.2	380.2	381.4	381.4	379.0	379.6	384.9
10°	374.9	377.2	376.7	379.6	377.9	377.9	379.6	379.6	377.2	377.9	383.2
12.5°	371.9	374.3	373.7	376.7	375.5	376.1	376.7	377.9	374.9	376.1	380.8
15°	367.2	369.6	369.6	372.5	371.4	372.5	373.7	375.5	373.1	373.1	377.9
17.5°	361.9	364.9	364.9	367.2	367.2	367.8	370.2	371.9	369.6	370.2	374.3
20°	356.0	359.6	359.6	362.5	361.9	363.1	364.9	366.6	364.3	364.3	369.0
22.5°	350.1	353.1	353.6	355.4	355.4	356.0	357.8	358.9	356.0	356.0	360.7
25°	341.8	344.8	345.4	346.6	345.4	345.4	346.6	347.7	344.8	344.8	348.9
27.5°	330.6	333.6	333.6	333.0	331.8	332.4	331.8	332.4	329.4	328.8	333.0
30°	314.1	315.8	315.8	315.3	313.5	313.5	311.7	312.3	308.2	308.2	311.7
32.5°	291.7	293.4	292.2	291.1	288.7	287.5	286.3	285.7	281.6	281.6	285.7
35°	265.1	266.3	264.5	262.1	259.2	257.4	255.6	253.3	250.3	250.9	253.3
37.5°	237.9	237.9	235.6	230.9	228.5	225.5	222.6	222.6	217.9	217.3	219.1
40°	214.9	212.6	208.4	201.9	197.8	194.8	190.7	188.3	184.8	184.8	187.8
42.5°	194.3	189.5	184.2	175.3	171.2	167.7	162.4	160.0	155.9	155.3	157.0
45°	176.0	171.2	163.5	154.1	148.8	144.7	137.0	134.0	130.5	129.9	131.1
47.5°	161.2	155.9	146.4	134.0	128.7	123.4	115.7	111.6	108.6	106.9	108.6
50°	148.2	141.1	131.1	118.1	111.0	106.3	96.8	92.7	88.6	87.4	88.0
52.5°	134.0	126.9	116.3	102.7	96.2	89.1	80.3	74.4	70.8	69.1	70.8
55°	118.7	111.6	101.0	87.4	80.3	73.8	64.3	59.6	55.5	53.7	55.5
57.5°	102.1	95.6	86.2	72.6	66.1	60.2	51.4	46.7	42.5	41.3	42.5
60°	88.0	82.6	73.2	60.2	54.9	48.4	40.7	36.0	32.5	31.9	32.5
62.5°	78.5	72.6	63.8	51.4	46.0	40.7	33.7	28.9	26.0	25.4	26.0
65°	69.1	62.6	54.3	43.7	38.4	34.2	27.2	23.0	20.1	19.5	20.1
67.5°	58.5	52.5	45.5	36.0	31.9	27.7	21.9	17.7	15.4	14.8	15.4
70°	48.4	43.1	36.0	28.9	24.8	21.9	16.5	13.6	11.2	10.6	11.2
72.5°	38.4	33.7	27.7	21.9	19.5	16.5	13.0	10.0	8.3	7.7	8.3
75°	29.5	26.0	21.2	15.9	14.2	12.4	8.9	7.1	5.9	5.3	5.9
77.5°	20.7	18.3	14.8	11.8	10.0	8.9	6.5	4.7	4.1	3.6	4.1
80°	14.2	12.4	10.0	7.7	6.5	5.3	4.1	2.9	2.4	2.4	2.4
82.5°	9.4	7.7	5.9	4.7	4.1	3.6	2.4	1.8	1.8	1.2	1.2
85°	5.3	4.7	3.6	2.9	2.4	1.8	1.2	1.2	0.6	0.6	0.6
87.5°	2.4	1.8	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: P880536

CATALOG NUMBER: LD4C08D010 EU4089050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7
2.5°	385.5	383.7	386.1	383.7	382.6	383.7	382.6	386.1	383.2	380.8	383.2
5°	384.9	382.6	384.9	383.2	381.4	382.0	380.8	384.3	380.8	379.0	380.2
7.5°	383.7	382.0	383.2	381.4	379.6	380.2	379.0	382.0	378.4	376.7	377.9
10°	382.0	380.2	380.8	379.6	377.9	377.9	376.7	379.0	374.9	372.5	373.7
12.5°	379.6	377.2	378.4	376.7	374.3	374.3	373.1	374.9	370.7	368.4	369.0
15°	376.7	374.3	374.3	372.5	370.2	370.2	367.8	369.6	364.9	362.5	362.5
17.5°	373.1	370.2	370.2	368.4	365.4	364.9	363.1	364.9	359.6	357.2	357.2
20°	367.8	365.4	364.9	363.7	360.7	360.1	357.8	358.4	354.2	352.4	351.9
22.5°	360.7	358.4	358.9	357.2	354.8	354.2	351.9	353.6	349.5	347.7	348.3
25°	348.3	347.1	348.3	347.7	346.0	346.0	344.8	346.0	342.4	341.2	341.8
27.5°	334.1	333.6	334.1	334.1	333.0	333.0	333.0	334.8	331.2	330.6	330.6
30°	313.5	313.5	314.1	314.7	314.7	315.8	315.3	317.6	315.3	314.1	315.3
32.5°	286.3	288.7	290.5	290.5	290.5	291.7	292.8	294.6	292.2	292.8	292.8
35°	255.6	257.4	258.6	261.5	259.8	263.9	265.1	267.4	266.9	268.0	267.4
37.5°	221.4	223.8	226.1	230.3	229.7	234.4	236.7	241.5	240.3	242.7	243.8
40°	189.5	193.1	196.6	199.6	201.9	206.6	211.4	217.3	219.1	220.8	221.4
42.5°	158.8	162.4	168.3	172.4	176.0	183.6	190.1	197.2	199.0	202.5	203.7
45°	134.0	137.0	144.1	149.4	152.3	163.5	171.2	180.1	183.0	187.2	188.9
47.5°	111.0	116.3	123.4	129.9	134.0	145.8	155.9	165.3	169.5	174.2	176.5
50°	90.9	96.8	106.3	112.2	118.1	131.1	142.3	152.3	156.5	161.8	164.1
52.5°	74.4	80.9	89.8	96.2	102.7	116.3	128.1	137.6	142.9	146.4	150.0
55°	58.5	65.5	74.4	81.5	86.8	101.6	111.6	121.0	124.6	127.5	129.3
57.5°	45.5	50.8	59.6	65.5	72.0	85.0	95.1	102.1	105.1	108.6	109.8
60°	35.4	40.7	49.0	54.9	60.8	73.2	83.3	90.3	93.3	96.2	98.0
62.5°	28.3	33.7	41.3	46.7	52.0	63.2	72.0	79.1	82.6	85.6	87.4
65°	22.4	27.2	33.7	39.0	43.1	53.1	62.0	68.5	72.0	75.0	76.8
67.5°	17.7	21.9	27.7	31.3	35.4	43.7	51.4	57.3	60.2	63.8	65.5
70°	13.6	16.5	21.9	24.8	27.7	34.8	40.7	46.7	49.6	52.0	53.1
72.5°	10.0	12.4	16.5	18.9	20.7	26.6	31.3	35.4	37.8	40.2	41.3
75°	7.1	8.9	11.8	13.6	14.8	18.9	23.0	26.0	27.7	29.5	31.3
77.5°	4.7	5.9	7.7	8.9	10.0	13.0	15.4	17.7	19.5	21.2	21.9
80°	2.9	4.1	5.3	5.9	6.5	8.3	10.6	11.8	13.0	14.2	14.8
82.5°	1.8	2.4	2.9	3.6	4.1	5.3	6.5	7.7	8.3	9.4	10.0
85°	0.6	1.2	1.2	1.8	1.8	2.9	3.6	4.1	4.7	5.3	5.9
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: P880536

CATALOG NUMBER: LD4C08D010 EU4089050 4LBDWNH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	383.7	383.7	383.7	383.7	383.7	383.7	383.7	383.7
2.5°	385.5	383.7	382.6	382.0	386.1	380.8	383.2	383.7
5°	383.2	381.4	380.2	379.6	383.2	378.4	380.2	381.4
7.5°	379.6	378.4	376.7	376.1	379.6	374.3	376.7	377.2
10°	375.5	373.7	372.5	371.9	374.9	369.6	371.9	371.9
12.5°	370.2	369.0	366.6	366.6	369.0	364.3	366.0	366.0
15°	363.1	361.9	359.6	359.6	361.9	357.2	358.9	358.9
17.5°	357.2	356.0	354.2	353.6	356.0	351.3	353.1	352.4
20°	352.4	351.3	348.9	348.9	350.7	346.0	347.7	347.7
22.5°	348.3	347.7	345.4	345.4	347.7	343.0	344.2	343.0
25°	341.8	341.2	338.9	339.5	340.6	335.9	337.7	336.5
27.5°	331.2	331.2	328.8	328.3	330.0	325.9	327.1	326.5
30°	314.7	315.3	312.3	312.3	312.9	309.3	311.1	310.5
32.5°	292.2	292.8	290.5	289.9	291.7	288.7	289.9	289.9
35°	267.4	268.0	266.3	266.3	268.0	266.3	266.3	265.7
37.5°	242.7	243.8	242.7	243.2	244.4	242.7	243.8	243.2
40°	222.6	223.8	222.0	223.2	224.4	222.6	224.4	223.2
42.5°	204.3	206.1	204.9	206.1	207.2	206.1	207.2	205.5
45°	190.7	191.9	191.3	191.9	193.1	192.5	193.1	192.5
47.5°	177.7	180.1	178.9	180.1	181.8	180.7	181.8	180.1
50°	165.9	167.7	167.1	168.3	168.8	168.3	169.5	167.7
52.5°	150.5	152.3	151.7	151.7	152.9	151.7	152.9	151.7
55°	130.5	131.1	131.1	131.7	131.1	130.5	131.1	129.9
57.5°	111.0	112.2	110.4	112.2	111.6	111.0	111.0	109.8
60°	98.6	100.4	99.2	100.4	99.8	99.8	99.8	99.2
62.5°	88.6	89.8	88.6	89.1	89.1	89.1	88.6	88.0
65°	77.3	79.1	77.9	78.5	77.9	77.3	77.9	77.3
67.5°	66.1	66.7	66.7	66.1	66.1	66.1	66.1	65.0
70°	53.7	54.3	53.7	54.9	54.3	53.7	54.3	53.1
72.5°	41.9	42.5	41.9	42.5	41.9	41.9	41.9	41.9
75°	31.3	31.9	31.9	31.9	31.9	31.9	30.7	31.9
77.5°	22.4	22.4	22.4	23.0	22.4	22.4	22.4	22.4
80°	15.4	15.4	15.4	15.9	15.4	15.9	15.4	15.9
82.5°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
85°	5.3	5.9	5.9	5.3	5.3	5.3	5.3	5.3
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)