

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: P#

Luminaire Tested: **LD4C05D010 EX4C059035 4LBSQLWWH**

Issue Date: 2/18/2022

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: P#
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P219529)
Test Lab: INNOVATION CENTER
Issue Date: 2/18/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LD4C05D010 EX4C059035 4LBSQLWWH
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 3500K, 90CRI LEDS AND 4LBSQLWW TRIM WITH H FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

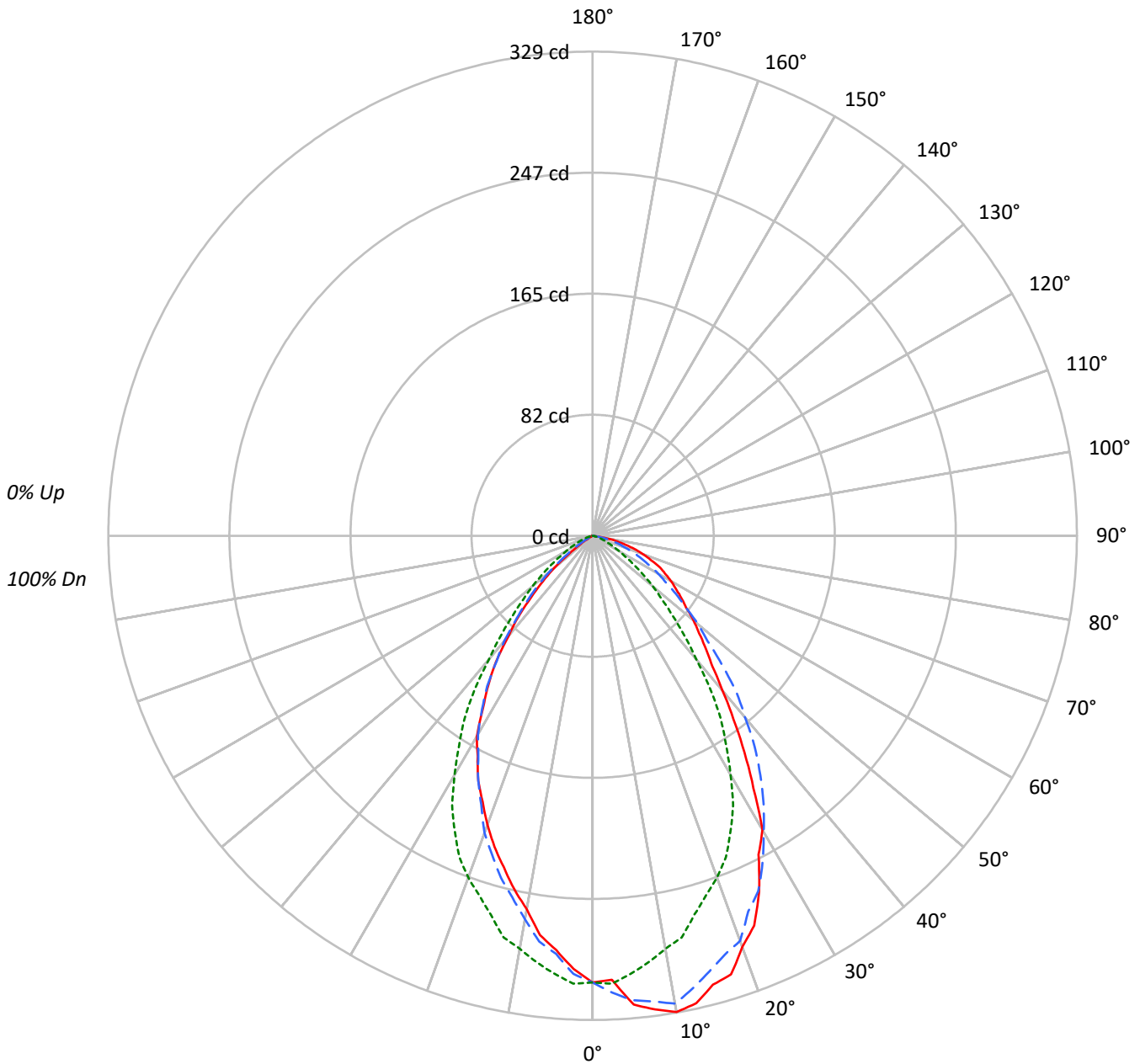
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 435.0 lumens
Efficiency: N/A
Efficacy: 60.4 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1 / 1.06
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 7.2
Input Voltage (V):
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





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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	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																			
2	104	98	93	89	102	96	92	88	93	89	86	90	87	84	87	84	82	80																			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	77	74	72																			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64																			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	60	68	64	60	58																			
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	54	53																			
7	75	63	56	51	73	63	56	51	61	55	50	60	54	50	59	54	50	48																			
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44																			
9	66	55	48	43	65	54	47	43	53	47	43	52	46	42	51	46	42	41																			
10	62	51	44	40	61	51	44	40	50	44	39	49	43	39	48	43	39	38																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	29284	29284	29284
5°	30975	28931	27382
10°	32195	27914	25239
15°	31546	26641	23295
20°	30527	25373	21450
25°	28479	23592	19568
30°	25704	20879	17515
35°	21179	17869	14535
40°	17281	13792	11185
45°	14846	10480	8037
50°	13435	7971	5074
55°	12364	5753	1834
60°	11868	3937	289
65°	11461	2648	91
70°	10269	1834	113
75°	8425	969	0
80°	5279	389	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.4	6.5
10°-20°	76.6	17.6
20°-30°	102.3	23.5
30°-40°	97.1	22.3
40°-50°	67.1	15.4
50°-60°	37.1	8.5
60°-70°	18.4	4.2
70°-80°	7.3	1.7
80°-90°	0.7	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°	207.3	47.7
0°-40°	304.4	70.0
0°-60°	408.6	93.9
0°-90°	435.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	435.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	304	304	304	304	304	
5°	320	317	299	285	283	31
15°	316	306	267	240	233	89
25°	268	266	222	184	184	122
35°	180	199	152	125	123	113
45°	109	125	77	63	59	85
55°	74	69	34	18	11	66
65°	50	36	12	0	0	49
75°	23	14	3	0	0	24
85°	0	0	0	0	0	2
90°	0	0	0	0	0	



TEST NUMBER: P#

CATALOG NUMBER: LD4C05D010 EX4C059035 4LBSQLWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5
2.5°	302.0	310.4	311.1	310.4	311.5	311.1	312.9	311.1	313.3	310.0	310.8
5°	319.8	316.6	323.5	319.8	319.8	319.5	318.4	318.0	319.5	314.8	316.9
7.5°	324.6	329.3	335.5	327.9	328.2	328.2	326.0	325.3	325.3	316.6	319.1
10°	328.6	325.7	328.9	326.0	328.6	328.2	329.7	324.9	328.2	323.1	322.8
12.5°	325.3	324.2	328.6	323.9	322.4	322.8	320.9	319.8	320.9	315.1	314.8
15°	315.8	316.9	323.5	318.4	317.7	316.9	314.8	311.1	314.0	306.0	306.4
17.5°	312.6	310.8	311.8	307.5	308.6	307.8	307.5	304.2	303.5	298.4	298.4
20°	297.3	301.3	301.3	298.4	298.4	298.0	293.3	296.2	292.9	291.5	292.9
22.5°	286.7	287.1	287.1	284.5	284.9	283.5	280.9	279.1	280.9	279.1	276.2
25°	267.5	268.2	272.5	267.8	267.1	268.5	266.4	265.3	264.9	260.5	266.4
27.5°	244.2	251.4	251.1	249.3	251.4	248.5	247.4	247.8	248.9	248.5	250.0
30°	230.7	231.8	232.9	231.4	231.8	230.7	230.7	231.1	234.0	232.9	232.5
32.5°	203.4	207.0	210.0	210.0	210.3	211.4	211.0	218.7	220.5	216.9	216.1
35°	179.8	182.3	184.8	185.2	189.9	190.3	190.7	192.9	197.9	199.0	198.7
37.5°	157.2	159.7	160.5	163.7	166.3	168.8	171.8	174.7	179.0	182.7	180.9
40°	137.2	138.3	140.1	141.5	146.6	146.6	148.1	153.9	158.7	161.6	161.2
42.5°	120.4	120.8	122.3	124.8	129.5	128.4	129.5	133.5	140.4	140.8	144.8
45°	108.8	108.4	109.5	109.9	112.8	114.3	115.0	117.9	123.7	124.4	124.8
47.5°	98.3	97.9	99.7	100.4	101.5	103.0	103.0	103.3	105.5	107.3	105.9
50°	89.5	89.5	89.5	90.2	92.1	91.7	92.1	93.5	94.6	93.9	93.5
52.5°	80.0	81.5	82.6	83.0	83.3	83.3	83.7	83.0	82.6	81.5	79.3
55°	73.5	75.0	75.0	75.0	75.0	76.4	74.6	75.0	75.0	72.0	69.1
57.5°	67.0	68.4	69.5	68.0	69.5	68.0	67.3	67.0	66.2	63.3	58.9
60°	61.5	62.2	61.9	61.5	62.2	61.1	60.4	58.9	58.2	54.2	51.3
62.5°	55.3	55.7	56.0	55.3	54.6	54.2	52.8	50.6	49.1	45.8	43.3
65°	50.2	49.1	48.8	48.4	47.7	46.6	45.5	42.9	41.8	38.9	36.4
67.5°	42.6	42.2	42.9	41.8	40.0	40.0	38.9	36.8	34.2	32.4	29.8
70°	36.4	36.0	35.3	34.2	33.8	32.4	32.4	29.8	29.1	25.8	23.7
72.5°	29.8	29.8	28.7	27.7	26.6	25.8	25.5	23.7	22.6	20.7	18.9
75°	22.6	22.6	22.2	21.1	20.4	19.6	19.3	17.8	16.7	14.9	13.8
77.5°	16.0	16.0	14.6	13.8	14.2	13.5	12.7	12.4	12.0	10.9	9.5
80°	9.5	9.1	8.0	8.4	8.0	8.0	7.6	7.3	6.5	5.8	5.1
82.5°	2.6	2.9	2.9	2.9	3.3	2.6	2.6	2.6	2.9	2.9	1.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4
87.5°	0.4	0.7	1.5	1.5	1.5	1.5	1.5	1.1	1.1	1.1	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):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°
0°	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5
2.5°	307.1	306.7	307.1	304.6	310.4	306.0	305.3	304.6	307.1	304.6	300.9
5°	313.7	310.0	308.9	307.8	311.1	306.0	304.9	305.3	303.5	298.7	299.1
7.5°	315.8	312.6	309.3	302.4	305.3	304.2	301.3	299.1	296.2	292.2	291.5
10°	316.6	312.9	308.2	306.0	301.7	300.2	299.1	295.5	291.8	284.9	283.1
12.5°	314.4	310.0	304.2	302.4	299.1	294.4	291.8	288.2	284.9	279.5	275.5
15°	304.9	301.3	299.5	293.3	291.8	288.9	283.8	278.7	274.0	266.7	264.5
17.5°	294.0	292.6	290.7	286.0	285.6	282.7	278.0	273.6	267.5	256.2	252.5
20°	282.7	282.7	276.9	275.1	278.7	272.9	269.3	265.3	252.5	247.1	240.5
22.5°	274.4	270.4	267.1	264.2	264.5	260.9	255.8	247.8	243.1	236.5	228.9
25°	258.0	259.4	252.2	251.1	252.2	243.8	241.3	234.7	227.8	221.6	215.8
27.5°	247.8	243.8	239.1	235.1	235.1	231.8	224.5	223.1	212.5	206.7	199.4
30°	232.5	229.6	225.6	219.8	219.1	216.5	210.7	207.0	196.1	187.4	183.4
32.5°	213.2	212.1	208.9	202.3	200.1	197.2	189.9	183.8	178.7	168.8	164.1
35°	199.4	195.4	188.5	183.0	181.2	176.1	170.3	165.9	160.5	151.7	145.6
37.5°	178.7	174.7	168.1	161.6	161.6	156.5	148.5	144.1	136.5	131.4	126.3
40°	160.5	155.4	148.8	141.2	140.1	132.8	129.5	122.3	117.5	109.5	108.8
42.5°	140.1	135.4	129.5	123.7	119.4	115.7	107.3	101.9	96.8	92.8	91.7
45°	121.5	115.3	110.3	103.0	98.6	94.2	88.8	85.2	81.1	76.8	74.2
47.5°	105.5	100.4	93.1	86.6	82.2	80.0	73.9	69.9	66.6	63.7	61.9
50°	89.2	83.0	79.0	71.7	71.0	65.9	60.8	57.5	55.7	53.1	50.6
52.5°	76.8	71.0	65.5	60.0	57.1	55.3	50.6	47.3	44.8	42.9	41.5
55°	64.8	59.7	55.3	49.9	48.0	45.5	40.0	39.3	36.8	34.2	32.4
57.5°	55.7	50.9	45.8	42.2	38.9	37.1	32.7	29.8	28.4	26.2	24.4
60°	47.3	42.2	38.2	33.8	32.4	29.8	26.6	24.0	22.2	20.4	18.6
62.5°	39.7	35.3	30.9	27.3	25.1	23.7	21.1	18.9	17.1	15.7	14.2
65°	32.7	28.7	25.1	21.5	20.4	18.6	16.7	14.9	13.5	11.6	10.2
67.5°	26.9	23.3	19.6	17.1	16.0	15.3	13.1	11.3	10.2	9.1	7.6
70°	21.1	18.6	15.7	13.5	12.4	11.3	9.8	8.7	7.3	6.5	5.5
72.5°	16.4	14.2	11.6	9.8	9.1	8.4	6.9	5.8	5.1	4.4	3.6
75°	11.6	9.8	8.4	6.5	6.2	5.8	4.7	4.0	3.3	2.6	2.2
77.5°	8.0	6.5	5.1	4.4	4.0	3.3	2.9	2.2	1.8	1.5	1.1
80°	4.4	3.3	2.6	2.2	1.8	1.5	1.5	1.1	0.7	0.7	0.4
82.5°	1.5	1.1	0.7	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4
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°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	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: P#

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CANDELA DISTRIBUTION (continued):

	100°	105°	110°	112.5°	115°	120°	125°	130°	135°	140°	145°
0°	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5
2.5°	303.1	299.1	300.2	300.2	299.5	299.5	298.7	297.6	298.0	295.8	291.1
5°	299.8	294.7	294.0	294.7	291.8	291.1	289.7	291.8	285.3	287.8	284.9
7.5°	290.4	285.6	284.5	287.1	283.5	281.3	280.9	283.8	278.0	275.1	271.8
10°	279.8	278.0	274.7	272.9	271.8	272.2	269.3	265.6	264.5	263.8	260.9
12.5°	270.4	266.4	263.4	261.3	260.5	260.5	255.8	255.1	251.8	251.1	246.7
15°	259.1	254.4	252.5	249.6	247.1	248.5	243.1	241.6	240.5	235.8	236.5
17.5°	249.3	244.2	239.8	238.0	235.8	233.6	228.5	229.6	227.1	227.1	220.5
20°	236.5	231.1	227.8	224.1	224.1	221.2	217.6	218.0	214.7	211.4	205.6
22.5°	223.1	217.2	213.2	211.8	208.1	207.4	203.0	201.9	197.6	197.9	192.9
25°	208.9	203.0	197.6	197.9	194.7	193.2	190.7	185.6	183.8	181.6	180.1
27.5°	192.1	188.1	183.4	183.0	176.8	177.2	173.9	172.5	168.1	169.2	165.9
30°	176.8	171.0	166.7	165.6	163.0	162.3	157.2	155.0	155.7	152.8	151.0
32.5°	161.2	152.5	150.6	148.5	147.0	145.2	141.5	143.0	139.7	140.4	137.5
35°	140.4	136.8	132.1	132.1	130.6	129.2	126.6	128.1	124.8	123.4	120.4
37.5°	123.0	119.7	115.0	116.4	113.9	111.7	109.5	109.9	107.0	106.6	103.7
40°	104.1	102.2	99.0	99.0	97.2	97.2	96.1	95.0	93.1	91.0	87.7
42.5°	86.2	84.8	83.3	83.7	81.1	83.3	80.4	82.2	76.4	76.1	73.9
45°	73.1	69.9	70.2	68.8	67.3	68.0	65.5	66.2	63.0	62.2	60.0
47.5°	59.3	58.2	56.0	55.3	55.3	54.2	53.1	52.8	51.3	49.5	46.6
50°	48.8	44.8	44.0	42.9	42.2	42.2	40.8	38.6	38.9	37.1	34.2
52.5°	38.2	34.9	33.5	33.1	31.7	30.9	29.1	27.7	26.6	25.8	24.0
55°	29.5	26.6	24.7	24.7	22.6	22.6	20.0	18.9	17.5	16.0	14.9
57.5°	22.2	20.7	18.9	17.5	16.7	14.9	13.5	11.6	10.5	8.4	6.9
60°	16.7	15.3	13.5	12.4	11.6	9.8	8.0	6.5	4.0	3.3	2.9
62.5°	12.4	10.9	9.1	8.4	7.6	6.2	4.4	2.2	1.1	1.1	1.1
65°	9.1	7.3	5.8	5.1	4.4	3.3	1.5	0.7	0.4	0.4	0.4
67.5°	6.2	4.7	3.3	2.9	2.2	1.1	0.4	0.4	0.4	0.4	0.4
70°	4.0	2.9	1.5	1.1	0.7	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	2.6	1.5	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.5	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	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	0.4	0.4	0.4
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: P#

CATALOG NUMBER: LD4C05D010 EX4C059035 4LBSQLWWH

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	303.5	303.5	303.5	303.5	303.5	303.5	303.5	303.5
2.5°	296.2	293.6	295.1	291.8	293.3	295.8	294.0	294.7
5°	286.0	284.5	282.7	278.0	281.6	284.5	283.1	282.7
7.5°	275.1	270.0	272.5	271.1	270.4	273.3	270.0	273.6
10°	263.8	260.2	259.8	257.3	257.3	259.4	259.8	257.6
12.5°	247.1	245.3	245.3	244.9	244.5	246.7	247.1	246.0
15°	235.1	234.3	232.5	232.2	230.0	233.2	233.6	233.2
17.5°	220.5	220.9	219.1	219.1	220.5	221.6	218.7	221.6
20°	210.7	208.9	208.1	204.9	206.7	208.5	208.5	208.9
22.5°	196.5	193.6	194.7	192.9	191.8	194.3	194.3	195.4
25°	180.5	180.5	181.2	180.1	180.9	182.3	181.2	183.8
27.5°	165.2	166.7	166.7	165.2	165.9	170.3	172.1	169.2
30°	151.0	151.4	152.5	151.7	153.9	155.4	155.0	157.2
32.5°	135.0	136.8	137.5	136.5	137.2	140.4	138.6	138.3
35°	122.6	119.4	119.0	119.4	120.8	121.5	120.8	123.4
37.5°	104.8	103.7	102.2	102.6	103.7	105.2	105.9	107.7
40°	87.7	86.2	86.2	85.9	84.8	88.8	88.8	88.8
42.5°	72.8	72.4	70.6	70.6	72.0	73.1	72.4	75.0
45°	59.7	58.2	57.1	57.1	58.2	58.2	59.3	58.9
47.5°	46.9	45.5	45.8	44.8	45.8	47.3	45.5	45.8
50°	35.3	35.3	34.6	35.3	34.9	35.3	34.6	33.8
52.5°	24.0	27.3	27.7	26.2	22.9	20.0	18.2	19.6
55°	13.8	12.4	12.4	12.0	11.3	10.9	9.8	10.9
57.5°	6.9	6.2	6.2	6.2	5.8	5.5	4.7	4.7
60°	2.9	2.6	2.6	2.2	1.8	1.5	1.1	1.5
62.5°	1.1	0.7	0.7	0.7	0.7	0.7	0.7	0.7
65°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
67.5°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
70°	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	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
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)