

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 EX4C059050 4LBSQLWWLI**

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 EX4C059050 4LBSQLWWLI
Description: 4 INCH 500 LUMEN PORTFOLIO LED DOWNLIGHT WITH, 5000K, 90CRI LEDS AND 4LBSQLWW TRIM WITH LI FINISH
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

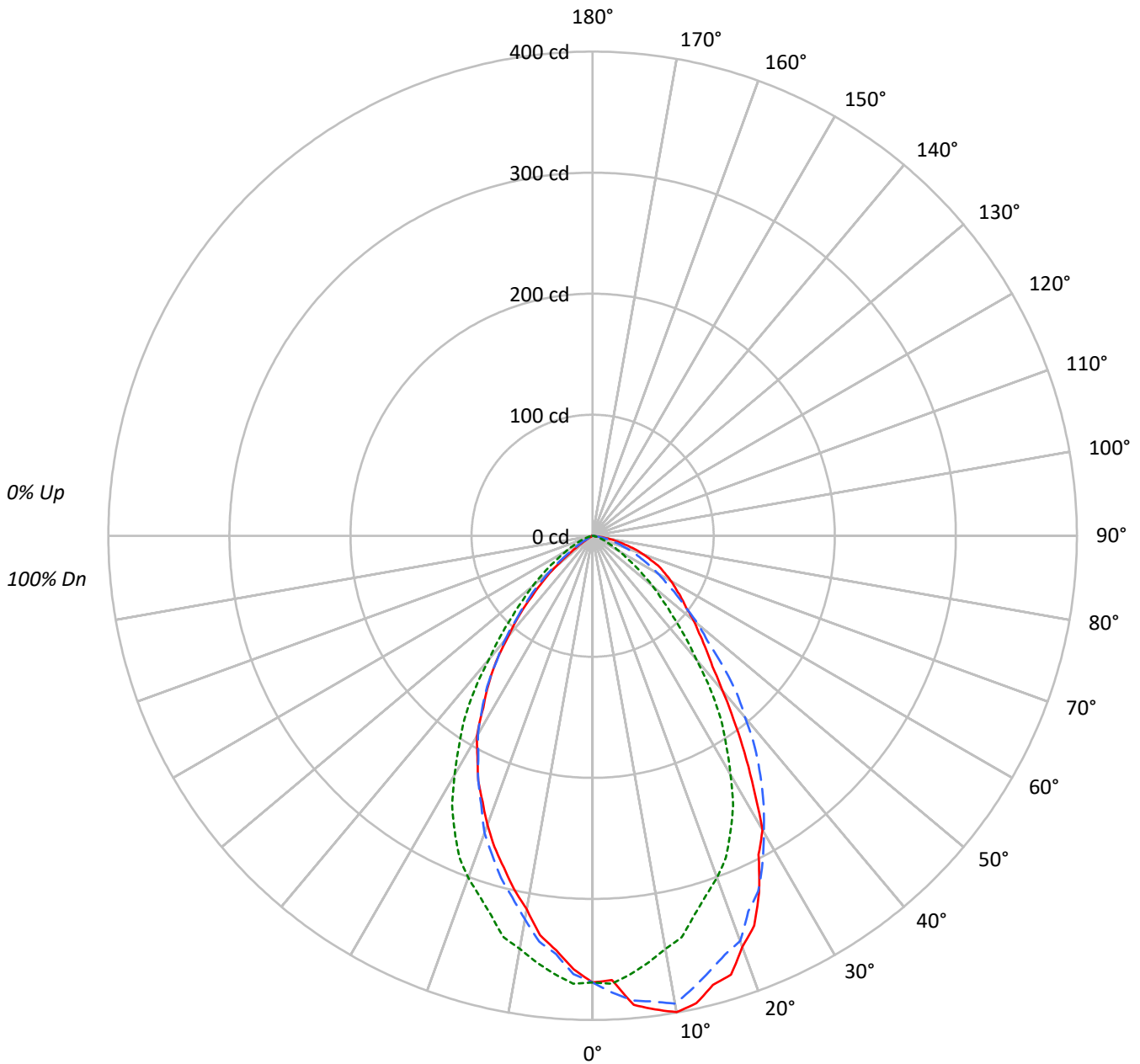
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 529.0 lumens
Efficiency: N/A
Efficacy: 73.5 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 (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	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°	35604	35604	35604
5°	37678	35188	33300
10°	39152	33949	30696
15°	38369	32395	28330
20°	37119	30856	26081
25°	34633	28692	23795
30°	31263	25392	21303
35°	25749	21732	17669
40°	21010	16778	13603
45°	18053	12745	9784
50°	16347	9697	6185
55°	15039	6998	2237
60°	14435	4786	347
65°	13950	3242	114
70°	12469	2257	141
75°	10215	1156	0
80°	6390	500	0
85°	0	0	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.6	6.5
10°-20°	93.2	17.6
20°-30°	124.4	23.5
30°-40°	118.1	22.3
40°-50°	81.6	15.4
50°-60°	45.1	8.5
60°-70°	22.4	4.2
70°-80°	8.8	1.7
80°-90°	0.8	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°	252.1	47.7
0°-40°	370.2	70.0
0°-60°	496.9	93.9
0°-90°	529.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	529.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	369	369	369	369	369	
5°	389	385	363	347	344	37
15°	384	373	324	292	284	109
25°	325	324	270	224	224	148
35°	219	242	184	152	150	137
45°	132	152	93	77	72	103
55°	89	84	42	21	13	80
65°	61	44	14	0	0	59
75°	27	17	3	0	0	29
85°	0	0	0	0	0	3
90°	0	0	0	0	0	



TEST NUMBER: P#

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0
2.5°	367.3	377.5	378.3	377.5	378.8	378.3	380.6	378.3	381.0	377.0	377.9
5°	389.0	385.0	393.4	389.0	389.0	388.5	387.2	386.7	388.5	382.8	385.4
7.5°	394.7	400.5	408.0	398.7	399.1	399.1	396.5	395.6	395.6	385.0	388.1
10°	399.6	396.0	400.0	396.5	399.6	399.1	400.9	395.2	399.1	392.9	392.5
12.5°	395.6	394.3	399.6	393.8	392.1	392.5	390.3	389.0	390.3	383.2	382.8
15°	384.1	385.4	393.4	387.2	386.3	385.4	382.8	378.3	381.9	372.1	372.6
17.5°	380.1	377.9	379.2	373.9	375.2	374.4	373.9	369.9	369.0	362.9	362.9
20°	361.5	366.4	366.4	362.9	362.9	362.4	356.7	360.2	356.2	354.4	356.2
22.5°	348.7	349.1	349.1	346.0	346.5	344.7	341.6	339.4	341.6	339.4	335.9
25°	325.3	326.1	331.4	325.7	324.8	326.6	323.9	322.6	322.1	316.8	323.9
27.5°	296.9	305.8	305.3	303.1	305.8	302.2	300.9	301.3	302.7	302.2	304.0
30°	280.6	281.9	283.2	281.4	281.9	280.6	280.6	281.0	284.5	283.2	282.8
32.5°	247.4	251.8	255.3	255.3	255.8	257.1	256.6	265.9	268.2	263.7	262.9
35°	218.6	221.7	224.8	225.2	231.0	231.4	231.9	234.5	240.7	242.1	241.6
37.5°	191.2	194.3	195.1	199.1	202.2	205.3	208.9	212.4	217.7	222.1	219.9
40°	166.8	168.1	170.4	172.1	178.3	178.3	180.1	187.2	192.9	196.5	196.0
42.5°	146.5	146.9	148.7	151.8	157.5	156.2	157.5	162.4	170.8	171.3	176.1
45°	132.3	131.9	133.2	133.6	137.2	139.0	139.8	143.4	150.4	151.3	151.8
47.5°	119.5	119.0	121.3	122.1	123.5	125.2	125.2	125.7	128.3	130.5	128.8
50°	108.9	108.9	108.9	109.7	112.0	111.5	112.0	113.7	115.0	114.2	113.7
52.5°	97.3	99.1	100.4	100.9	101.3	101.3	101.8	100.9	100.4	99.1	96.5
55°	89.4	91.2	91.2	91.2	91.2	92.9	90.7	91.2	91.2	87.6	84.1
57.5°	81.4	83.2	84.5	82.7	84.5	82.7	81.9	81.4	80.5	77.0	71.7
60°	74.8	75.7	75.2	74.8	75.7	74.3	73.5	71.7	70.8	65.9	62.4
62.5°	67.3	67.7	68.1	67.3	66.4	65.9	64.2	61.5	59.7	55.8	52.7
65°	61.1	59.7	59.3	58.9	58.0	56.6	55.3	52.2	50.9	47.3	44.2
67.5°	51.8	51.3	52.2	50.9	48.7	48.7	47.3	44.7	41.6	39.4	36.3
70°	44.2	43.8	42.9	41.6	41.2	39.4	39.4	36.3	35.4	31.4	28.8
72.5°	36.3	36.3	35.0	33.6	32.3	31.4	31.0	28.8	27.4	25.2	23.0
75°	27.4	27.4	27.0	25.7	24.8	23.9	23.5	21.7	20.4	18.2	16.8
77.5°	19.5	19.5	17.7	16.8	17.2	16.4	15.5	15.0	14.6	13.3	11.5
80°	11.5	11.1	9.7	10.2	9.7	9.7	9.3	8.8	8.0	7.1	6.2
82.5°	3.1	3.5	3.5	3.5	4.0	3.1	3.1	3.1	3.5	3.5	2.2
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5
87.5°	0.5	0.9	1.8	1.8	1.8	1.8	1.8	1.3	1.3	1.3	0.9
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°	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0
2.5°	373.5	373.0	373.5	370.4	377.5	372.1	371.3	370.4	373.5	370.4	366.0
5°	381.4	377.0	375.7	374.4	378.3	372.1	370.8	371.3	369.0	363.3	363.7
7.5°	384.1	380.1	376.1	367.7	371.3	369.9	366.4	363.7	360.2	355.3	354.4
10°	385.0	380.6	374.8	372.1	366.8	365.1	363.7	359.3	354.9	346.5	344.3
12.5°	382.3	377.0	369.9	367.7	363.7	358.0	354.9	350.5	346.5	339.8	335.0
15°	370.8	366.4	364.2	356.7	354.9	351.3	345.2	339.0	333.2	324.3	321.7
17.5°	357.5	355.8	353.6	347.8	347.4	343.8	338.1	332.8	325.3	311.5	307.1
20°	343.8	343.8	336.7	334.5	339.0	331.9	327.5	322.6	307.1	300.5	292.5
22.5°	333.7	328.8	324.8	321.3	321.7	317.3	311.1	301.3	295.6	287.6	278.3
25°	313.7	315.5	306.7	305.3	306.7	296.5	293.4	285.4	277.0	269.5	262.4
27.5°	301.3	296.5	290.7	285.9	285.9	281.9	273.0	271.3	258.4	251.3	242.5
30°	282.8	279.2	274.4	267.3	266.4	263.3	256.2	251.8	238.5	227.9	223.0
32.5°	259.3	258.0	254.0	246.0	243.4	239.8	231.0	223.5	217.3	205.3	199.6
35°	242.5	237.6	229.2	222.6	220.4	214.2	207.1	201.8	195.1	184.5	177.0
37.5°	217.3	212.4	204.4	196.5	196.5	190.3	180.5	175.2	165.9	159.7	153.5
40°	195.1	189.0	181.0	171.7	170.4	161.5	157.5	148.7	142.9	133.2	132.3
42.5°	170.4	164.6	157.5	150.4	145.1	140.7	130.5	123.9	117.7	112.8	111.5
45°	147.8	140.3	134.1	125.2	119.9	114.6	108.0	103.6	98.7	93.4	90.3
47.5°	128.3	122.1	113.3	105.3	100.0	97.3	89.8	85.0	81.0	77.4	75.2
50°	108.4	100.9	96.0	87.2	86.3	80.1	73.9	69.9	67.7	64.6	61.5
52.5°	93.4	86.3	79.6	73.0	69.5	67.3	61.5	57.5	54.4	52.2	50.4
55°	78.8	72.6	67.3	60.6	58.4	55.3	48.7	47.8	44.7	41.6	39.4
57.5°	67.7	61.9	55.8	51.3	47.3	45.1	39.8	36.3	34.5	31.9	29.6
60°	57.5	51.3	46.5	41.2	39.4	36.3	32.3	29.2	27.0	24.8	22.6
62.5°	48.2	42.9	37.6	33.2	30.5	28.8	25.7	23.0	20.8	19.0	17.2
65°	39.8	35.0	30.5	26.1	24.8	22.6	20.4	18.2	16.4	14.2	12.4
67.5°	32.7	28.3	23.9	20.8	19.5	18.6	15.9	13.7	12.4	11.1	9.3
70°	25.7	22.6	19.0	16.4	15.0	13.7	11.9	10.6	8.8	8.0	6.6
72.5°	19.9	17.2	14.2	11.9	11.1	10.2	8.4	7.1	6.2	5.3	4.4
75°	14.2	11.9	10.2	8.0	7.5	7.1	5.8	4.9	4.0	3.1	2.7
77.5°	9.7	8.0	6.2	5.3	4.9	4.0	3.5	2.7	2.2	1.8	1.3
80°	5.3	4.0	3.1	2.7	2.2	1.8	1.8	1.3	0.9	0.9	0.5
82.5°	1.8	1.3	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.0	0.5
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°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	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°	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0
2.5°	368.6	363.7	365.1	365.1	364.2	364.2	363.3	362.0	362.4	359.8	354.0
5°	364.6	358.4	357.5	358.4	354.9	354.0	352.2	354.9	346.9	350.0	346.5
7.5°	353.1	347.4	346.0	349.1	344.7	342.0	341.6	345.2	338.1	334.5	330.6
10°	340.3	338.1	334.1	331.9	330.6	331.0	327.5	323.0	321.7	320.8	317.3
12.5°	328.8	323.9	320.4	317.7	316.8	316.8	311.1	310.2	306.2	305.3	300.0
15°	315.1	309.3	307.1	303.6	300.5	302.2	295.6	293.8	292.5	286.7	287.6
17.5°	303.1	296.9	291.6	289.4	286.7	284.1	277.9	279.2	276.1	276.1	268.2
20°	287.6	281.0	277.0	272.6	272.6	269.0	264.6	265.1	261.1	257.1	250.0
22.5°	271.3	264.2	259.3	257.5	253.1	252.2	246.9	245.6	240.3	240.7	234.5
25°	254.0	246.9	240.3	240.7	236.7	235.0	231.9	225.7	223.5	220.8	219.0
27.5°	233.6	228.8	223.0	222.6	215.1	215.5	211.5	209.8	204.4	205.8	201.8
30°	215.1	208.0	202.7	201.3	198.2	197.4	191.2	188.5	189.4	185.8	183.6
32.5°	196.0	185.4	183.2	180.5	178.8	176.6	172.1	173.9	169.9	170.8	167.3
35°	170.8	166.4	160.6	160.6	158.9	157.1	154.0	155.8	151.8	150.0	146.5
37.5°	149.6	145.6	139.8	141.6	138.5	135.8	133.2	133.6	130.1	129.7	126.1
40°	126.6	124.3	120.4	120.4	118.1	118.1	116.8	115.5	113.3	110.6	106.6
42.5°	104.9	103.1	101.3	101.8	98.7	101.3	97.8	100.0	92.9	92.5	89.8
45°	88.9	85.0	85.4	83.6	81.9	82.7	79.6	80.5	76.6	75.7	73.0
47.5°	72.1	70.8	68.1	67.3	67.3	65.9	64.6	64.2	62.4	60.2	56.6
50°	59.3	54.4	53.5	52.2	51.3	51.3	49.6	46.9	47.3	45.1	41.6
52.5°	46.5	42.5	40.7	40.3	38.5	37.6	35.4	33.6	32.3	31.4	29.2
55°	35.8	32.3	30.1	30.1	27.4	27.4	24.3	23.0	21.2	19.5	18.2
57.5°	27.0	25.2	23.0	21.2	20.4	18.2	16.4	14.2	12.8	10.2	8.4
60°	20.4	18.6	16.4	15.0	14.2	11.9	9.7	8.0	4.9	4.0	3.5
62.5°	15.0	13.3	11.1	10.2	9.3	7.5	5.3	2.7	1.3	1.3	1.3
65°	11.1	8.8	7.1	6.2	5.3	4.0	1.8	0.9	0.5	0.5	0.5
67.5°	7.5	5.8	4.0	3.5	2.7	1.3	0.5	0.5	0.5	0.5	0.5
70°	4.9	3.5	1.8	1.3	0.9	0.5	0.5	0.5	0.5	0.5	0.5
72.5°	3.1	1.8	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	1.8	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	0.5	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	0.5	0.5	0.5
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 EX4C059050 4LBSQLWWLI

CANDELA DISTRIBUTION (continued):

	150°	155°	157.5°	160°	165°	170°	175°	180°
0°	369.0	369.0	369.0	369.0	369.0	369.0	369.0	369.0
2.5°	360.2	357.1	358.9	354.9	356.7	359.8	357.5	358.4
5°	347.8	346.0	343.8	338.1	342.5	346.0	344.3	343.8
7.5°	334.5	328.3	331.4	329.7	328.8	332.3	328.3	332.8
10°	320.8	316.4	316.0	312.9	312.9	315.5	316.0	313.3
12.5°	300.5	298.3	298.3	297.8	297.4	300.0	300.5	299.1
15°	285.9	285.0	282.8	282.3	279.7	283.6	284.1	283.6
17.5°	268.2	268.6	266.4	266.4	268.2	269.5	265.9	269.5
20°	256.2	254.0	253.1	249.1	251.3	253.6	253.6	254.0
22.5°	238.9	235.4	236.7	234.5	233.2	236.3	236.3	237.6
25°	219.5	219.5	220.4	219.0	219.9	221.7	220.4	223.5
27.5°	200.9	202.7	202.7	200.9	201.8	207.1	209.3	205.8
30°	183.6	184.1	185.4	184.5	187.2	189.0	188.5	191.2
32.5°	164.2	166.4	167.3	165.9	166.8	170.8	168.6	168.1
35°	149.1	145.1	144.7	145.1	146.9	147.8	146.9	150.0
37.5°	127.4	126.1	124.3	124.8	126.1	127.9	128.8	131.0
40°	106.6	104.9	104.9	104.4	103.1	108.0	108.0	108.0
42.5°	88.5	88.1	85.9	85.9	87.6	88.9	88.1	91.2
45°	72.6	70.8	69.5	69.5	70.8	70.8	72.1	71.7
47.5°	57.1	55.3	55.8	54.4	55.8	57.5	55.3	55.8
50°	42.9	42.9	42.0	42.9	42.5	42.9	42.0	41.2
52.5°	29.2	33.2	33.6	31.9	27.9	24.3	22.1	23.9
55°	16.8	15.0	15.0	14.6	13.7	13.3	11.9	13.3
57.5°	8.4	7.5	7.5	7.5	7.1	6.6	5.8	5.8
60°	3.5	3.1	3.1	2.7	2.2	1.8	1.3	1.8
62.5°	1.3	0.9	0.9	0.9	0.9	0.9	0.9	0.9
65°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
67.5°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
70°	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
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)