

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: McGRAW-EDISON

Report Number: P301851

Luminaire Tested: **GLNA-AF-09-LED-E1-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301851
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24301)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-SL4-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control WITH HOUSESIDE SHEILD OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39241.5 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B2 - U0 - G5

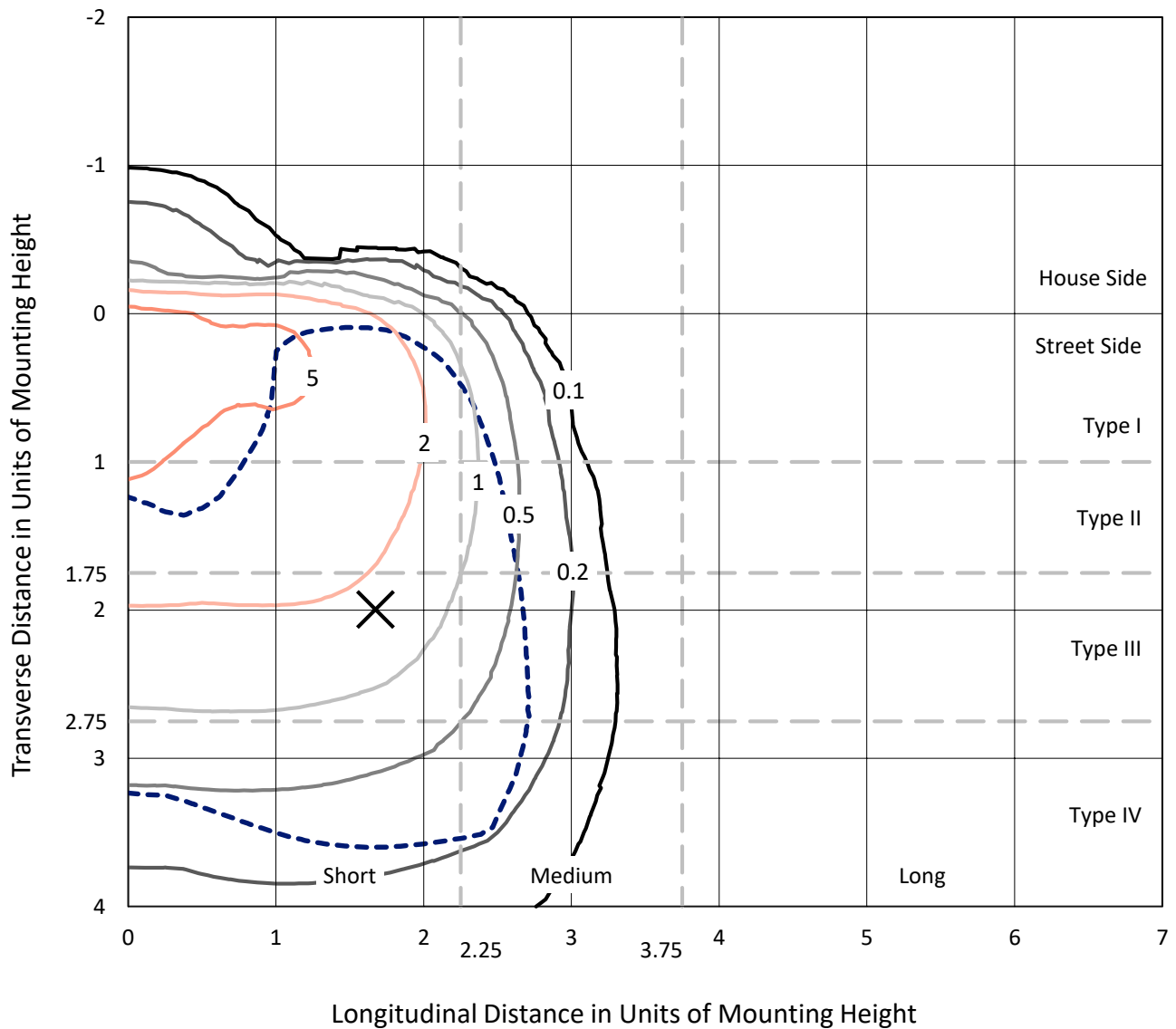
Input Watts (W): 501
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

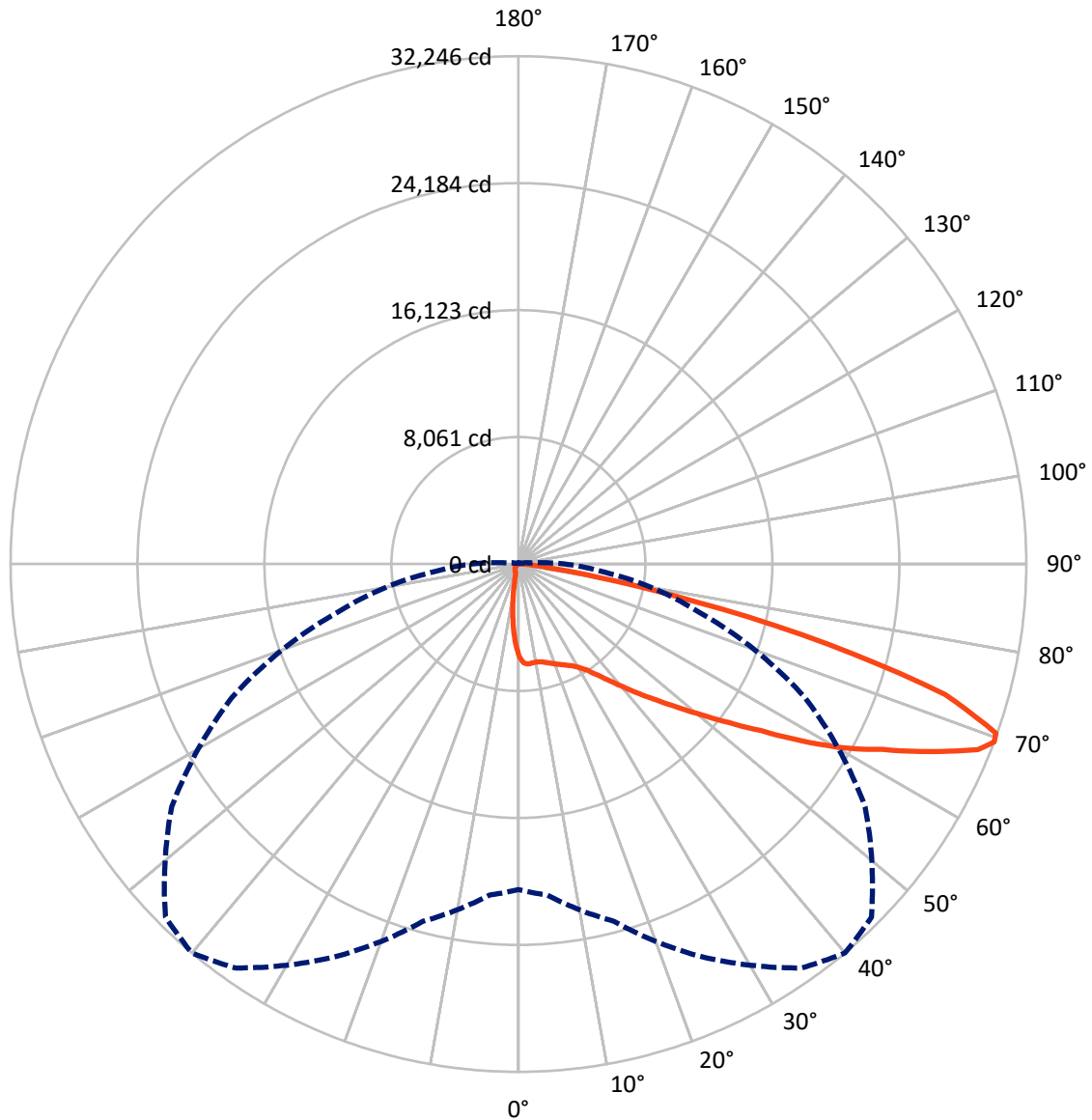
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.1 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2295.9	0.0	2295.9
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	36945.7	0.0	36945.7
	% Fixture	94.1	0.0	94.1
Total	Lumens	39241.5	0.0	39241.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	475.4	1.2
10°-20°	1169.0	3.0
20°-30°	1969.0	5.0
30°-40°	3223.3	8.2
40°-50°	5581.1	14.2
50°-60°	8790.8	22.4
60°-70°	11480.4	29.3
70°-80°	5912.9	15.1
80°-90°	639.6	1.6
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°-90°	39241.5	100.0
0°-180°	39241.5	100.0



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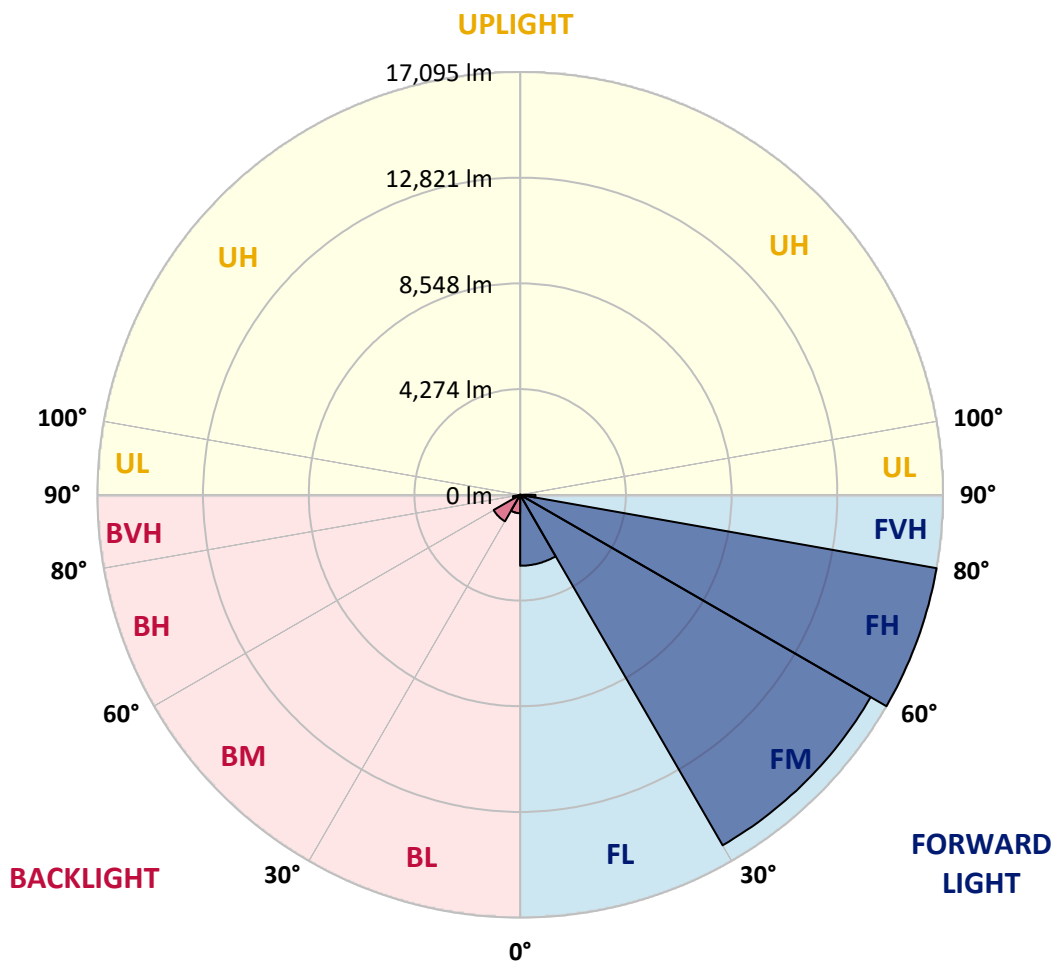
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2869.7	7.3			
FM	(30°-60°)	16361.3	41.7			
FH	(60°-80°)	17095.2	43.6			G5
FVH	(80°-90°)	619.5	1.6			G4/750
BL	(0°-30°)	743.7	1.9	B2/1000		
BM	(30°-60°)	1234.0	3.1	B2/2500		
BH	(60°-80°)	298.1	0.8	B1/500		G1/500
BVH	(80°-90°)	20.1	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9
2.5°	6437.5	6402.5	6381.4	6353.4	6318.4	6288.0	6276.3	6189.9	6108.1	5996.0	5867.6
5°	6556.6	6544.9	6507.6	6470.2	6428.2	6381.4	6355.7	6253.0	6136.2	5972.7	5748.4
7.5°	6568.3	6554.3	6507.6	6456.2	6397.8	6341.7	6297.3	6194.6	6087.1	5921.3	5648.0
10°	6549.6	6533.3	6498.2	6442.2	6369.8	6316.0	6271.7	6173.5	6082.5	5933.0	5629.3
12.5°	6528.6	6512.2	6495.9	6467.9	6404.8	6367.4	6330.0	6236.6	6154.9	6028.7	5697.0
15°	6549.6	6540.3	6559.0	6547.3	6512.2	6479.5	6442.2	6358.1	6283.3	6178.2	5820.8
17.5°	6638.4	6638.4	6696.8	6703.8	6671.1	6624.4	6570.6	6486.5	6423.5	6334.7	5968.0
20°	6846.3	6839.3	6914.0	6928.0	6848.6	6776.2	6696.8	6594.0	6544.9	6488.9	6112.8
22.5°	7203.6	7170.9	7215.3	7201.3	7044.8	6932.7	6834.6	6708.4	6682.8	6657.1	6274.0
25°	7668.5	7649.8	7680.1	7542.3	7266.7	7114.9	6998.1	6855.6	6855.6	6881.3	6456.2
27.5°	8343.5	8273.4	8170.7	7927.7	7514.3	7320.4	7194.3	7042.5	7082.2	7177.9	6696.8
30°	9034.9	8957.8	8721.9	8348.2	7815.6	7612.4	7465.3	7306.4	7399.8	7575.0	7019.1
32.5°	9717.0	9630.5	9296.5	8824.7	8247.7	8044.5	7902.0	7726.9	7883.4	8177.7	7490.9
35°	10378.0	10300.9	9915.5	9359.6	8822.4	8654.2	8523.4	8371.5	8572.4	8983.5	8156.7
37.5°	11120.8	11036.7	10567.2	9964.6	9520.8	9399.3	9303.5	9151.7	9502.1	10104.7	9084.0
40°	12034.1	11891.6	11258.6	10658.3	10329.0	10270.6	10205.2	10184.1	10728.4	11562.3	10319.6
42.5°	13080.5	12847.0	11982.7	11389.4	11216.6	11258.6	11242.3	11335.7	12263.0	13374.9	11823.9
45°	14127.0	13825.7	12788.6	12169.6	12192.9	12340.1	12431.2	12804.9	14185.4	15453.7	13442.6
47.5°	15014.6	14717.9	13561.7	13012.8	13293.1	13582.7	13830.3	14538.1	16161.5	17499.9	14701.6
50°	15773.7	15493.4	14381.6	13940.1	14570.8	15038.0	15439.7	16488.5	18287.1	19057.9	15584.5
52.5°	16395.1	16208.2	15231.8	15002.9	16030.7	16715.1	17303.7	18560.4	20169.7	20323.9	16271.3
55°	17000.0	16866.9	16145.1	16266.6	17745.2	18677.1	19422.3	20758.4	21790.8	21379.7	16930.0
57.5°	17696.1	17574.6	17186.9	17869.0	19999.2	21171.8	21984.7	22706.4	23218.0	22458.8	17551.3
60°	18406.2	18336.1	18345.5	19648.8	22587.3	23713.2	24161.6	24348.5	24619.4	23474.9	17586.3
62.5°	19083.6	19216.7	19669.9	21629.6	25065.6	25929.8	26156.4	26340.9	26023.3	23636.1	16247.9
65°	20230.5	20447.7	21529.2	24280.8	27791.5	28716.5	28950.0	28317.0	26245.2	21552.5	13216.0
67.5°	20791.1	21188.1	23117.5	26752.0	30435.6	31463.4	31376.9	28445.5	23552.0	16434.8	8481.3
69°	20674.3	21097.0	23484.2	27508.8	31313.9	32245.9	31697.0	26873.5	20064.6	11905.6	5206.5
70°	20211.8	20639.2	23295.0	27480.8	31426.0	32164.1	31103.7	24932.4	16965.0	8705.6	3256.1
72.5°	16878.6	17247.6	20681.3	24839.0	28950.0	28349.7	26020.9	17273.3	8266.4	2370.8	733.4
75°	10389.7	10595.2	14839.4	18712.2	21865.5	20323.9	17336.4	8593.4	2464.3	670.4	406.4
77.5°	5489.2	5582.6	8124.0	11029.7	13860.7	11468.8	8885.4	3351.9	1135.2	420.4	294.3
80°	3244.4	3314.5	4375.0	5043.0	5998.4	5010.3	3552.8	2057.8	812.9	263.9	261.6
82.5°	1857.0	1901.4	3172.0	2803.0	2363.8	2018.1	1768.2	1950.4	488.2	177.5	271.0
85°	682.1	691.4	1784.6	2132.6	1406.2	836.2	878.3	1616.4	130.8	112.1	212.6
87.5°	317.7	310.7	918.0	1305.7	822.2	530.2	684.4	355.0	51.4	72.4	58.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9	5862.9
2.5°	5792.8	5706.4	5549.9	5388.7	5225.2	5099.1	4975.3	4877.2	4844.5	4783.7	4788.4
5°	5615.3	5456.5	5129.4	4797.8	4452.1	4167.1	3898.5	3681.2	3576.1	3468.7	3468.7
7.5°	5461.1	5229.9	4718.3	4178.8	3620.5	3151.0	2728.2	2410.6	2235.4	2095.2	2092.9
10°	5402.7	5089.7	4375.0	3601.8	2824.0	2184.0	1681.8	1359.4	1193.6	1086.2	1081.5
12.5°	5428.4	5040.7	4111.0	3069.3	2092.9	1403.8	974.0	766.1	696.1	663.4	663.4
15°	5503.2	5026.7	3847.1	2548.4	1478.6	878.3	647.0	591.0	586.3	586.3	586.3
17.5°	5594.3	5031.3	3576.1	2041.5	1006.7	628.3	558.3	551.3	555.9	555.9	555.9
20°	5687.7	5033.7	3284.2	1572.0	710.1	546.6	525.6	523.2	527.9	527.9	530.2
22.5°	5802.2	5045.4	2992.2	1174.9	586.3	516.2	499.9	499.9	502.2	502.2	499.9
25°	5933.0	5068.7	2688.5	871.3	534.9	495.2	481.2	478.8	481.2	478.8	476.5
27.5°	6096.5	5101.4	2349.8	682.1	511.5	474.2	462.5	462.5	460.2	457.8	455.5
30°	6302.0	5138.8	1969.1	579.3	488.2	455.5	443.8	441.5	439.1	434.5	434.5
32.5°	6615.0	5220.5	1593.0	525.6	462.5	429.8	420.4	420.4	415.8	411.1	408.8
35°	7096.2	5381.7	1256.7	492.9	434.5	401.8	390.1	390.1	385.4	383.1	380.7
37.5°	7761.9	5627.0	976.4	462.5	406.4	371.4	359.7	357.4	352.7	348.0	345.7
40°	8647.2	5930.6	768.5	434.5	378.4	341.0	331.7	327.0	317.7	310.7	310.7
42.5°	9759.0	6276.3	623.7	404.1	345.7	313.0	306.0	299.0	282.6	275.6	273.3
45°	10922.3	6587.0	527.9	369.1	313.0	285.0	280.3	268.6	247.6	240.6	240.6
47.5°	11760.8	6659.4	464.8	336.4	282.6	254.6	252.3	231.2	212.6	207.9	205.6
50°	12284.0	6516.9	413.4	303.7	254.6	226.6	219.6	193.9	182.2	177.5	175.2
52.5°	12636.7	6262.3	371.4	275.6	228.9	200.9	184.5	165.8	156.5	151.8	151.8
55°	12919.4	5902.6	329.3	249.9	207.9	179.9	156.5	142.5	133.1	128.5	128.5
57.5°	12998.8	5414.4	287.3	228.9	186.9	158.8	133.1	123.8	112.1	109.8	109.8
60°	12421.8	4533.8	254.6	203.2	168.2	137.8	116.8	105.1	93.4	91.1	88.8
62.5°	10901.2	3508.4	224.2	179.9	147.2	119.1	100.4	86.4	77.1	77.1	77.1
65°	8315.5	2352.2	196.2	156.5	128.5	100.4	86.4	70.1	65.4	65.4	67.7
67.5°	4977.6	1280.0	168.2	133.1	109.8	84.1	72.4	60.7	58.4	60.7	60.7
69°	2917.4	752.1	151.8	119.1	95.8	74.7	63.1	53.7	58.4	60.7	60.7
70°	1800.9	506.9	140.1	107.4	86.4	67.7	58.4	51.4	56.1	58.4	58.4
72.5°	502.2	261.6	112.1	84.1	70.1	56.1	46.7	46.7	53.7	56.1	56.1
75°	327.0	193.9	86.4	63.1	53.7	44.4	39.7	44.4	51.4	53.7	53.7
77.5°	271.0	158.8	70.1	51.4	44.4	42.0	37.4	39.7	46.7	49.1	49.1
80°	247.6	112.1	56.1	46.7	39.7	37.4	35.0	32.7	42.0	44.4	44.4
82.5°	235.9	88.8	49.1	42.0	37.4	32.7	30.4	32.7	37.4	39.7	42.0
85°	147.2	58.4	44.4	39.7	32.7	30.4	30.4	30.4	35.0	37.4	37.4
87.5°	53.7	46.7	39.7	32.7	28.0	28.0	28.0	28.0	30.4	35.0	35.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)