

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: P301971

Luminaire Tested: **GLNA-AF-09-LED-E1-SL4-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301971
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-SL4-600-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 4000K CCT 600mA 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: 25850.9 lumens
Efficiency: N/A
Efficacy: 89.1 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G4

Input Watts (W): 290
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

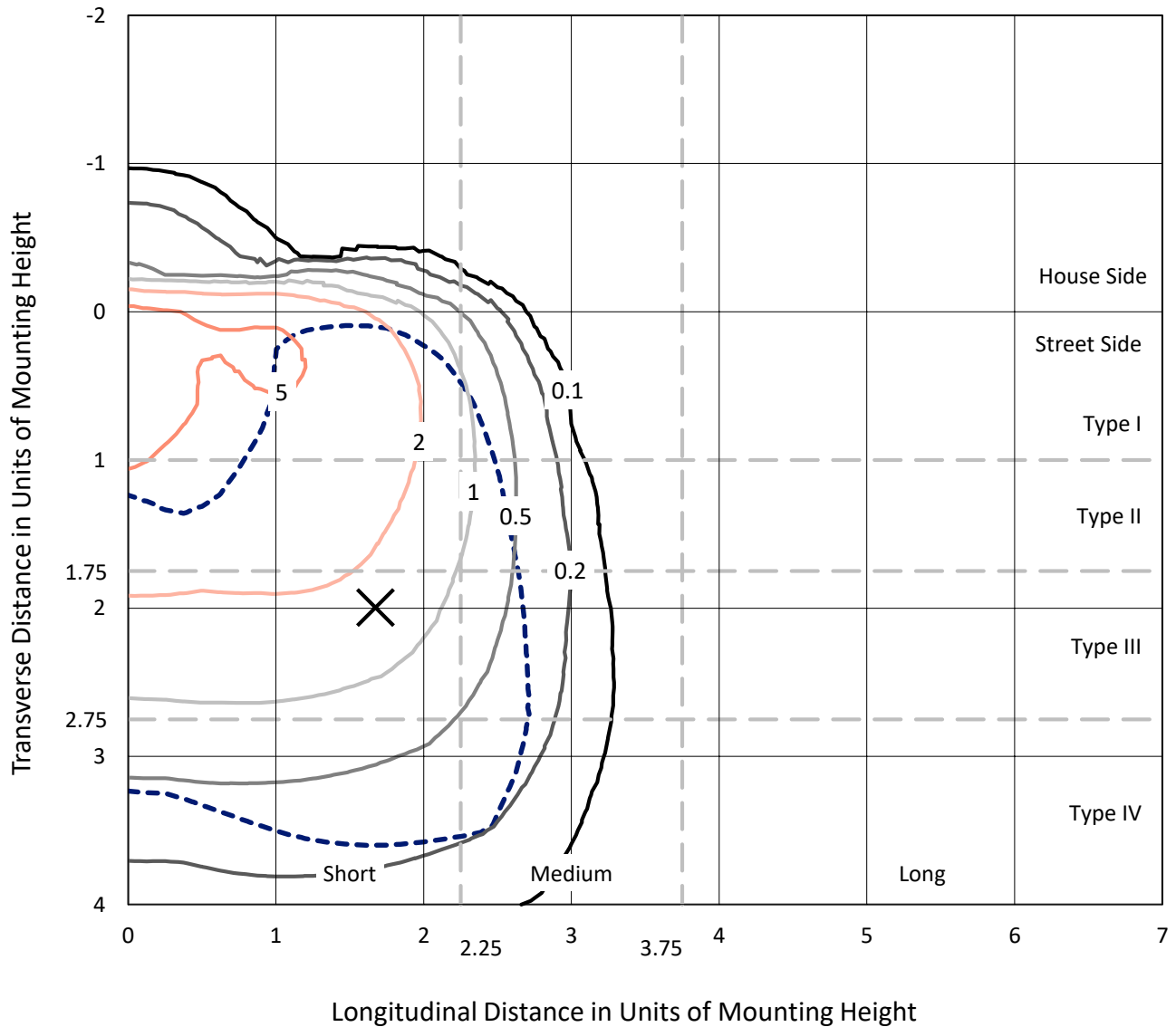


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Iso-Footcandle Lines of Horizontal Illumination

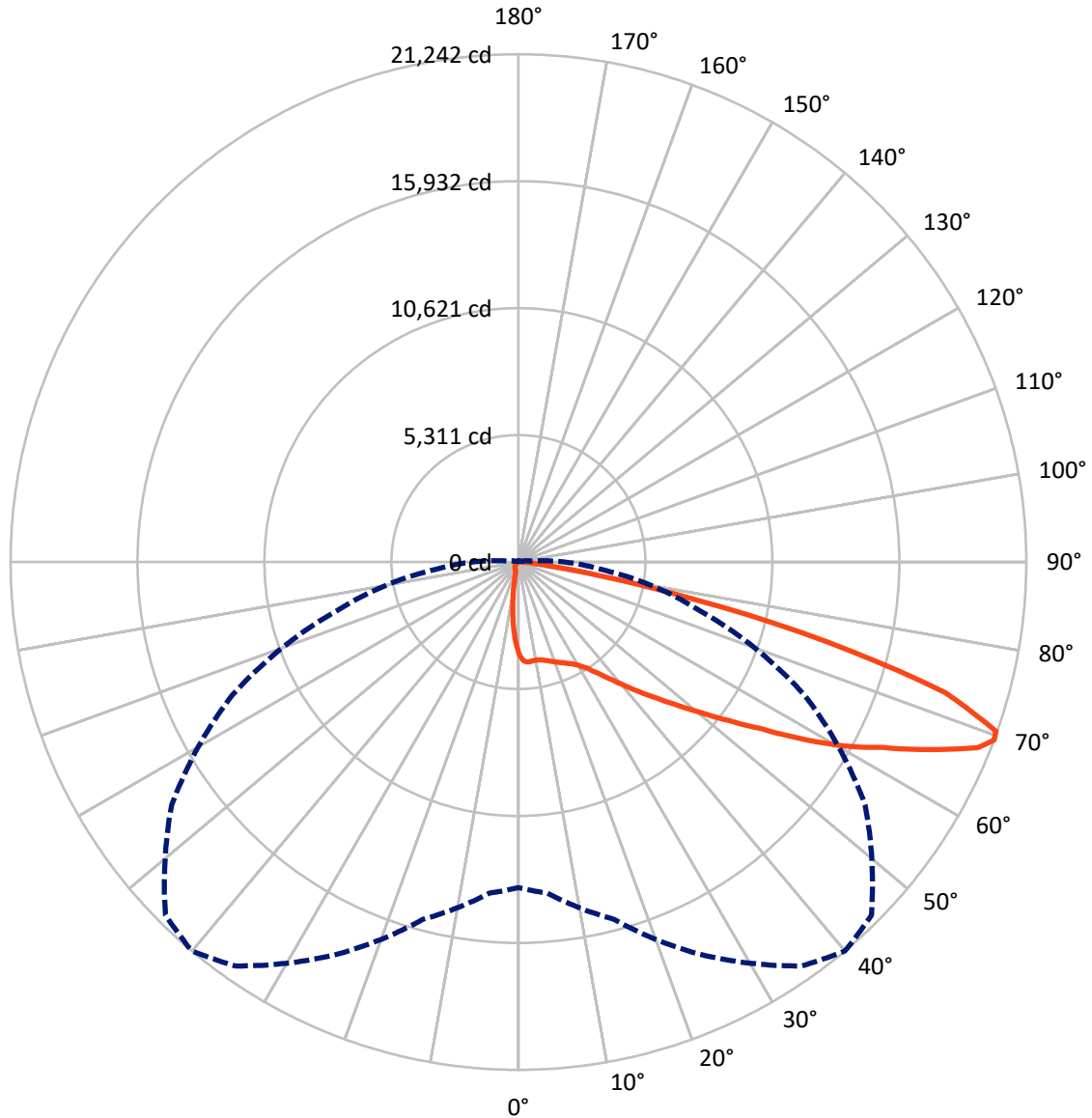
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.8 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	1512.4	0.0	1512.4
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	24338.5	0.0	24338.5
	% Fixture	94.1	0.0	94.1
Total	Lumens	25850.9	0.0	25850.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	313.1	1.2
10°-20°	770.1	3.0
20°-30°	1297.1	5.0
30°-40°	2123.4	8.2
40°-50°	3676.6	14.2
50°-60°	5791.1	22.4
60°-70°	7562.9	29.3
70°-80°	3895.2	15.1
80°-90°	421.4	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°	25850.9	100.0
0°-180°	25850.9	100.0

Coefficient of Utilization



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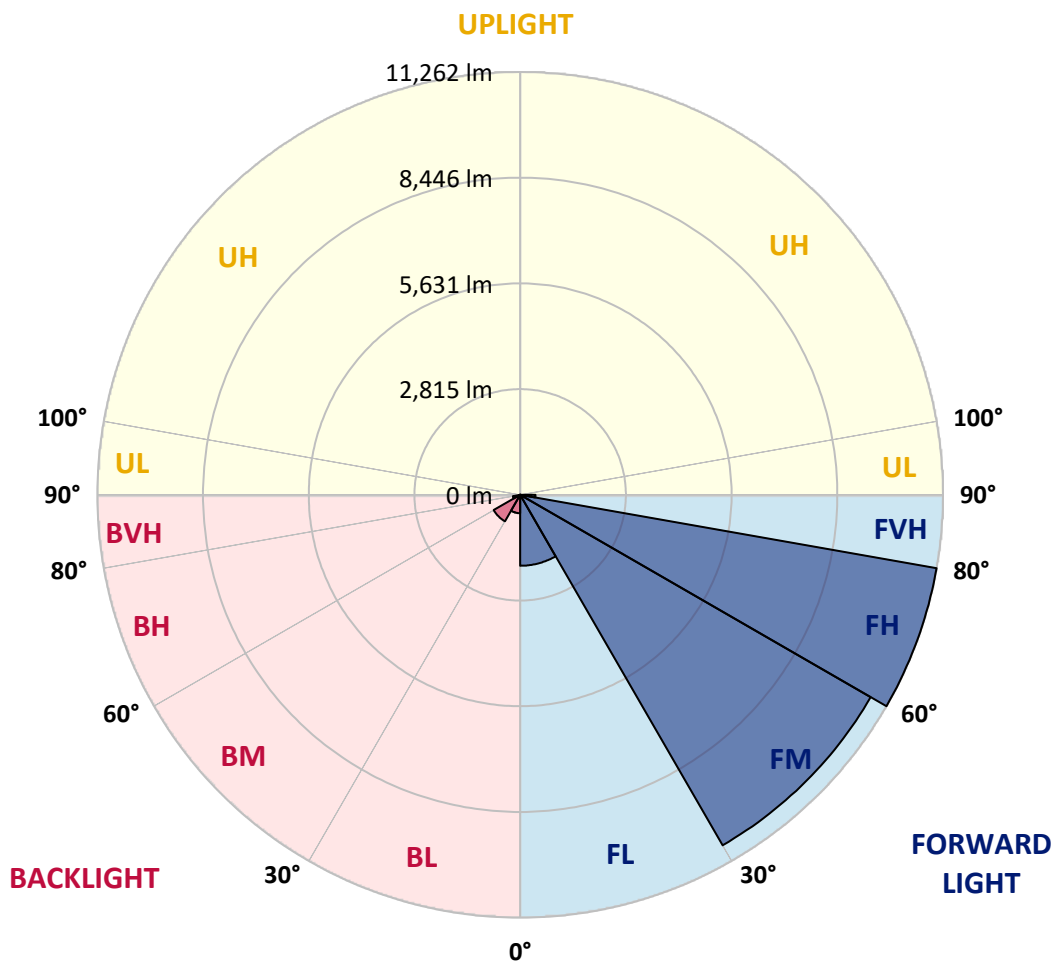
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1890.4	7.3			
FM	(30°-60°)	10778.2	41.7			
FH	(60°-80°)	11261.7	43.6			G4/12000
FVH	(80°-90°)	408.1	1.6			G3/500
BL	(0°-30°)	489.9	1.9	B1/500		
BM	(30°-60°)	812.9	3.1	B1/1000		
BH	(60°-80°)	196.4	0.8	B1/500		G1/500
BVH	(80°-90°)	13.2	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3
2.5°	4240.8	4217.7	4203.9	4185.4	4162.3	4142.3	4134.6	4077.7	4023.8	3950.0	3865.3
5°	4319.3	4311.6	4287.0	4262.3	4234.6	4203.9	4186.9	4119.2	4042.3	3934.6	3786.9
7.5°	4327.0	4317.7	4287.0	4253.1	4214.6	4177.7	4148.5	4080.8	4010.0	3900.7	3720.7
10°	4314.6	4303.9	4280.8	4243.9	4196.2	4160.8	4131.5	4066.9	4006.9	3908.4	3708.4
12.5°	4300.8	4290.0	4279.3	4260.8	4219.2	4194.6	4170.0	4108.5	4054.6	3971.5	3753.0
15°	4314.6	4308.5	4320.8	4313.1	4290.0	4268.5	4243.9	4188.5	4139.2	4070.0	3834.6
17.5°	4373.1	4373.1	4411.6	4416.2	4394.7	4363.9	4328.5	4273.1	4231.6	4173.1	3931.5
20°	4510.1	4505.5	4554.7	4563.9	4511.6	4463.9	4411.6	4343.9	4311.6	4274.6	4026.9
22.5°	4745.5	4724.0	4753.2	4744.0	4640.9	4567.0	4502.4	4419.3	4402.4	4385.4	4133.1
25°	5051.7	5039.4	5059.4	4968.6	4787.0	4687.0	4610.1	4516.2	4516.2	4533.2	4253.1
27.5°	5496.4	5450.2	5382.5	5222.5	4950.2	4822.4	4739.3	4639.3	4665.5	4728.6	4411.6
30°	5951.9	5901.1	5745.7	5499.5	5148.7	5014.8	4917.8	4813.2	4874.8	4990.2	4623.9
32.5°	6401.2	6344.3	6124.2	5813.4	5433.3	5299.4	5205.6	5090.2	5193.3	5387.2	4934.8
35°	6836.7	6785.9	6532.0	6165.8	5811.9	5701.1	5614.9	5514.9	5647.2	5918.0	5373.3
37.5°	7326.0	7270.6	6961.3	6564.3	6271.9	6191.9	6128.8	6028.8	6259.6	6656.6	5984.2
40°	7927.6	7833.8	7416.8	7021.3	6804.3	6765.9	6722.8	6708.9	7067.5	7616.8	6798.2
42.5°	8617.0	8463.1	7893.8	7502.9	7389.1	7416.8	7406.0	7467.5	8078.4	8810.9	7789.1
45°	9306.3	9107.8	8424.6	8016.9	8032.3	8129.2	8189.2	8435.4	9344.8	10180.4	8855.5
47.5°	9891.1	9695.7	8934.0	8572.4	8757.0	8947.8	9110.9	9577.2	10646.6	11528.3	9684.9
50°	10391.2	10206.5	9474.1	9183.2	9598.7	9906.5	10171.1	10862.0	12046.9	12554.6	10266.5
52.5°	10800.5	10677.4	10034.2	9883.4	10560.4	11011.3	11399.0	12226.9	13287.1	13388.6	10718.9
55°	11199.0	11111.3	10635.8	10715.8	11689.9	12303.8	12794.7	13674.9	14355.0	14084.2	11152.8
57.5°	11657.6	11577.5	11322.1	11771.4	13174.8	13947.2	14482.7	14958.2	15295.2	14795.1	11562.2
60°	12125.3	12079.2	12085.3	12943.9	14879.7	15621.4	15916.8	16039.9	16218.4	15464.4	11585.2
62.5°	12571.6	12659.3	12957.8	14248.8	16512.3	17081.6	17230.9	17352.5	17143.2	15570.6	10703.5
65°	13327.1	13470.2	14182.6	15995.3	18308.0	18917.4	19071.2	18654.2	17289.4	14198.0	8706.2
67.5°	13696.4	13958.0	15229.0	17623.3	20049.9	20726.9	20670.0	18738.9	15515.2	10826.6	5587.2
69°	13619.5	13898.0	15470.6	18121.8	20628.5	21242.4	20880.8	17703.3	13217.8	7843.0	3429.9
70°	13314.8	13596.4	15345.9	18103.4	20702.3	21188.6	20490.0	16424.6	11175.9	5734.9	2145.0
72.5°	11119.0	11362.1	13624.1	16363.0	19071.2	18675.8	17141.7	11379.0	5445.6	1561.8	483.2
75°	6844.4	6979.8	9775.7	12326.9	14404.2	13388.6	11420.6	5661.1	1623.4	441.6	267.7
77.5°	3616.1	3677.6	5351.8	7266.0	9130.9	7555.3	5853.4	2208.1	747.8	277.0	193.9
80°	2137.3	2183.5	2882.1	3322.2	3951.5	3300.6	2340.4	1355.6	535.5	173.9	172.3
82.5°	1223.3	1252.5	2089.6	1846.5	1557.2	1329.5	1164.8	1284.9	321.6	116.9	178.5
85°	449.3	455.5	1175.6	1404.9	926.3	550.9	578.6	1064.8	86.2	73.9	140.0
87.5°	209.3	204.7	604.7	860.2	541.6	349.3	450.9	233.9	33.9	47.7	38.5
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°	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3	3862.3
2.5°	3816.1	3759.2	3656.1	3549.9	3442.2	3359.1	3277.5	3212.9	3191.4	3151.4	3154.4
5°	3699.2	3594.5	3379.1	3160.6	2932.9	2745.1	2568.2	2425.1	2355.8	2285.0	2285.0
7.5°	3597.6	3445.3	3108.3	2752.8	2385.1	2075.8	1797.3	1588.0	1472.6	1380.3	1378.7
10°	3559.1	3352.9	2882.1	2372.7	1860.3	1438.7	1107.9	895.6	786.3	715.5	712.4
12.5°	3576.1	3320.6	2708.2	2021.9	1378.7	924.8	641.7	504.7	458.5	437.0	437.0
15°	3625.3	3311.4	2534.3	1678.8	974.0	578.6	426.2	389.3	386.2	386.2	386.2
17.5°	3685.3	3314.5	2355.8	1344.9	663.2	413.9	367.8	363.1	366.2	366.2	366.2
20°	3746.9	3316.0	2163.5	1035.6	467.8	360.1	346.2	344.7	347.8	347.8	349.3
22.5°	3822.2	3323.7	1971.1	774.0	386.2	340.1	329.3	329.3	330.8	330.8	329.3
25°	3908.4	3339.1	1771.1	574.0	352.4	326.2	317.0	315.4	317.0	315.4	313.9
27.5°	4016.1	3360.6	1548.0	449.3	337.0	312.4	304.7	304.7	303.1	301.6	300.1
30°	4151.5	3385.2	1297.2	381.6	321.6	300.1	292.4	290.8	289.3	286.2	286.2
32.5°	4357.7	3439.1	1049.4	346.2	304.7	283.1	277.0	277.0	273.9	270.8	269.3
35°	4674.7	3545.3	827.8	324.7	286.2	264.7	257.0	257.0	253.9	252.4	250.8
37.5°	5113.3	3706.8	643.2	304.7	267.7	244.7	237.0	235.4	232.4	229.3	227.7
40°	5696.4	3906.9	506.2	286.2	249.3	224.7	218.5	215.4	209.3	204.7	204.7
42.5°	6428.9	4134.6	410.8	266.2	227.7	206.2	201.6	197.0	186.2	181.6	180.0
45°	7195.2	4339.3	347.8	243.1	206.2	187.7	184.6	177.0	163.1	158.5	158.5
47.5°	7747.6	4387.0	306.2	221.6	186.2	167.7	166.2	152.3	140.0	136.9	135.4
50°	8092.3	4293.1	272.4	200.0	167.7	149.3	144.6	127.7	120.0	116.9	115.4
52.5°	8324.6	4125.4	244.7	181.6	150.8	132.3	121.6	109.3	103.1	100.0	100.0
55°	8510.8	3888.4	217.0	164.6	136.9	118.5	103.1	93.9	87.7	84.6	84.6
57.5°	8563.1	3566.8	189.3	150.8	123.1	104.6	87.7	81.6	73.9	72.3	72.3
60°	8183.1	2986.7	167.7	133.9	110.8	90.8	76.9	69.2	61.5	60.0	58.5
62.5°	7181.3	2311.2	147.7	118.5	96.9	78.5	66.2	56.9	50.8	50.8	50.8
65°	5477.9	1549.5	129.3	103.1	84.6	66.2	56.9	46.2	43.1	43.1	44.6
67.5°	3279.1	843.2	110.8	87.7	72.3	55.4	47.7	40.0	38.5	40.0	40.0
69°	1921.9	495.5	100.0	78.5	63.1	49.2	41.5	35.4	38.5	40.0	40.0
70°	1186.4	333.9	92.3	70.8	56.9	44.6	38.5	33.9	36.9	38.5	38.5
72.5°	330.8	172.3	73.9	55.4	46.2	36.9	30.8	30.8	35.4	36.9	36.9
75°	215.4	127.7	56.9	41.5	35.4	29.2	26.2	29.2	33.9	35.4	35.4
77.5°	178.5	104.6	46.2	33.9	29.2	27.7	24.6	26.2	30.8	32.3	32.3
80°	163.1	73.9	36.9	30.8	26.2	24.6	23.1	21.5	27.7	29.2	29.2
82.5°	155.4	58.5	32.3	27.7	24.6	21.5	20.0	21.5	24.6	26.2	27.7
85°	96.9	38.5	29.2	26.2	21.5	20.0	20.0	20.0	23.1	24.6	24.6
87.5°	35.4	30.8	26.2	21.5	18.5	18.5	18.5	18.5	20.0	23.1	23.1
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)