

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: P301824

Luminaire Tested: **GLNA-AF-05-LED-E1-SL4-7027-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P301824  
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-05-LED-E1-SL4-7027-HSS  
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE  
(5) 70 CRI, 2700K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV  
w/Spill Control WITH HOUSESIDE SHEILD OPTICS  
Light Source: -  
Ballast/Driver: -

**Summary**

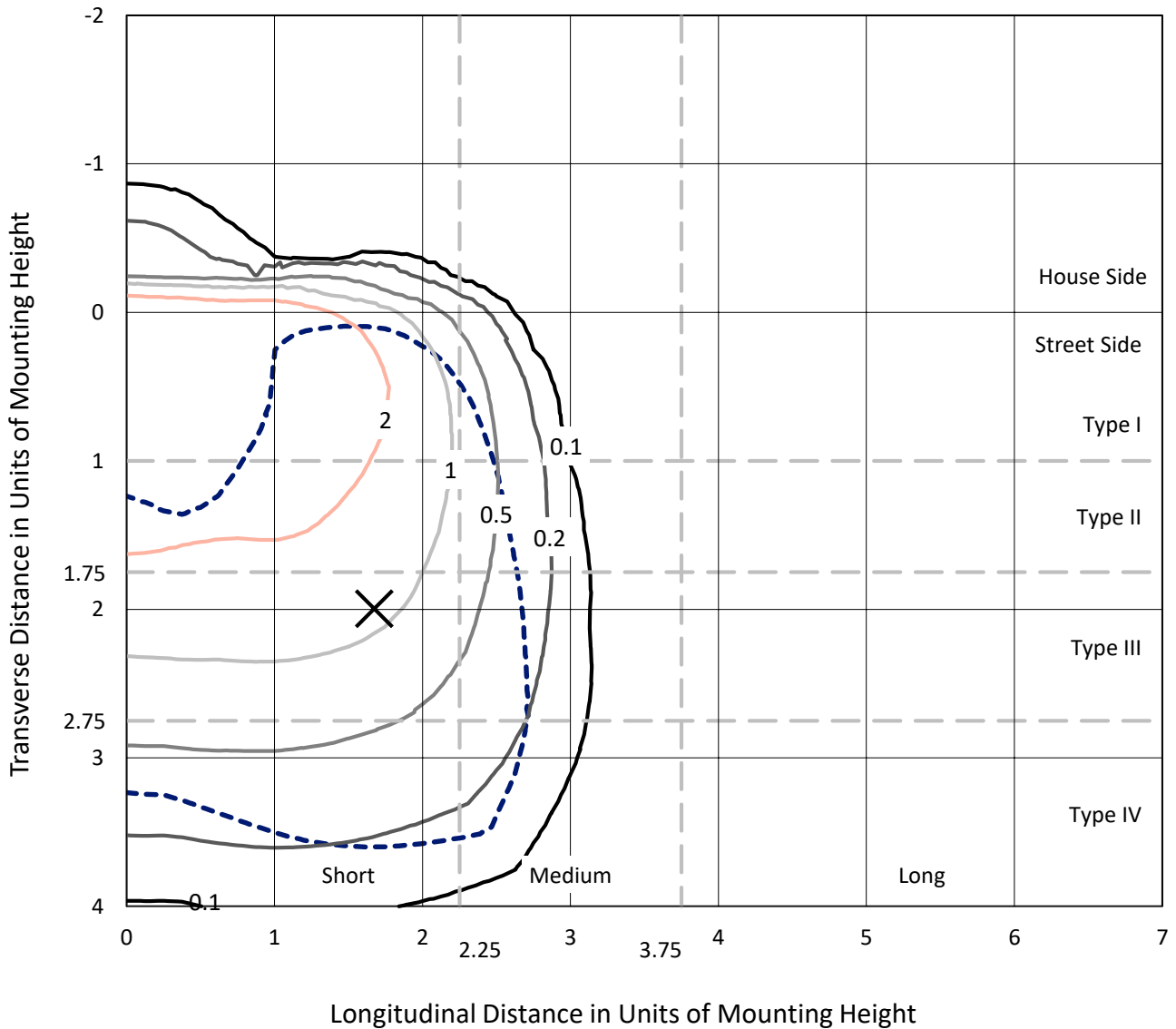
Lumens per Lamp: N/A  
Luminaire Lumens: 19061.1 lumens  
Efficiency: N/A  
Efficacy: 68.3 lumens/watt  
Luminous Opening: Rectangular (W 1.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G4  
  
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (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

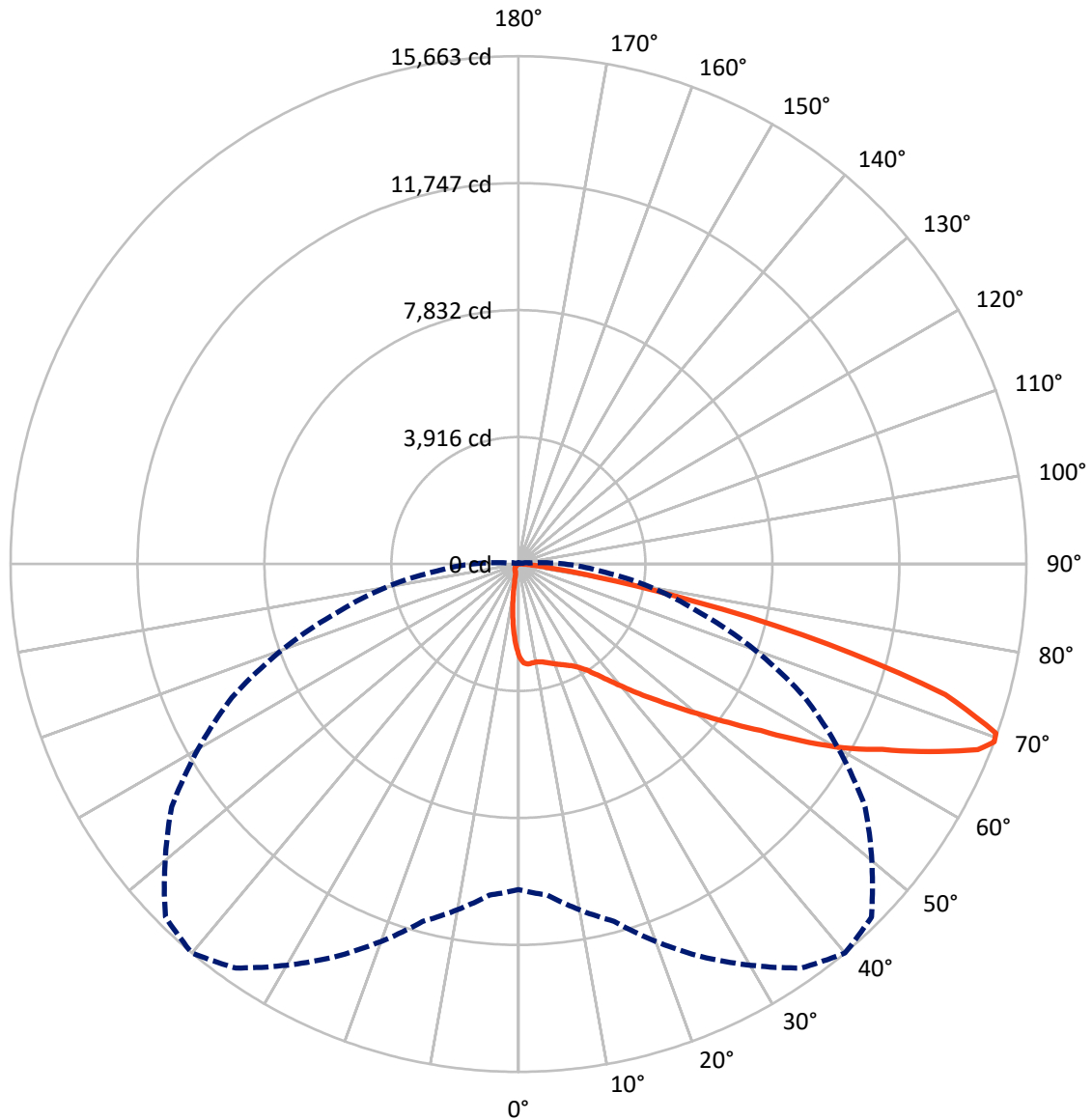


Based on 25 foot mounting height. Maximum calculated value = 5 fc  
 Type IV - Short - Semi-Cutoff

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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
<b>House Side</b>	Lumens	1115.2	0.0	1115.2
	% Fixture	5.9	0.0	5.9
<b>Street Side</b>	Lumens	17945.9	0.0	17945.9
	% Fixture	94.1	0.0	94.1
<b>Total</b>	Lumens	19061.1	0.0	19061.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	230.9	1.2
10°-20°	567.8	3.0
20°-30°	956.4	5.0
30°-40°	1565.7	8.2
40°-50°	2711.0	14.2
50°-60°	4270.0	22.4
60°-70°	5576.5	29.3
70°-80°	2872.1	15.1
80°-90°	310.7	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°	19061.1	100.0
0°-180°	19061.1	100.0

**Coefficient of Utilization**



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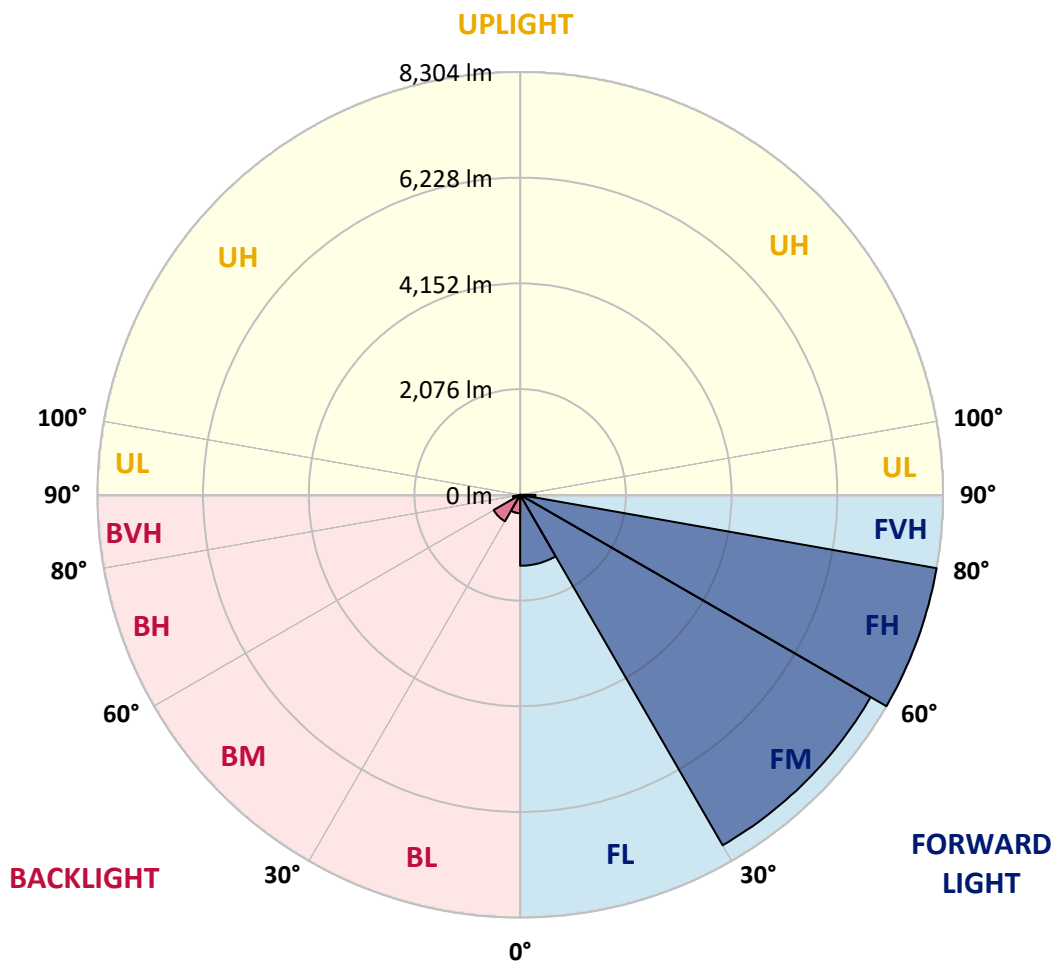
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1393.9	7.3			
FM	(30°-60°)	7947.3	41.7			
FH	(60°-80°)	8303.8	43.6			G4/12000
FVH	(80°-90°)	300.9	1.6			G3/500
BL	(0°-30°)	361.2	1.9	B1/500		
BM	(30°-60°)	599.4	3.1	B1/1000		
BH	(60°-80°)	144.8	0.8	B1/500		G1/500
BVH	(80°-90°)	9.8	0.1			G0/10
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°	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8
2.5°	3126.9	3109.9	3099.7	3086.1	3069.1	3054.3	3048.7	3006.7	2967.0	2912.5	2850.1
5°	3184.8	3179.1	3161.0	3142.8	3122.4	3099.7	3087.2	3037.3	2980.6	2901.2	2792.2
7.5°	3190.5	3183.7	3161.0	3136.0	3107.7	3080.4	3058.9	3008.9	2956.7	2876.2	2743.4
10°	3181.4	3173.5	3156.4	3129.2	3094.0	3067.9	3046.4	2998.7	2954.5	2881.9	2734.4
12.5°	3171.2	3163.2	3155.3	3141.7	3111.1	3092.9	3074.7	3029.4	2989.7	2928.4	2767.3
15°	3181.4	3176.9	3185.9	3180.3	3163.2	3147.4	3129.2	3088.4	3052.1	3001.0	2827.4
17.5°	3224.5	3224.5	3252.9	3256.3	3240.4	3217.7	3191.6	3150.8	3120.1	3077.0	2898.9
20°	3325.5	3322.1	3358.4	3365.2	3326.6	3291.5	3252.9	3203.0	3179.1	3151.9	2969.2
22.5°	3499.1	3483.2	3504.8	3498.0	3421.9	3367.5	3319.8	3258.6	3246.1	3233.6	3047.5
25°	3724.9	3715.8	3730.5	3663.6	3529.7	3456.0	3399.2	3330.0	3330.0	3342.5	3136.0
27.5°	4052.8	4018.7	3968.8	3850.8	3650.0	3555.8	3494.5	3420.8	3440.1	3486.6	3252.9
30°	4388.6	4351.2	4236.6	4055.0	3796.3	3697.6	3626.2	3549.0	3594.4	3679.5	3409.5
32.5°	4719.9	4677.9	4515.7	4286.5	4006.2	3907.5	3838.3	3753.2	3829.3	3972.2	3638.6
35°	5041.0	5003.6	4816.3	4546.3	4285.4	4203.7	4140.1	4066.4	4164.0	4363.6	3962.0
37.5°	5401.8	5361.0	5132.9	4840.2	4624.6	4565.6	4519.1	4445.3	4615.5	4908.3	4412.4
40°	5845.4	5776.2	5468.7	5177.1	5017.2	4988.8	4957.0	4946.8	5211.2	5616.2	5012.6
42.5°	6353.7	6240.3	5820.5	5532.3	5448.3	5468.7	5460.8	5506.2	5956.6	6496.7	5743.3
45°	6862.0	6715.7	6211.9	5911.2	5922.6	5994.1	6038.3	6219.8	6890.4	7506.5	6529.6
47.5°	7293.2	7149.1	6587.4	6320.8	6457.0	6597.7	6717.9	7061.7	7850.3	8500.4	7141.1
50°	7661.9	7525.8	6985.7	6771.3	7077.6	7304.5	7499.7	8009.1	8882.7	9257.1	7570.0
52.5°	7963.7	7872.9	7398.7	7287.5	7786.7	8119.1	8405.1	9015.5	9797.2	9872.1	7903.6
55°	8257.6	8192.9	7842.3	7901.3	8619.5	9072.2	9434.1	10083.1	10584.6	10384.9	8223.5
57.5°	8595.7	8536.7	8348.3	8679.6	9714.4	10284.0	10678.8	11029.4	11277.9	10909.1	8525.3
60°	8940.6	8906.6	8911.1	9544.2	10971.5	11518.4	11736.2	11827.0	11958.6	11402.7	8542.4
62.5°	9269.6	9334.3	9554.4	10506.3	12175.3	12595.1	12705.2	12794.8	12640.5	11480.9	7892.2
65°	9826.7	9932.2	10457.5	11794.1	13499.4	13948.7	14062.1	13754.7	12748.3	10468.9	6419.5
67.5°	10099.0	10291.9	11229.1	12994.5	14783.7	15283.0	15241.0	13817.1	11440.1	7983.0	4119.7
69°	10042.3	10247.6	11407.2	13362.1	15210.4	15663.1	15396.4	13053.5	9746.2	5783.0	2529.0
70°	9817.6	10025.3	11315.3	13348.5	15264.8	15623.3	15108.2	12110.6	8240.6	4228.6	1581.6
72.5°	8198.6	8377.8	10045.7	12065.3	14062.1	13770.6	12639.4	8390.3	4015.3	1151.6	356.3
75°	5046.7	5146.5	7208.1	9089.2	10620.9	9872.1	8421.0	4174.2	1197.0	325.6	197.4
77.5°	2666.3	2711.7	3946.1	5357.5	6732.7	5570.9	4316.0	1628.1	551.4	204.2	143.0
80°	1575.9	1610.0	2125.1	2449.6	2913.6	2433.7	1725.7	999.6	394.8	128.2	127.1
82.5°	902.0	923.6	1540.8	1361.5	1148.2	980.3	858.9	947.4	237.1	86.2	131.6
85°	331.3	335.8	866.8	1035.9	683.0	406.2	426.6	785.1	63.5	54.5	103.2
87.5°	154.3	150.9	445.9	634.2	399.4	257.6	332.4	172.5	25.0	35.2	28.4
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°	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8	2847.8
2.5°	2813.8	2771.8	2695.8	2617.5	2538.1	2476.8	2416.7	2369.0	2353.1	2323.6	2325.9
5°	2727.6	2650.4	2491.6	2330.5	2162.5	2024.1	1893.6	1788.1	1737.1	1684.9	1684.9
7.5°	2652.7	2540.4	2291.9	2029.8	1758.6	1530.6	1325.2	1170.9	1085.8	1017.7	1016.6
10°	2624.3	2472.3	2125.1	1749.5	1371.7	1060.8	816.9	660.3	579.8	527.6	525.3
12.5°	2636.8	2448.5	1996.9	1490.9	1016.6	681.9	473.1	372.1	338.1	322.2	322.2
15°	2673.1	2441.6	1868.7	1237.8	718.2	426.6	314.3	287.1	284.8	284.8	284.8
17.5°	2717.4	2443.9	1737.1	991.6	489.0	305.2	271.2	267.8	270.0	270.0	270.0
20°	2762.7	2445.0	1595.2	763.6	344.9	265.5	255.3	254.1	256.4	256.4	257.6
22.5°	2818.3	2450.7	1453.4	570.7	284.8	250.7	242.8	242.8	243.9	243.9	242.8
25°	2881.9	2462.1	1305.9	423.2	259.8	240.5	233.7	232.6	233.7	232.6	231.5
27.5°	2961.3	2478.0	1141.4	331.3	248.5	230.3	224.6	224.6	223.5	222.4	221.2
30°	3061.1	2496.1	956.5	281.4	237.1	221.2	215.6	214.4	213.3	211.0	211.0
32.5°	3213.2	2535.8	773.8	255.3	224.6	208.8	204.2	204.2	202.0	199.7	198.6
35°	3446.9	2614.1	610.4	239.4	211.0	195.2	189.5	189.5	187.2	186.1	184.9
37.5°	3770.3	2733.2	474.3	224.6	197.4	180.4	174.7	173.6	171.3	169.1	167.9
40°	4200.3	2880.7	373.3	211.0	183.8	165.7	161.1	158.8	154.3	150.9	150.9
42.5°	4740.3	3048.7	302.9	196.3	167.9	152.0	148.6	145.2	137.3	133.9	132.7
45°	5305.4	3199.6	256.4	179.3	152.0	138.4	136.2	130.5	120.3	116.9	116.9
47.5°	5712.7	3234.7	225.8	163.4	137.3	123.7	122.5	112.3	103.2	101.0	99.8
50°	5966.8	3165.5	200.8	147.5	123.7	110.1	106.7	94.2	88.5	86.2	85.1
52.5°	6138.1	3041.8	180.4	133.9	111.2	97.6	89.6	80.6	76.0	73.7	73.7
55°	6275.4	2867.1	160.0	121.4	101.0	87.4	76.0	69.2	64.7	62.4	62.4
57.5°	6314.0	2630.0	139.6	111.2	90.8	77.2	64.7	60.1	54.5	53.3	53.3
60°	6033.8	2202.2	123.7	98.7	81.7	66.9	56.7	51.1	45.4	44.2	43.1
62.5°	5295.1	1704.2	108.9	87.4	71.5	57.9	48.8	42.0	37.4	37.4	37.4
65°	4039.2	1142.5	95.3	76.0	62.4	48.8	42.0	34.0	31.8	31.8	32.9
67.5°	2417.8	621.8	81.7	64.7	53.3	40.8	35.2	29.5	28.4	29.5	29.5
69°	1417.1	365.3	73.7	57.9	46.5	36.3	30.6	26.1	28.4	29.5	29.5
70°	874.8	246.2	68.1	52.2	42.0	32.9	28.4	25.0	27.2	28.4	28.4
72.5°	243.9	127.1	54.5	40.8	34.0	27.2	22.7	22.7	26.1	27.2	27.2
75°	158.8	94.2	42.0	30.6	26.1	21.6	19.3	21.6	25.0	26.1	26.1
77.5°	131.6	77.2	34.0	25.0	21.6	20.4	18.2	19.3	22.7	23.8	23.8
80°	120.3	54.5	27.2	22.7	19.3	18.2	17.0	15.9	20.4	21.6	21.6
82.5°	114.6	43.1	23.8	20.4	18.2	15.9	14.7	15.9	18.2	19.3	20.4
85°	71.5	28.4	21.6	19.3	15.9	14.7	14.7	14.7	17.0	18.2	18.2
87.5°	26.1	22.7	19.3	15.9	13.6	13.6	13.6	13.6	14.7	17.0	17.0
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)