

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: P301854

Luminaire Tested: **GLNA-AF-10-LED-E1-SL4-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P301854
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-10-LED-E1-SL4-7027-HSS
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(10) 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: 37748.1 lumens
Efficiency: N/A
Efficacy: 67.6 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

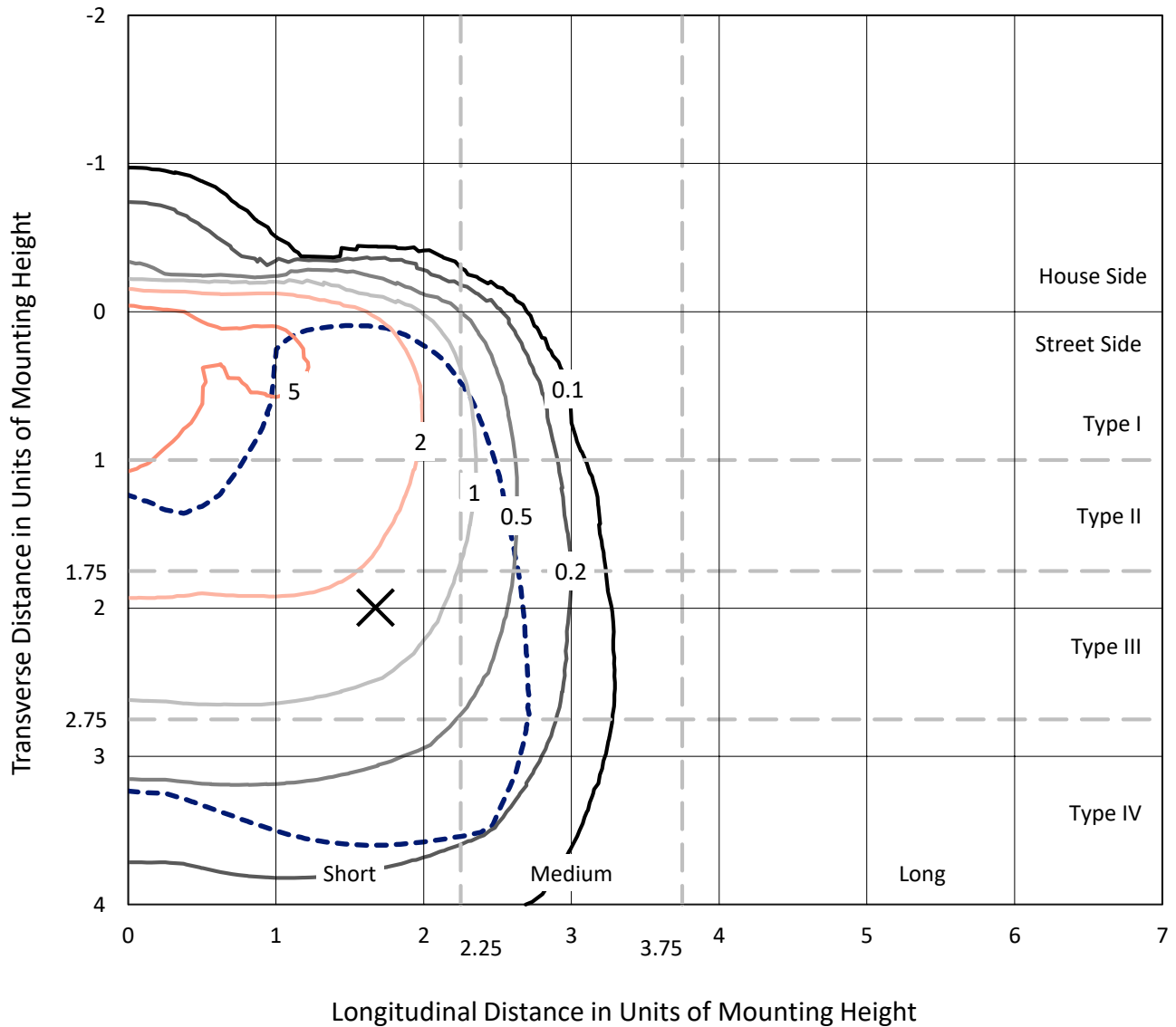
Input Watts (W): 558
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

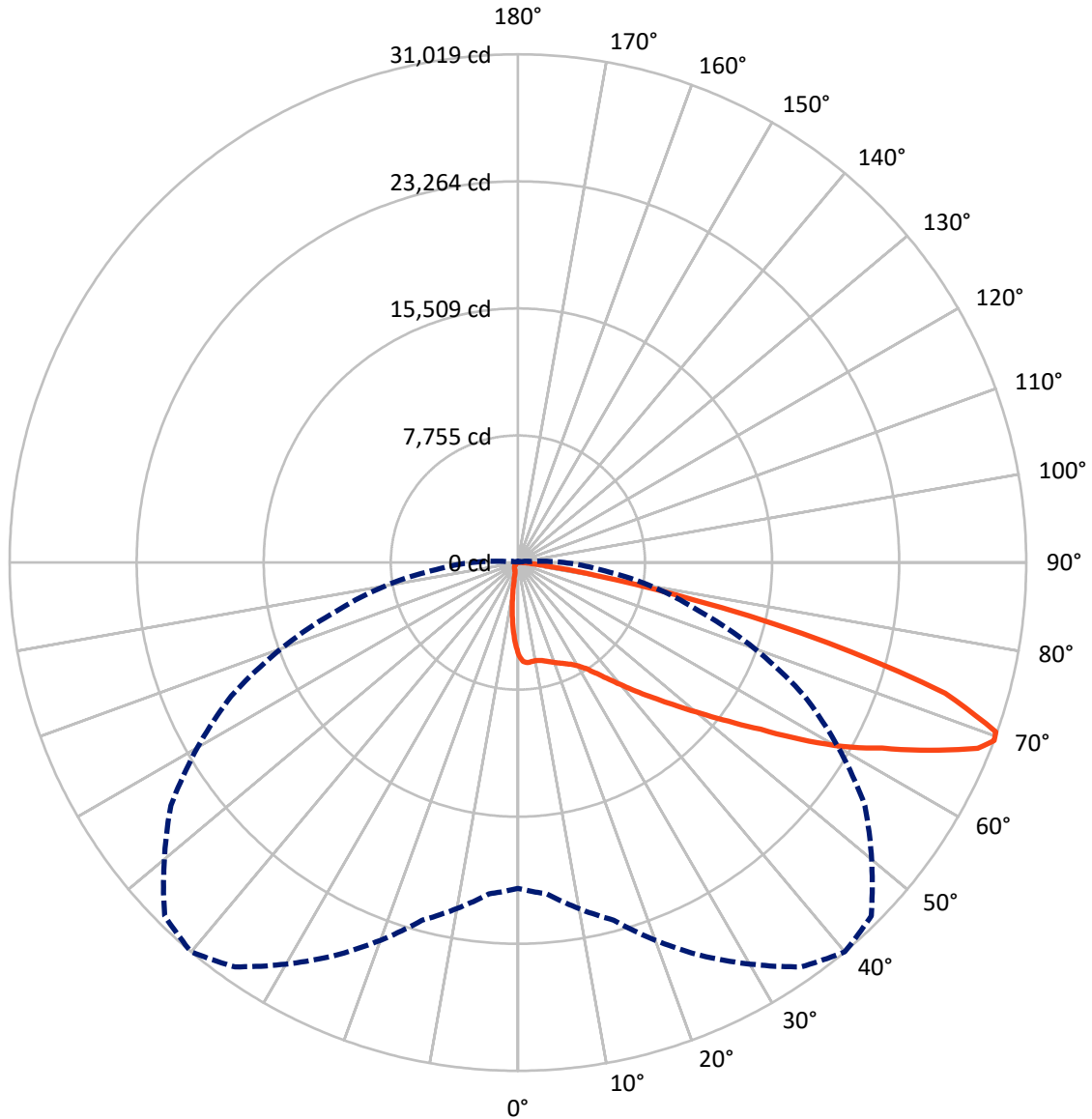
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.9 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	2208.5	0.0	2208.5
	% Fixture	5.9	0.0	5.9
Street Side	Lumens	35539.6	0.0	35539.6
	% Fixture	94.1	0.0	94.1
Total	Lumens	37748.1	0.0	37748.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	457.3	1.2
10°-20°	1124.5	3.0
20°-30°	1894.1	5.0
30°-40°	3100.7	8.2
40°-50°	5368.7	14.2
50°-60°	8456.2	22.4
60°-70°	11043.5	29.3
70°-80°	5687.9	15.1
80°-90°	615.3	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°	37748.1	100.0
0°-180°	37748.1	100.0



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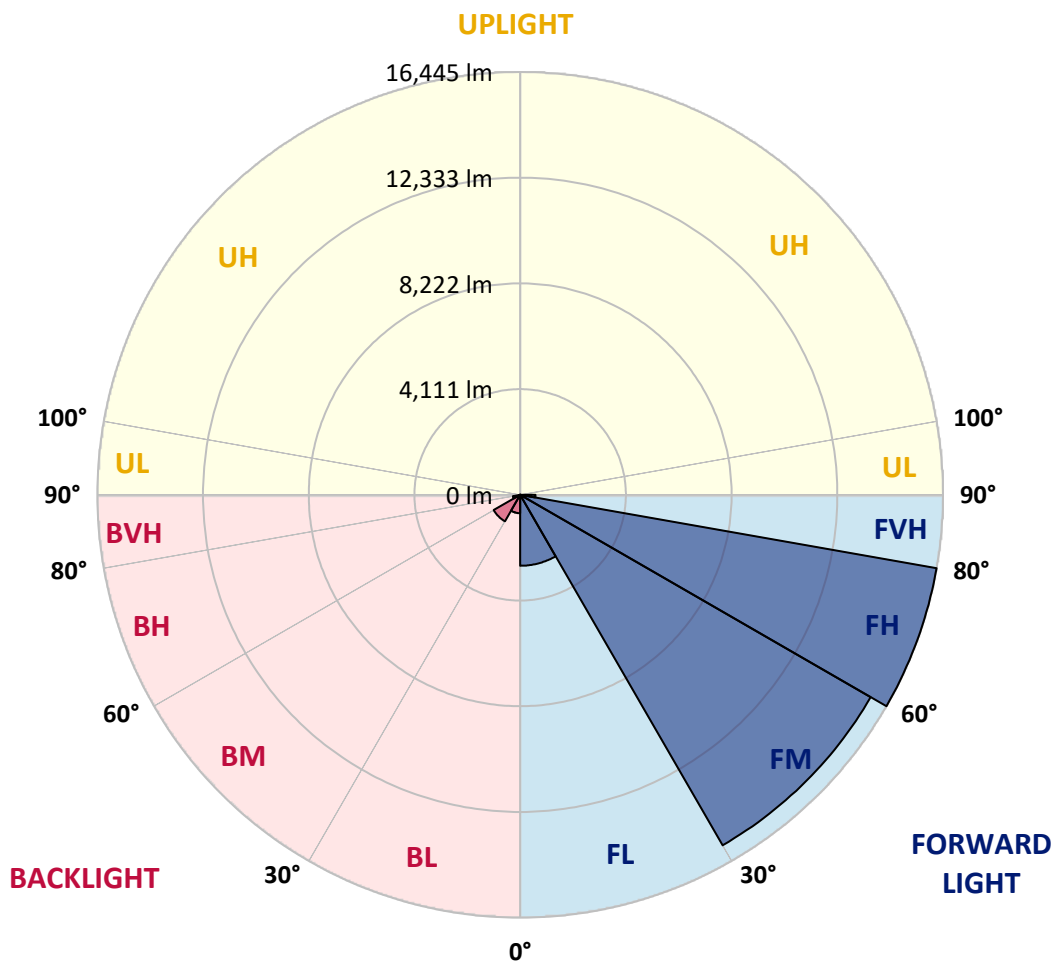
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2760.5	7.3			
FM	(30°-60°)	15738.6	41.7			
FH	(60°-80°)	16444.6	43.6			G5
FVH	(80°-90°)	595.9	1.6			G4/750
BL	(0°-30°)	715.4	1.9	B2/1000		
BM	(30°-60°)	1187.0	3.1	B2/2500		
BH	(60°-80°)	286.8	0.8	B1/500		G1/500
BVH	(80°-90°)	19.3	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°	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8
2.5°	6192.5	6158.8	6138.6	6111.6	6077.9	6048.7	6037.5	5954.3	5875.7	5767.8	5644.3
5°	6307.1	6295.9	6259.9	6224.0	6183.5	6138.6	6113.9	6015.0	5902.7	5745.4	5529.7
7.5°	6318.3	6304.9	6259.9	6210.5	6154.3	6100.4	6057.7	5958.8	5855.5	5695.9	5433.0
10°	6300.4	6284.6	6250.9	6197.0	6127.3	6075.7	6033.0	5938.6	5851.0	5707.2	5415.1
12.5°	6280.1	6264.4	6248.7	6221.7	6161.0	6125.1	6089.1	5999.3	5920.6	5799.3	5480.2
15°	6300.4	6291.4	6309.3	6298.1	6264.4	6233.0	6197.0	6116.1	6044.2	5943.1	5599.3
17.5°	6385.7	6385.7	6441.9	6448.7	6417.2	6372.3	6320.6	6239.7	6179.0	6093.6	5740.9
20°	6585.7	6579.0	6650.9	6664.4	6588.0	6518.3	6441.9	6343.0	6295.9	6241.9	5880.2
22.5°	6929.5	6898.0	6940.7	6927.2	6776.7	6668.9	6574.5	6453.1	6428.4	6403.7	6035.2
25°	7376.6	7358.7	7387.9	7255.3	6990.2	6844.1	6731.8	6594.7	6594.7	6619.4	6210.5
27.5°	8026.0	7958.6	7859.7	7626.0	7228.3	7041.8	6920.5	6774.5	6812.7	6904.8	6441.9
30°	8691.1	8616.9	8390.0	8030.5	7518.2	7322.7	7181.2	7028.4	7118.2	7286.8	6752.0
32.5°	9347.2	9264.0	8942.7	8488.9	7933.9	7738.4	7601.3	7432.8	7583.3	7866.5	7205.9
35°	9983.1	9908.9	9538.2	9003.4	8486.6	8324.8	8199.0	8053.0	8246.2	8641.6	7846.2
37.5°	10697.6	10616.7	10165.1	9585.4	9158.4	9041.6	8949.5	8803.4	9140.5	9720.2	8738.3
40°	11576.1	11439.1	10830.1	10252.7	9935.9	9879.7	9816.8	9796.6	10320.1	11122.2	9926.9
42.5°	12582.7	12358.0	11526.7	10956.0	10789.7	10830.1	10814.4	10904.3	11796.3	12865.9	11373.9
45°	13589.4	13299.5	12301.9	11706.4	11728.9	11870.5	11958.1	12317.6	13645.5	14865.6	12931.0
47.5°	14443.2	14157.8	13045.6	12517.6	12787.2	13065.8	13304.0	13984.8	15546.4	16833.9	14142.1
50°	15173.4	14903.8	13834.3	13409.6	14016.3	14465.7	14852.1	15861.0	17591.1	18332.6	14991.4
52.5°	15771.1	15591.4	14652.2	14432.0	15420.6	16078.9	16645.2	17854.0	19402.1	19550.4	15652.0
55°	16353.1	16225.0	15530.7	15647.5	17069.8	17966.4	18683.1	19968.4	20961.5	20566.0	16285.7
57.5°	17022.7	16905.8	16532.8	17188.9	19238.1	20366.1	21148.0	21842.3	22334.4	21604.1	16883.3
60°	17705.7	17638.3	17647.3	18901.1	21727.7	22810.7	23242.1	23421.9	23682.5	22581.5	16917.0
62.5°	18357.3	18485.4	18921.3	20806.5	24111.7	24943.0	25161.0	25338.5	25032.9	22736.6	15629.6
65°	19460.6	19669.5	20709.8	23356.7	26733.8	27623.6	27848.3	27239.4	25246.4	20732.3	12713.1
67.5°	19999.8	20381.8	22237.7	25734.0	29277.3	30266.0	30182.9	27363.0	22655.7	15809.3	8158.6
69°	19887.5	20294.2	22590.5	26462.0	30122.2	31018.7	30490.7	25850.8	19301.0	11452.5	5008.4
70°	19442.6	19853.8	22408.5	26435.0	30230.0	30940.1	29920.0	23983.6	16319.4	8374.3	3132.2
72.5°	16236.2	16591.2	19894.2	23893.7	27848.3	27270.8	25030.7	16616.0	7951.8	2280.6	705.5
75°	9994.3	10192.0	14274.7	18000.1	21033.4	19550.4	16676.6	8266.4	2370.5	644.9	391.0
77.5°	5280.3	5370.1	7814.8	10609.9	13333.2	11032.4	8547.3	3224.3	1092.0	404.4	283.1
80°	3121.0	3188.4	4208.5	4851.1	5770.1	4819.6	3417.6	1979.5	781.9	253.9	251.7
82.5°	1786.3	1829.0	3051.3	2696.3	2273.9	1941.3	1700.9	1876.2	469.6	170.8	260.6
85°	656.1	665.1	1716.6	2051.4	1352.6	804.4	844.8	1554.9	125.8	107.9	204.5
87.5°	305.6	298.8	883.0	1256.0	790.9	510.1	658.3	341.5	49.4	69.7	56.2
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°	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8	5639.8
2.5°	5572.4	5489.2	5338.7	5183.6	5026.4	4905.0	4785.9	4691.6	4660.1	4601.7	4606.2
5°	5401.6	5248.8	4934.2	4615.2	4282.6	4008.5	3750.1	3541.1	3440.0	3336.7	3336.7
7.5°	5253.3	5030.8	4538.8	4019.7	3482.7	3031.1	2624.4	2318.8	2150.3	2015.5	2013.2
10°	5197.1	4896.0	4208.5	3464.7	2716.5	2100.9	1617.8	1307.7	1148.2	1044.8	1040.3
12.5°	5221.8	4848.8	3954.6	2952.5	2013.2	1350.4	937.0	737.0	669.6	638.1	638.1
15°	5293.7	4835.4	3700.7	2451.4	1422.3	844.8	622.4	568.5	564.0	564.0	564.0
17.5°	5381.4	4839.9	3440.0	1963.8	968.4	604.4	537.0	530.3	534.8	534.8	534.8
20°	5471.2	4842.1	3159.2	1512.2	683.1	525.8	505.6	503.3	507.8	507.8	510.1
22.5°	5581.3	4853.3	2878.3	1130.2	564.0	496.6	480.8	480.8	483.1	483.1	480.8
25°	5707.2	4875.8	2586.2	838.1	514.5	476.3	462.9	460.6	462.9	460.6	458.4
27.5°	5864.5	4907.3	2260.4	656.1	492.1	456.1	444.9	444.9	442.6	440.4	438.1
30°	6062.2	4943.2	1894.2	557.2	469.6	438.1	426.9	424.7	422.4	417.9	417.9
32.5°	6363.3	5021.9	1532.4	505.6	444.9	413.4	404.4	404.4	400.0	395.5	393.2
35°	6826.1	5176.9	1208.8	474.1	417.9	386.5	375.2	375.2	370.7	368.5	366.2
37.5°	7466.5	5412.8	939.2	444.9	391.0	357.3	346.0	343.8	339.3	334.8	332.5
40°	8318.1	5704.9	739.2	417.9	364.0	328.1	319.1	314.6	305.6	298.8	298.8
42.5°	9387.6	6037.5	599.9	388.7	332.5	301.1	294.3	287.6	271.9	265.1	262.9
45°	10506.6	6336.3	507.8	355.0	301.1	274.1	269.6	258.4	238.2	231.4	231.4
47.5°	11313.2	6406.0	447.1	323.6	271.9	244.9	242.7	222.4	204.5	200.0	197.7
50°	11816.5	6268.9	397.7	292.1	244.9	218.0	211.2	186.5	175.3	170.8	168.5
52.5°	12155.8	6024.0	357.3	265.1	220.2	193.2	177.5	159.5	150.5	146.0	146.0
55°	12427.7	5678.0	316.8	240.4	200.0	173.0	150.5	137.1	128.1	123.6	123.6
57.5°	12504.1	5208.4	276.4	220.2	179.8	152.8	128.1	119.1	107.9	105.6	105.6
60°	11949.1	4361.3	244.9	195.5	161.8	132.6	112.3	101.1	89.9	87.6	85.4
62.5°	10486.4	3374.9	215.7	173.0	141.6	114.6	96.6	83.1	74.1	74.1	74.1
65°	7999.0	2262.6	188.7	150.5	123.6	96.6	83.1	67.4	62.9	62.9	65.2
67.5°	4788.2	1231.3	161.8	128.1	105.6	80.9	69.7	58.4	56.2	58.4	58.4
69°	2806.4	723.5	146.0	114.6	92.1	71.9	60.7	51.7	56.2	58.4	58.4
70°	1732.4	487.6	134.8	103.4	83.1	65.2	56.2	49.4	53.9	56.2	56.2
72.5°	483.1	251.7	107.9	80.9	67.4	53.9	44.9	44.9	51.7	53.9	53.9
75°	314.6	186.5	83.1	60.7	51.7	42.7	38.2	42.7	49.4	51.7	51.7
77.5°	260.6	152.8	67.4	49.4	42.7	40.4	36.0	38.2	44.9	47.2	47.2
80°	238.2	107.9	53.9	44.9	38.2	36.0	33.7	31.5	40.4	42.7	42.7
82.5°	226.9	85.4	47.2	40.4	36.0	31.5	29.2	31.5	36.0	38.2	40.4
85°	141.6	56.2	42.7	38.2	31.5	29.2	29.2	29.2	33.7	36.0	36.0
87.5°	51.7	44.9	38.2	31.5	27.0	27.0	27.0	27.0	29.2	33.7	33.7
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)