

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: P299267

Luminaire Tested: **GLNA-AF-09-LED-E1-SL2-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299267
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24286)
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-SL2-7050-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type V
Narrow OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 34223.1 lumens
Efficiency: N/A
Efficacy: 118.0 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G5

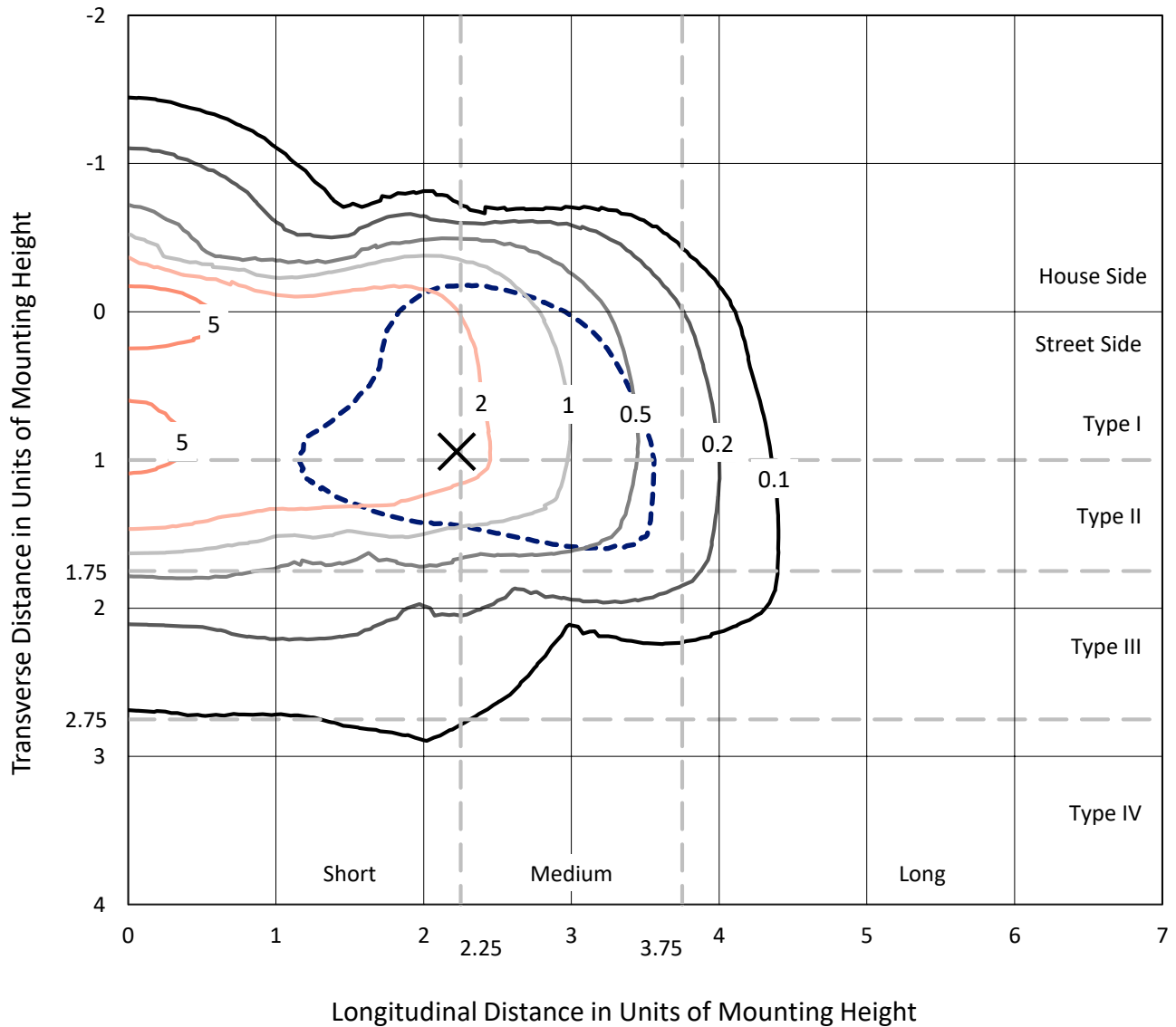
Input Watts (W): 290
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P299267
 CATALOG NUMBER: GLNA-AF-09-LED-E1-SL2-7050-600

Iso-Footcandle Lines of Horizontal Illumination

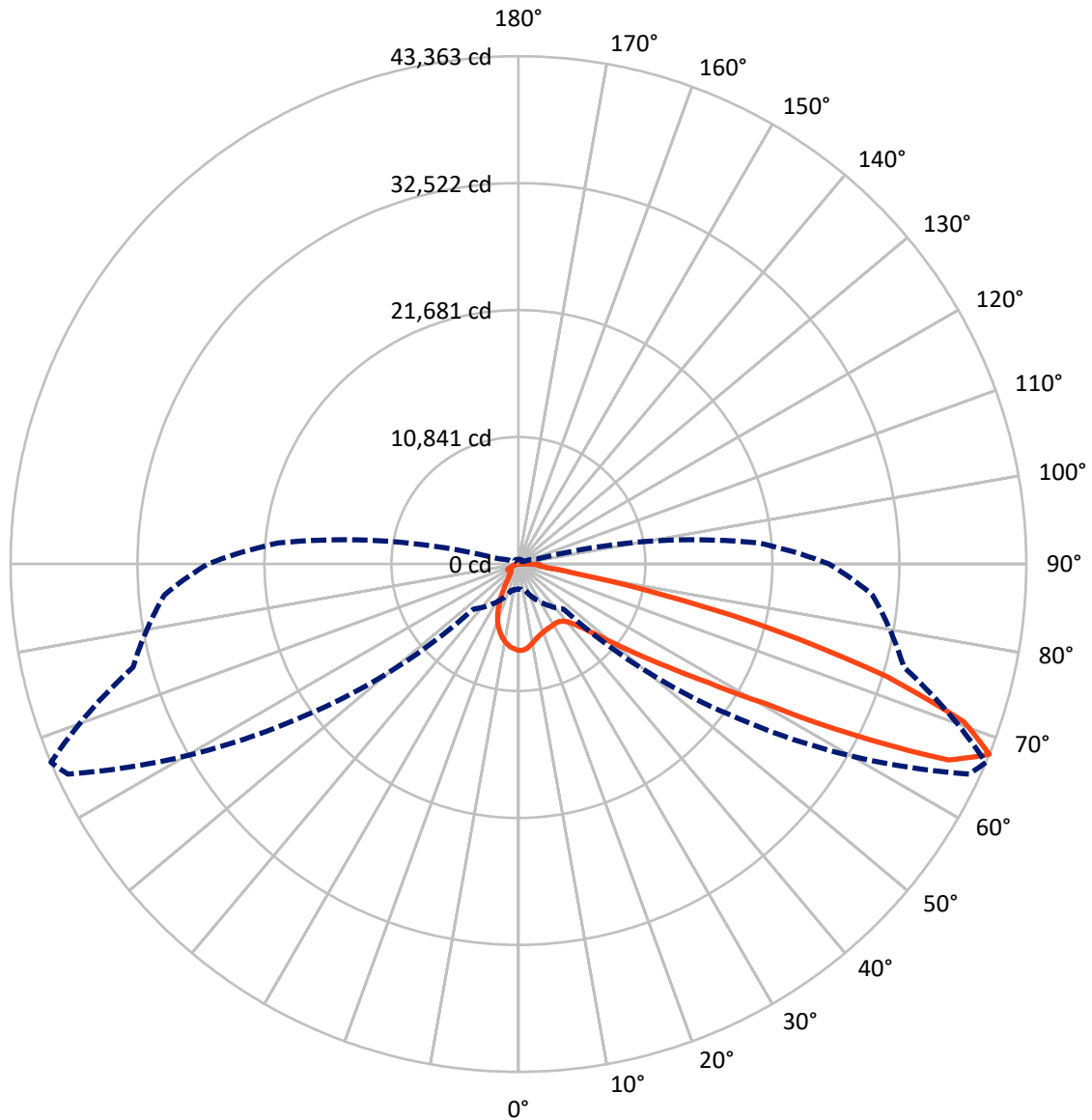
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 8.2 fc
 Type II - Short - Semi-Cutoff

REPORT NUMBER: P299267
CATALOG NUMBER: GLNA-AF-09-LED-E1-SL2-7050-600

Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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CATALOG NUMBER: GLNA-AF-09-LED-E1-SL2-7050-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5670.4	0.0	5670.4
	% Fixture	16.6	0.0	16.6
Street Side	Lumens	28552.7	0.0	28552.7
	% Fixture	83.4	0.0	83.4
Total	Lumens	34223.1	0.0	34223.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	629.8	1.8
10°-20°	1457.2	4.3
20°-30°	1975.3	5.8
30°-40°	2808.1	8.2
40°-50°	4698.0	13.7
50°-60°	7432.2	21.7
60°-70°	9467.9	27.7
70°-80°	4959.3	14.5
80°-90°	795.4	2.3
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°	34223.1	100.0
0°-180°	34223.1	100.0



REPORT NUMBER: P299267

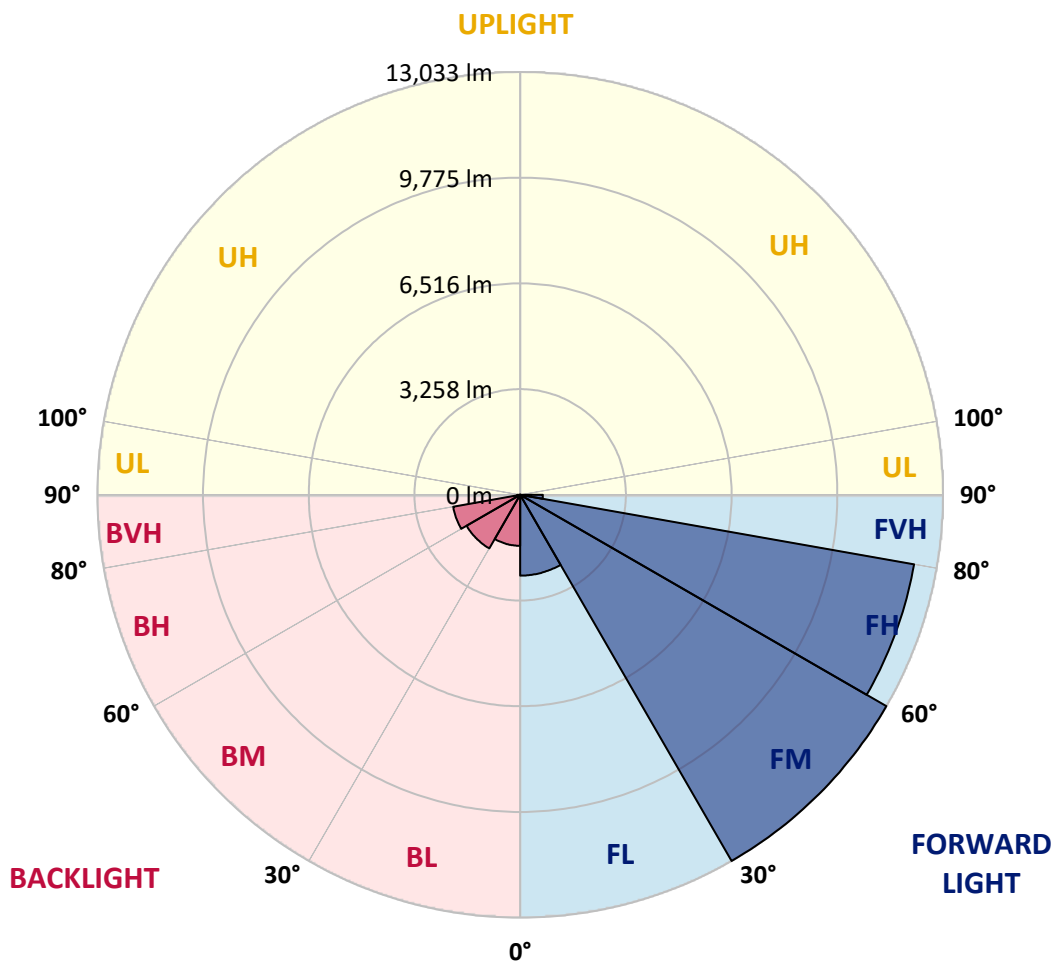
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2490.6	7.3			
FM (30°-60°)	13032.9	38.1			
FH (60°-80°)	12329.9	36.0			G5
FVH (80°-90°)	699.4	2.0			G4/750
BL (0°-30°)	1571.7	4.6	B3/2500		
BM (30°-60°)	1905.4	5.6	B2/2500		
BH (60°-80°)	2097.3	6.1	B3/2500		G3/2500
BVH (80°-90°)	96.0	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type II Short





REPORT NUMBER: P299267

CATALOG NUMBER: GLNA-AF-09-LED-E1-SL2-7050-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8
2.5°	7078.1	7089.9	7127.0	7150.6	7257.0	7302.5	7334.6	7366.6	7371.7	7386.9	7371.7
5°	6335.5	6360.8	6430.0	6507.6	6713.5	6875.5	7046.0	7223.2	7255.3	7370.0	7402.1
7.5°	5760.0	5753.2	5810.6	5903.4	6114.4	6338.9	6637.6	6990.3	7059.5	7317.7	7442.6
10°	5339.8	5334.7	5395.5	5491.7	5692.5	5905.1	6242.7	6725.3	6823.2	7235.0	7481.4
12.5°	5029.2	5030.9	5091.7	5198.0	5402.2	5616.5	5959.1	6468.8	6593.7	7138.8	7521.9
15°	4823.3	4836.8	4885.8	4998.9	5198.0	5412.3	5748.2	6276.4	6416.5	7062.9	7567.5
17.5°	4754.1	4776.1	4793.0	4875.7	5046.1	5260.4	5589.5	6134.7	6283.2	7010.6	7608.0
20°	4818.3	4843.6	4811.5	4840.2	4948.2	5137.2	5464.7	6023.3	6175.2	6951.5	7613.0
22.5°	5093.4	5117.0	5022.5	4939.8	4933.0	5047.8	5361.7	5935.5	6092.5	6907.6	7614.7
25°	5577.7	5592.9	5434.3	5241.9	5054.6	5015.7	5289.1	5874.8	6041.8	6868.8	7582.7
27.5°	6171.8	6183.6	6001.3	5717.8	5341.5	5091.7	5263.8	5839.3	6013.1	6835.0	7528.7
30°	6894.1	6949.8	6705.1	6347.3	5798.8	5316.1	5314.5	5820.7	5981.1	6777.7	7422.3
32.5°	7633.3	7656.9	7488.2	7125.3	6414.8	5711.1	5456.2	5834.3	5972.6	6708.5	7287.3
35°	8382.6	8413.0	8303.3	8011.3	7257.0	6289.9	5733.0	5913.6	6025.0	6684.8	7192.8
37.5°	9353.0	9393.5	9241.6	8904.1	8281.4	7074.7	6193.7	6112.7	6185.3	6752.3	7164.1
40°	10887.1	10868.5	10424.7	9921.8	9402.0	8078.8	6851.9	6450.2	6492.4	6970.0	7251.9
42.5°	12672.7	12627.1	11862.6	11072.8	10634.0	9294.0	7722.7	7035.9	7027.4	7398.7	7560.7
45°	14097.0	14059.9	13371.4	12397.6	12046.5	10677.8	8848.4	7908.4	7845.9	8078.8	8131.2
47.5°	14868.3	14870.0	14473.4	13678.5	13670.1	12436.4	10294.7	9170.8	9062.7	9172.4	9116.8
50°	14598.3	14633.7	14591.5	14338.4	15151.8	14741.7	12183.2	10931.0	10713.3	10821.3	10607.0
52.5°	13292.0	13337.6	13587.4	13975.5	15774.6	17528.1	14957.8	13118.2	12865.1	12826.2	12588.3
55°	10976.6	11032.3	11541.9	12596.7	15256.5	19399.7	19335.6	15906.2	15502.9	15136.6	15035.4
57.5°	7565.8	7658.6	8478.8	10045.0	13580.6	19965.1	24548.7	19880.7	19060.5	17781.2	17804.8
60°	4264.7	4372.7	5339.8	6762.5	10198.5	19350.7	28514.8	25900.6	24169.0	20878.1	21053.6
62.5°	2712.1	2828.5	3562.7	4698.5	6119.5	16042.9	30140.0	34269.7	32070.7	24695.6	24867.7
65°	2195.6	2246.3	2592.3	3878.2	4443.6	9665.2	28906.3	41163.8	40343.6	29540.9	28737.5
67.5°	2143.3	2160.2	2339.1	3255.5	4261.3	5432.6	23056.9	42453.2	43362.8	34065.5	30349.2
70°	2118.0	2177.1	2636.1	3107.0	4080.8	4582.0	13855.7	38919.2	40355.4	35248.5	28204.2
72.5°	1027.8	1024.4	1326.5	2810.0	4597.2	4752.5	7118.6	31490.1	32931.4	30538.3	23176.7
75°	828.6	757.8	724.0	1029.5	4420.0	4907.7	4536.4	21667.9	22710.9	20474.7	14247.3
77.5°	786.5	702.1	643.0	644.7	1868.2	5204.8	3842.8	11992.5	12296.3	9248.4	3903.6
80°	651.4	573.8	531.6	599.1	904.6	4956.7	4155.0	5427.5	4980.3	2271.6	1299.5
82.5°	452.3	411.8	400.0	502.9	724.0	3532.3	4831.8	2916.3	2445.4	1137.5	801.6
85°	288.6	246.4	273.4	366.2	563.7	1630.3	4976.9	2273.3	1807.5	722.3	452.3
87.5°	133.3	108.0	135.0	202.5	367.9	562.0	4735.6	2553.4	1861.5	381.4	285.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P299267

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8	7381.8
2.5°	7385.2	7353.1	7327.8	7280.6	7228.3	7177.6	7132.1	7074.7	7057.8	7042.6	7066.2
5°	7408.8	7376.8	7284.0	7138.8	6978.5	6828.3	6678.1	6549.8	6470.5	6426.6	6451.9
7.5°	7444.3	7398.7	7206.3	6939.7	6651.1	6387.8	6116.1	5898.4	5738.1	5662.1	5684.0
10°	7476.3	7388.6	7074.7	6674.7	6252.8	5861.3	5432.6	5078.2	4814.9	4676.5	4710.3
12.5°	7489.8	7349.8	6890.7	6343.9	5765.1	5191.3	4560.1	4030.1	3652.1	3513.7	3485.0
15°	7503.3	7305.9	6688.2	5967.6	5176.1	4364.3	3480.0	2845.4	2531.5	2462.3	2447.1
17.5°	7506.7	7229.9	6458.7	5559.2	4485.8	3380.4	2379.6	1976.3	1977.9	2089.3	2102.8
20°	7471.3	7116.9	6180.2	5051.2	3658.9	2337.4	1633.7	1564.5	1819.3	2097.8	2131.5
22.5°	7390.3	6966.7	5864.6	4458.8	2712.1	1539.1	1264.1	1340.0	1669.1	2010.0	2048.8
25°	7287.3	6784.4	5491.7	3771.9	1795.7	1100.4	1059.9	1152.7	1375.4	1603.3	1625.2
27.5°	7147.3	6568.4	5073.1	2985.5	1166.2	906.3	933.3	995.7	1086.9	1188.1	1198.2
30°	6966.7	6310.2	4625.9	2177.1	881.0	815.1	854.0	887.7	926.5	983.9	989.0
32.5°	6759.1	6062.1	4166.8	1503.7	781.4	767.9	798.3	815.1	845.5	881.0	884.3
35°	6585.3	5825.8	3690.9	1063.2	739.2	732.4	752.7	759.4	788.1	827.0	830.3
37.5°	6485.7	5633.4	3199.8	857.3	710.5	700.4	712.2	712.2	752.7	810.1	818.5
40°	6492.4	5527.1	2708.7	774.6	686.9	673.4	675.1	675.1	727.4	789.8	794.9
42.5°	6676.4	5554.1	2273.3	742.6	668.3	653.1	644.7	649.8	693.6	734.1	737.5
45°	7108.4	5744.8	1864.9	722.3	649.8	644.7	626.1	624.4	641.3	659.9	659.9
47.5°	7817.3	6121.2	1588.1	708.8	634.6	632.9	610.9	589.0	587.3	594.1	594.1
50°	8969.9	6769.2	1402.4	693.6	624.4	610.9	585.6	551.9	540.1	545.1	545.1
52.5°	10698.1	7925.3	1331.6	673.4	602.5	580.6	551.9	518.1	508.0	509.7	509.7
55°	12964.6	9700.7	1321.4	649.8	578.9	543.4	519.8	494.5	482.7	486.0	486.0
57.5°	15734.1	12156.2	1502.0	612.6	546.8	506.3	492.8	475.9	467.5	472.5	470.9
60°	19101.0	15369.5	2227.7	573.8	514.7	472.5	472.5	459.0	452.3	457.4	455.7
62.5°	22979.2	19060.5	3132.3	545.1	481.0	445.5	452.3	445.5	438.8	442.2	440.5
65°	26418.7	21465.4	2933.2	523.2	447.2	420.2	432.0	428.7	423.6	427.0	425.3
67.5°	26518.2	20574.3	1647.2	499.5	415.2	394.9	411.8	410.1	406.7	410.1	408.4
70°	23666.1	17372.8	928.2	455.7	381.4	364.5	388.2	386.5	383.1	389.9	388.2
72.5°	18960.9	12606.8	678.4	401.7	347.7	332.5	359.5	357.8	357.8	367.9	362.8
75°	10910.7	6487.4	541.7	344.3	312.2	300.4	324.0	325.7	329.1	342.6	332.5
77.5°	3110.4	2021.8	442.2	292.0	268.3	263.3	286.9	290.3	292.0	307.2	293.7
80°	1156.0	931.6	364.5	244.7	219.4	221.1	243.0	248.1	249.8	265.0	248.1
82.5°	737.5	614.3	295.3	189.0	172.1	170.5	197.5	204.2	204.2	205.9	195.8
85°	430.4	367.9	222.8	136.7	121.5	116.4	146.8	158.6	153.6	150.2	143.5
87.5°	288.6	253.1	136.7	75.9	65.8	62.4	86.1	94.5	91.1	86.1	81.0
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)