

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: LUMARK

Report Number: P270686

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270686
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL4-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 32752 lumens
Efficiency: N/A
Efficacy: 85.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

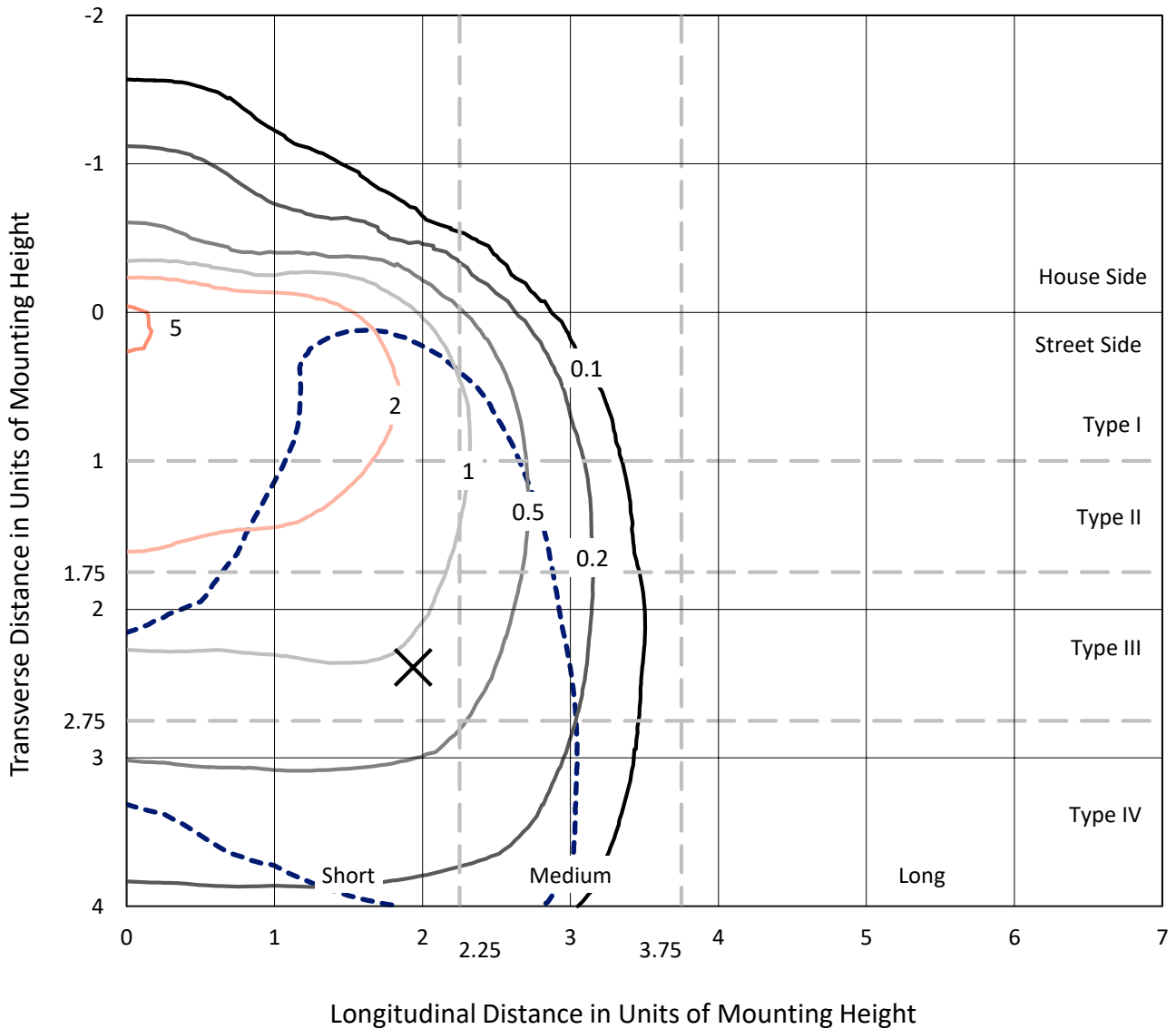
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270686
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

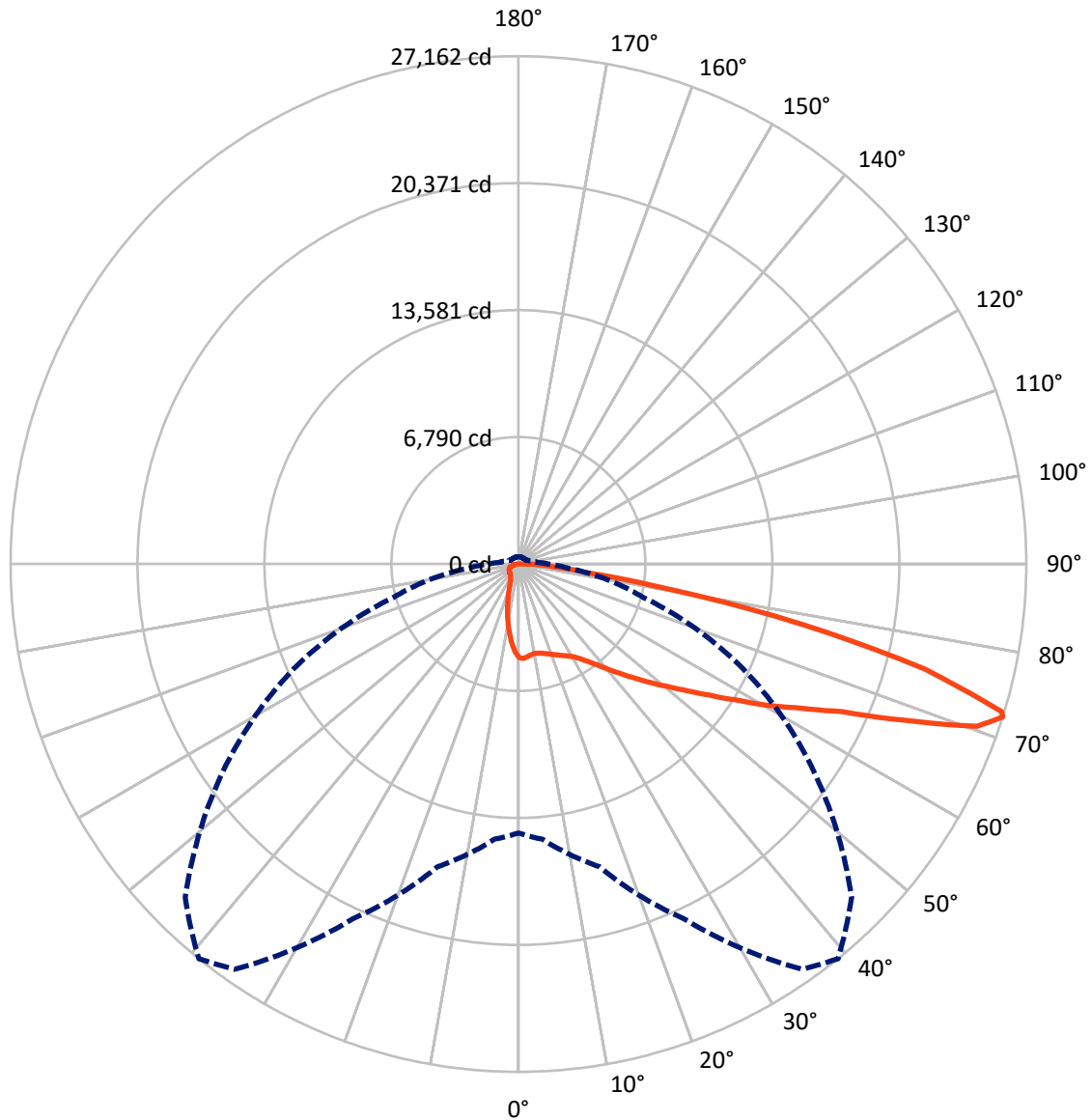
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.6 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270686
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P270686

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3755.5	0.0	3755.5
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	28996.6	0.0	28996.6
	% Fixture	88.5	0.0	88.5
Total	Lumens	32752.0	0.0	32752.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.8	1.3
10°-20°	1080.1	3.3
20°-30°	1683.2	5.1
30°-40°	2591.6	7.9
40°-50°	4224.9	12.9
50°-60°	6565.0	20.0
60°-70°	8787.0	26.8
70°-80°	6319.2	19.3
80°-90°	1071.2	3.3
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°	32752.0	100.0
0°-180°	32752.0	100.0

Coefficient of Utilization



REPORT NUMBER: P270686

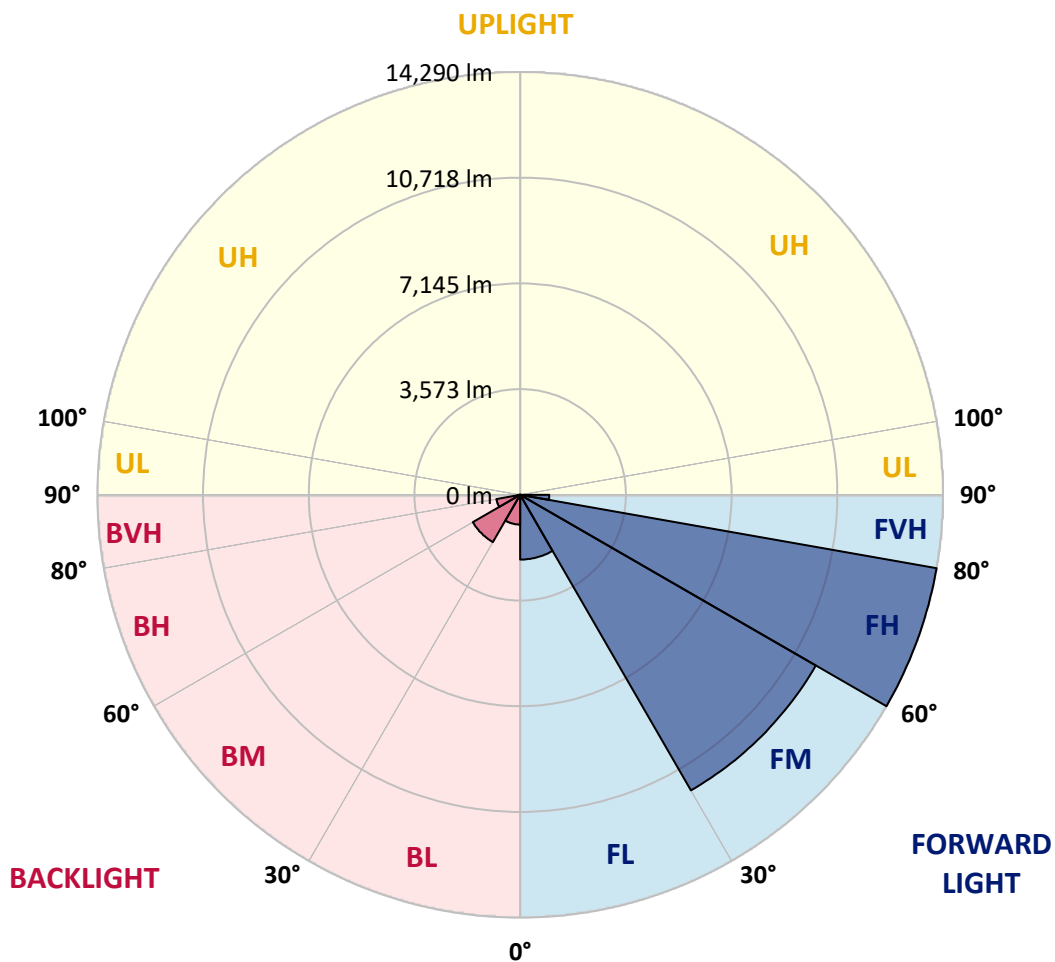
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2187.8	6.7			
FM (30°-60°)	11535.9	35.2			
FH (60°-80°)	14290.2	43.6			G5
FVH (80°-90°)	982.7	3.0			G5
BL (0°-30°)	1005.3	3.1	B3/2500		
BM (30°-60°)	1845.6	5.6	B2/2500		
BH (60°-80°)	815.9	2.5	B2/1000		G2/1000
BVH (80°-90°)	88.5	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 IV Short





REPORT NUMBER: P270686

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9
2.5°	5109.6	5111.7	5105.2	5085.3	5067.8	5059.0	5043.7	5017.3	4982.0	4957.8	4938.1
5°	5061.2	5067.8	5063.3	5030.4	4999.6	4982.0	4957.8	4920.5	4874.4	4854.5	4808.4
7.5°	5023.9	5028.3	5015.0	4977.7	4918.3	4896.3	4852.4	4804.0	4762.2	4733.6	4678.6
10°	4997.5	5001.9	4990.9	4953.4	4887.5	4861.1	4808.4	4755.5	4700.7	4665.4	4603.9
12.5°	4960.0	4968.9	4968.9	4951.3	4907.4	4889.7	4837.0	4779.7	4729.1	4691.8	4614.9
15°	4953.4	4964.5	4984.2	4982.0	4968.9	4955.7	4913.9	4856.7	4812.8	4768.7	4674.2
17.5°	5008.4	5032.7	5072.2	5085.3	5076.6	5047.9	4999.6	4946.8	4898.5	4856.7	4740.1
20°	5146.8	5160.1	5219.5	5245.8	5201.8	5160.1	5096.4	5028.3	4984.2	4951.3	4801.8
22.5°	5355.9	5373.4	5421.8	5424.0	5331.6	5281.0	5199.7	5116.1	5074.3	5061.2	4885.3
25°	5690.0	5685.6	5698.8	5643.8	5476.7	5417.4	5318.4	5221.7	5193.1	5219.5	5008.4
27.5°	6090.1	6079.1	6037.4	5894.5	5641.6	5564.7	5446.0	5360.1	5360.1	5421.8	5175.6
30°	6551.9	6540.9	6404.6	6164.9	5837.2	5749.3	5624.0	5533.9	5580.0	5698.8	5402.0
32.5°	7039.9	7000.3	6809.1	6488.1	6116.5	6019.8	5898.9	5806.6	5894.5	6096.7	5727.4
35°	7499.4	7477.4	7242.1	6861.9	6477.0	6395.8	6312.2	6197.9	6338.6	6652.9	6186.8
37.5°	7974.3	7956.7	7668.7	7264.1	6916.8	6861.9	6791.5	6712.3	6938.8	7352.2	6809.1
40°	8504.3	8469.0	8106.2	7701.7	7429.2	7402.8	7365.4	7343.4	7708.3	8324.0	7596.2
42.5°	9104.4	9036.3	8567.9	8183.2	7987.5	8009.5	7989.7	8077.6	8636.1	9445.1	8532.8
45°	9790.4	9654.1	9027.4	8695.5	8605.4	8693.3	8735.1	8959.3	9733.2	10740.1	9579.3
47.5°	10432.3	10256.5	9530.9	9251.7	9302.3	9454.0	9572.7	9968.5	10935.8	12019.9	10647.8
50°	11023.8	10826.0	10069.6	9827.7	10074.0	10289.5	10535.7	11094.2	12215.4	13336.7	11628.4
52.5°	11461.4	11318.5	10608.3	10456.6	10960.0	11245.8	11639.3	12345.1	13508.3	14592.2	12503.5
55°	11799.9	11722.9	11133.8	11177.7	11962.5	12371.5	12848.6	13659.9	14875.8	15717.9	13207.1
57.5°	12191.3	12134.0	11733.9	12048.3	13207.1	13721.5	14284.3	15185.8	16177.3	16709.5	13758.9
60°	12604.6	12604.6	12402.3	13097.1	14763.6	15352.8	15913.6	16614.8	17474.5	17602.0	13983.1
62.5°	12916.8	12998.1	13070.7	14214.1	16241.0	16973.3	17588.9	18261.6	18817.9	18041.7	13455.4
65°	13369.7	13543.3	13952.4	15504.6	18070.3	19028.9	19860.0	20425.0	19906.1	17692.2	11733.9
67.5°	14148.0	14405.3	15275.9	17426.1	20871.3	22307.0	23113.8	22137.7	19693.0	15491.5	8987.9
70°	14849.3	15212.2	16700.6	19864.4	24512.2	26002.9	25631.2	21739.8	17151.2	11355.7	5529.4
72°	14383.2	14779.0	16766.5	20926.2	26458.0	27161.5	25202.6	19266.4	13253.1	6930.1	2726.3
72.5°	14077.7	14488.9	16553.2	20900.0	26510.8	27014.3	24606.8	18283.7	12030.8	6063.7	2205.2
75°	11760.3	12112.0	14233.7	18523.2	23362.4	22438.9	19202.6	11832.8	5529.4	1958.9	1134.5
77.5°	7679.7	7947.9	9814.5	12833.2	16364.2	15476.0	11687.8	5540.4	2073.3	1189.4	853.1
80°	3858.6	4049.7	5252.5	6747.4	8831.7	8126.1	5395.4	2680.2	1387.3	859.7	670.6
82.5°	2684.4	2860.5	3616.7	3445.2	3691.4	3572.6	2537.3	2236.1	1037.7	543.0	351.7
85°	2251.3	2433.9	2992.3	2455.8	2009.5	1831.5	1818.3	2112.9	685.9	268.2	296.8
87.5°	1963.3	2240.4	2469.0	1794.1	1378.4	1215.9	1339.0	1936.9	217.7	147.3	90.1
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: P270686

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7027-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9	5001.9
2.5°	4905.0	4898.5	4865.5	4814.9	4777.5	4753.4	4707.2	4705.1	4709.5	4669.7	4685.2
5°	4766.5	4740.1	4654.5	4537.9	4443.3	4353.2	4254.4	4221.3	4192.7	4133.5	4140.0
7.5°	4621.5	4575.2	4425.8	4234.5	4052.1	3884.9	3720.1	3638.7	3577.1	3500.2	3500.2
10°	4535.7	4463.1	4234.5	3955.2	3665.1	3421.0	3174.8	3027.5	2919.8	2820.8	2814.2
12.5°	4531.3	4421.4	4102.6	3717.8	3319.9	2977.0	2640.5	2414.0	2253.6	2137.1	2126.1
15°	4566.5	4412.7	3992.6	3495.8	2994.5	2548.2	2132.7	1844.6	1640.1	1510.4	1497.2
17.5°	4597.3	4401.6	3873.9	3262.7	2677.8	2134.8	1673.2	1374.1	1180.6	1075.1	1064.1
20°	4625.8	4377.4	3722.2	3016.5	2328.3	1747.9	1308.2	1066.3	938.8	879.4	872.9
22.5°	4667.7	4355.4	3563.9	2739.4	1985.3	1422.5	1079.6	905.9	837.7	809.2	804.7
25°	4735.8	4357.7	3410.1	2455.8	1670.9	1185.0	934.3	826.7	789.3	769.5	769.5
27.5°	4834.8	4384.0	3258.3	2167.8	1404.9	1022.4	848.7	784.8	760.8	745.4	740.9
30°	4979.8	4432.3	3097.9	1895.2	1193.8	910.3	798.1	758.4	738.8	725.6	723.3
32.5°	5190.9	4518.1	2928.6	1646.8	1033.3	831.1	760.8	736.5	721.1	710.1	708.0
35°	5505.4	4669.7	2763.6	1435.8	919.1	773.9	730.0	710.1	701.3	696.9	694.7
37.5°	5967.0	4913.9	2607.5	1270.8	844.2	736.5	699.2	688.1	683.8	683.8	683.8
40°	6547.4	5234.9	2466.8	1154.2	802.5	708.0	677.1	668.3	668.3	670.6	670.6
42.5°	7253.2	5637.3	2346.0	1075.1	778.3	688.1	661.8	657.4	655.1	655.1	657.4
45°	8073.2	6112.1	2271.2	1013.6	760.8	677.1	650.8	648.5	639.9	635.5	635.5
47.5°	8897.7	6620.0	2266.8	978.3	738.8	663.9	639.9	639.9	622.2	613.5	615.6
50°	9667.3	7075.1	2315.1	969.6	725.6	644.2	628.9	631.0	606.9	595.8	593.6
52.5°	10287.3	7422.4	2374.5	980.6	725.6	626.6	609.1	620.0	593.6	580.5	578.1
55°	10766.5	7664.2	2396.5	1004.8	734.4	611.1	591.4	609.1	589.2	571.6	571.6
57.5°	11109.6	7741.2	2301.9	1015.8	747.5	609.1	573.8	606.9	595.8	573.8	573.8
60°	10984.2	7295.0	1950.2	974.0	745.4	604.6	560.6	611.1	617.9	593.6	593.6
62.5°	10005.9	6103.4	1565.3	879.4	708.0	589.2	545.2	606.9	633.1	624.4	620.0
65°	8145.8	4476.3	1213.6	767.3	644.2	556.2	512.3	567.2	598.0	606.9	609.1
67.5°	5740.6	2834.1	943.2	653.0	565.0	507.9	474.9	501.3	512.3	516.6	525.5
70°	3139.5	1534.7	749.7	549.7	483.6	459.6	435.3	437.6	433.2	428.8	433.2
72°	1576.3	1002.6	633.1	477.1	428.8	413.3	402.4	395.8	395.8	389.1	391.3
72.5°	1356.5	932.3	611.1	459.6	415.6	402.4	393.5	387.0	384.7	380.3	382.6
75°	903.7	738.8	510.1	384.7	354.0	345.2	349.6	343.1	345.2	340.7	343.1
77.5°	730.0	635.5	433.2	325.4	303.4	290.2	299.0	301.2	305.7	301.2	299.0
80°	611.1	540.9	362.7	268.2	252.9	241.9	246.2	261.6	263.8	250.6	248.4
82.5°	395.8	435.3	285.8	208.9	193.4	189.1	200.1	215.5	219.8	202.3	197.8
85°	332.1	349.6	206.7	142.9	127.5	123.1	145.0	160.4	171.4	153.9	149.5
87.5°	92.3	171.4	101.1	68.1	57.1	57.1	70.3	83.5	99.0	101.1	101.1
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)