

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: P270606

Luminaire Tested: **NAV-AF-05-D-UNV-SL4-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270606
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-05-D-UNV-SL4-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 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: 27339.2 lumens
Efficiency: N/A
Efficacy: 85.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G5

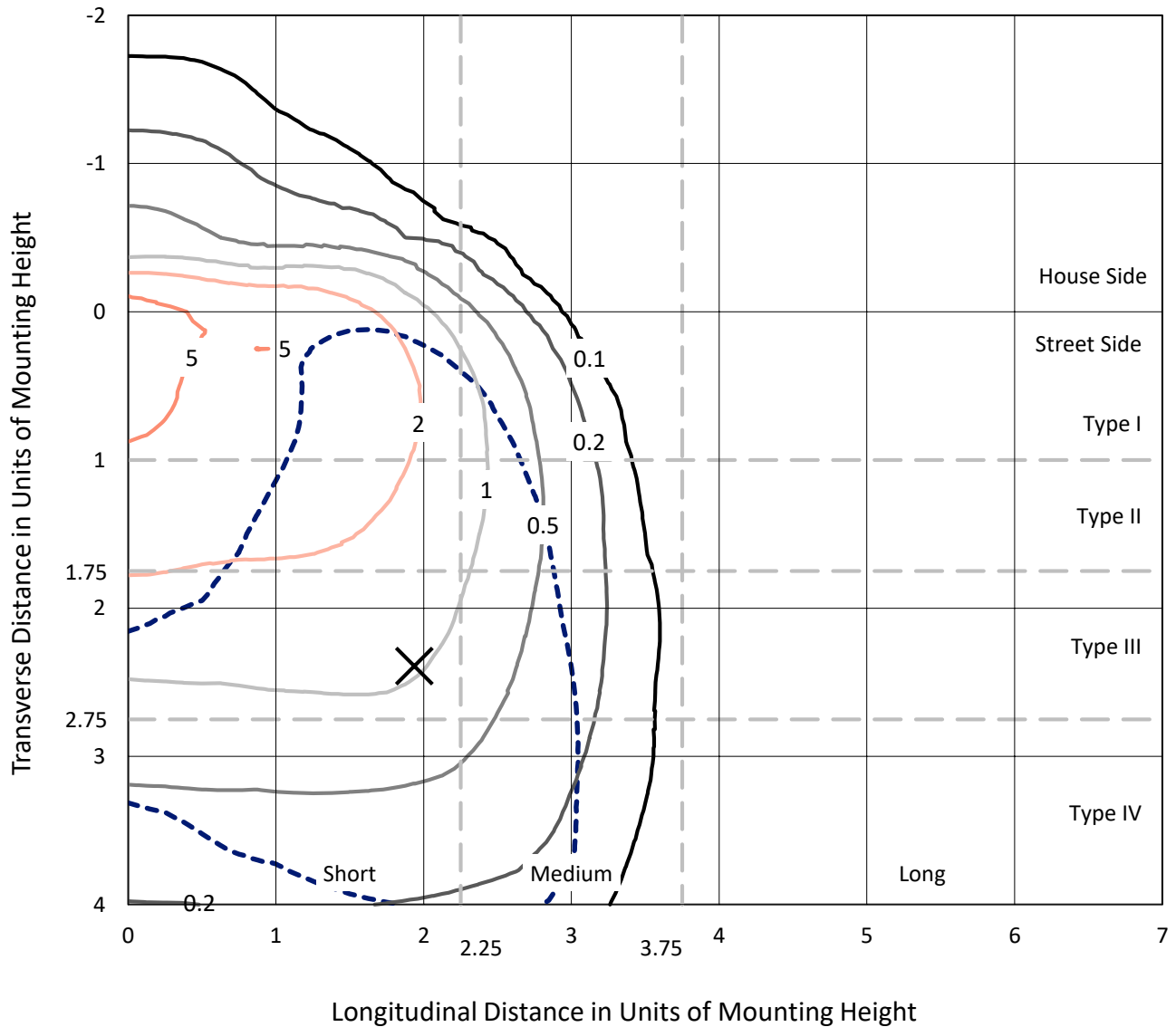
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270606
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

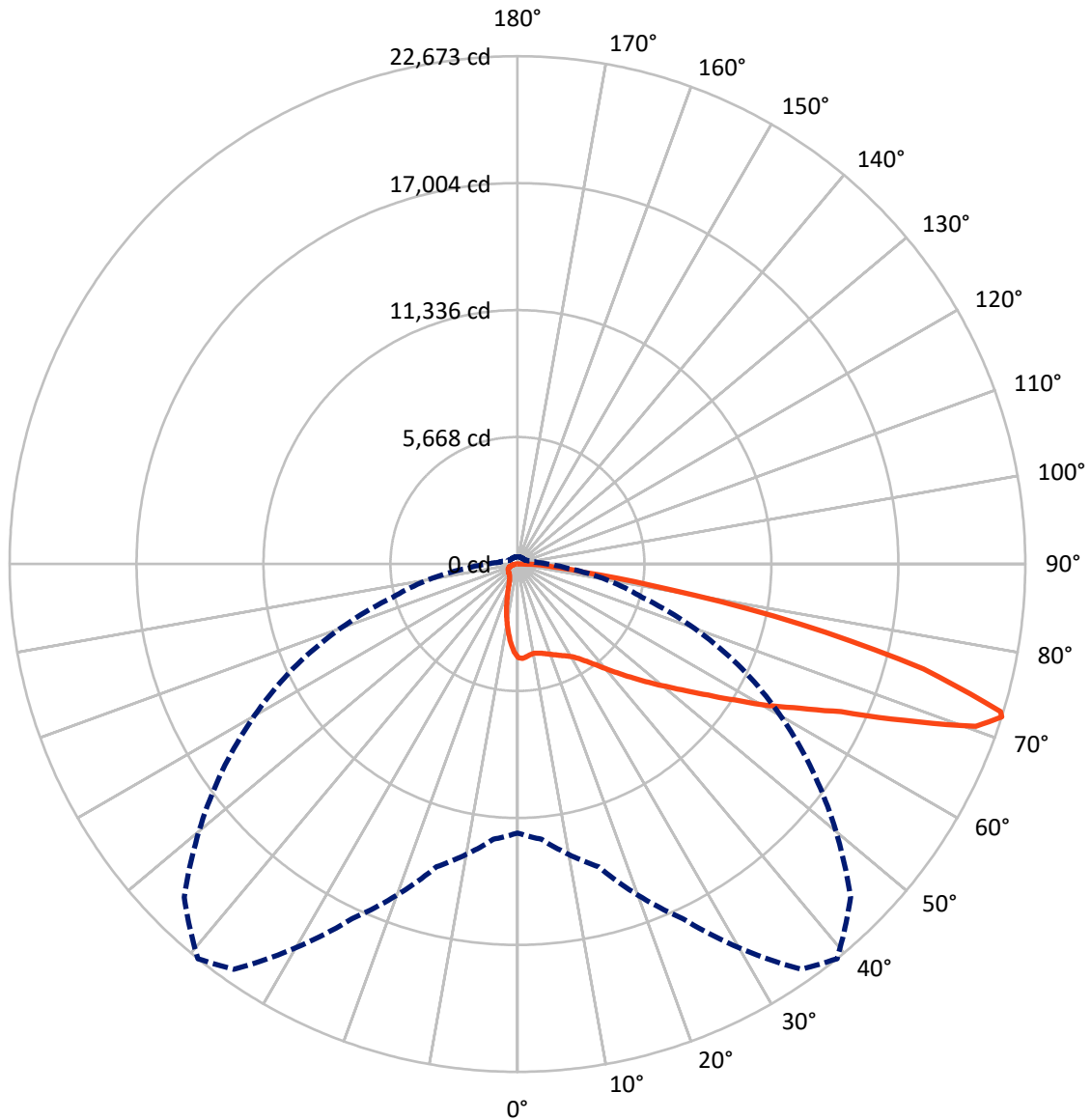
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.7 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P270606
CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P270606

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3134.8	0.0	3134.8
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	24204.4	0.0	24204.4
	% Fixture	88.5	0.0	88.5
Total	Lumens	27339.2	0.0	27339.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	358.8	1.3
10°-20°	901.6	3.3
20°-30°	1405.0	5.1
30°-40°	2163.3	7.9
40°-50°	3526.6	12.9
50°-60°	5480.0	20.0
60°-70°	7334.8	26.8
70°-80°	5274.8	19.3
80°-90°	894.2	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°	27339.2	100.0
0°-180°	27339.2	100.0

Coefficient of Utilization



REPORT NUMBER: P270606

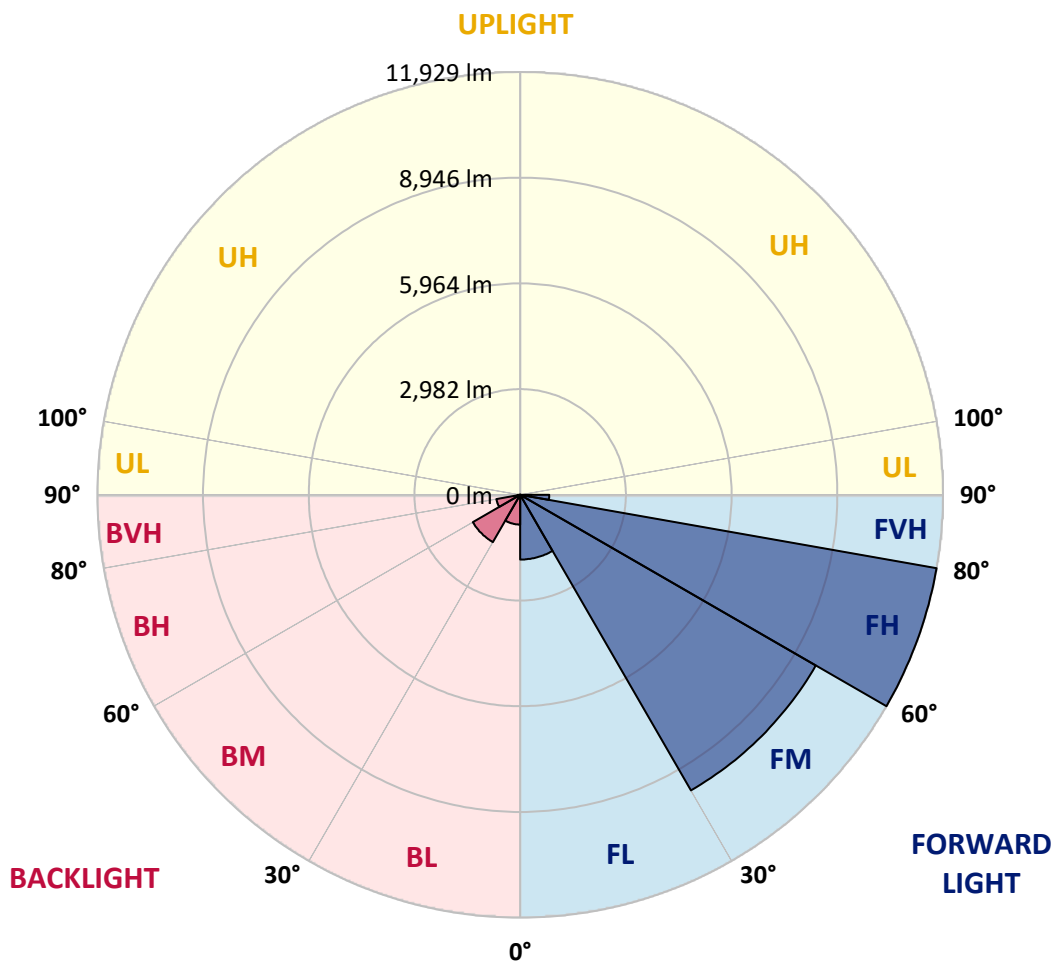
CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1826.2	6.7			
FM	(30°-60°)	9629.4	35.2			
FH	(60°-80°)	11928.5	43.6			G4/12000
FVH	(80°-90°)	820.3	3.0			G5
BL	(0°-30°)	839.2	3.1	B2/1000		
BM	(30°-60°)	1540.6	5.6	B2/2500		
BH	(60°-80°)	681.1	2.5	B2/1000		G2/1000
BVH	(80°-90°)	73.9	0.3			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





REPORT NUMBER: P270606

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2
2.5°	4265.2	4266.9	4261.4	4244.9	4230.3	4222.9	4210.0	4188.0	4158.7	4138.5	4122.0
5°	4224.6	4230.3	4226.5	4199.0	4173.3	4158.7	4138.5	4107.3	4068.8	4052.3	4013.6
7.5°	4193.6	4197.2	4186.2	4155.0	4105.4	4087.1	4050.4	4010.0	3975.1	3951.3	3905.4
10°	4171.5	4175.2	4166.0	4134.8	4079.7	4057.7	4013.6	3969.6	3923.7	3894.4	3842.9
12.5°	4140.3	4147.7	4147.7	4133.0	4096.4	4081.5	4037.5	3989.8	3947.6	3916.4	3852.2
15°	4134.8	4144.1	4160.5	4158.7	4147.7	4136.6	4101.8	4054.1	4017.3	3980.7	3901.7
17.5°	4180.7	4200.8	4233.9	4244.9	4237.6	4213.7	4173.3	4129.2	4088.9	4054.1	3956.8
20°	4296.4	4307.4	4356.9	4378.9	4342.1	4307.4	4254.2	4197.2	4160.5	4133.0	4008.1
22.5°	4470.7	4485.3	4525.8	4527.5	4450.5	4408.3	4340.3	4270.6	4235.8	4224.6	4077.9
25°	4749.6	4745.9	4757.0	4711.2	4571.7	4522.1	4439.5	4358.7	4334.9	4356.9	4180.7
27.5°	5083.6	5074.4	5039.6	4920.2	4709.3	4645.0	4546.0	4474.3	4474.3	4525.8	4320.2
30°	5469.1	5459.9	5346.1	5146.0	4872.5	4799.1	4694.5	4619.4	4657.8	4757.0	4509.2
32.5°	5876.4	5843.5	5683.8	5415.8	5105.6	5024.8	4924.0	4846.9	4920.2	5089.2	4780.8
35°	6260.0	6241.7	6045.4	5727.9	5406.5	5338.7	5269.0	5173.6	5290.9	5553.4	5164.4
37.5°	6656.4	6641.8	6401.3	6063.6	5773.6	5727.9	5669.1	5603.0	5792.0	6137.1	5683.8
40°	7098.8	7069.3	6766.6	6428.9	6201.3	6179.4	6148.1	6129.8	6434.4	6948.2	6340.7
42.5°	7599.8	7542.9	7151.9	6830.8	6667.4	6685.7	6669.2	6742.7	7208.9	7884.2	7122.7
45°	8172.3	8058.5	7535.5	7258.3	7183.1	7256.6	7291.5	7478.6	8124.6	8965.2	7996.2
47.5°	8708.2	8561.4	7955.7	7722.6	7764.9	7891.5	7990.7	8321.0	9128.4	10033.3	8888.1
50°	9201.9	9036.7	8405.4	8203.5	8409.2	8589.0	8794.4	9260.6	10196.7	11132.5	9706.6
52.5°	9567.0	9447.8	8855.0	8728.4	9148.7	9387.3	9715.8	10304.8	11275.7	12180.5	10437.0
55°	9849.7	9785.5	9293.7	9330.3	9985.6	10326.9	10725.1	11402.4	12417.4	13120.1	11024.3
57.5°	10176.4	10128.7	9794.7	10057.2	11024.3	11453.7	11923.7	12676.1	13503.7	13947.9	11485.0
60°	10521.5	10521.5	10352.5	10932.6	12323.7	12815.5	13283.4	13868.9	14586.5	14692.9	11672.1
62.5°	10782.0	10850.0	10910.5	11864.9	13557.0	14168.1	14682.0	15243.6	15707.9	15060.1	11231.7
65°	11160.2	11305.1	11646.4	12942.2	15083.9	15884.0	16577.9	17049.4	16616.3	14768.2	9794.7
67.5°	11809.7	12024.5	12751.4	14546.2	17422.0	18620.3	19293.9	18479.0	16438.3	12931.1	7502.5
70°	12395.3	12698.0	13940.4	16581.5	20461.1	21705.4	21395.3	18146.9	14316.7	9479.0	4615.6
72°	12006.1	12336.6	13995.6	17467.8	22085.3	22672.6	21037.3	16082.3	11062.8	5784.6	2275.6
72.5°	11751.1	12094.3	13817.5	17445.9	22129.3	22549.7	20540.0	15261.9	10042.4	5061.6	1840.7
75°	9816.7	10110.3	11881.4	15461.9	19501.3	18730.5	16029.0	9877.4	4615.6	1635.3	947.1
77.5°	6410.6	6634.4	8192.5	10712.3	13659.7	12918.3	9756.1	4624.8	1730.7	992.8	712.0
80°	3220.9	3380.5	4384.4	5632.4	7372.2	6783.0	4503.7	2237.1	1158.0	717.6	559.7
82.5°	2240.8	2387.7	3018.9	2875.8	3081.4	2982.3	2117.8	1866.5	866.2	453.4	293.7
85°	1879.3	2031.5	2497.7	2049.9	1677.5	1528.7	1517.7	1763.6	572.6	223.9	247.8
87.5°	1638.9	1870.1	2061.0	1497.6	1150.6	1014.8	1117.8	1616.9	181.6	123.0	75.3
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: P270606

CATALOG NUMBER: NAV-AF-05-D-UNV-SL4-7027-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2	4175.2
2.5°	4094.5	4088.9	4061.3	4019.1	3987.9	3967.9	3929.2	3927.4	3931.2	3898.0	3911.0
5°	3978.9	3956.8	3885.2	3788.0	3709.0	3633.7	3551.2	3523.7	3499.7	3450.3	3455.8
7.5°	3857.7	3819.1	3694.4	3534.7	3382.4	3242.9	3105.3	3037.3	2986.0	2921.6	2921.6
10°	3786.0	3725.5	3534.7	3301.6	3059.4	2855.6	2650.1	2527.1	2437.2	2354.5	2349.1
12.5°	3782.5	3690.6	3424.6	3103.5	2771.2	2484.9	2204.1	2015.1	1881.1	1783.9	1774.7
15°	3811.8	3683.3	3332.8	2918.1	2499.7	2127.0	1780.3	1539.8	1369.0	1260.9	1249.8
17.5°	3837.5	3674.2	3233.7	2723.5	2235.3	1782.0	1396.7	1147.0	985.5	897.4	888.2
20°	3861.4	3653.9	3107.1	2517.9	1943.6	1458.9	1092.0	890.1	783.6	734.0	728.5
22.5°	3896.2	3635.6	2974.9	2286.7	1657.3	1187.4	901.1	756.2	699.2	675.3	671.8
25°	3953.1	3637.4	2846.5	2049.9	1394.8	989.3	780.0	690.1	658.8	642.4	642.4
27.5°	4035.6	3659.4	2719.9	1809.5	1172.6	853.4	708.5	655.1	635.0	622.2	618.5
30°	4156.8	3699.8	2585.9	1581.9	996.5	759.7	666.3	633.1	616.6	605.6	603.8
32.5°	4333.1	3771.4	2444.6	1374.5	862.6	693.8	635.0	614.8	602.0	592.8	590.9
35°	4595.5	3898.0	2306.8	1198.3	767.2	646.1	609.3	592.8	585.4	581.7	579.9
37.5°	4980.8	4101.8	2176.7	1060.8	704.7	614.8	583.5	574.5	570.8	570.8	570.8
40°	5465.4	4369.7	2059.2	963.5	669.9	590.9	565.3	557.8	557.8	559.7	559.7
42.5°	6054.4	4705.6	1958.2	897.4	649.7	574.5	552.4	548.8	546.9	546.9	548.8
45°	6739.1	5102.0	1895.9	846.1	635.0	565.3	543.3	541.4	534.0	530.4	530.4
47.5°	7427.2	5526.0	1892.1	816.6	616.6	554.3	534.0	534.0	519.4	512.0	513.9
50°	8069.6	5905.7	1932.6	809.4	605.6	537.7	524.9	526.8	506.6	497.3	495.5
52.5°	8587.1	6195.8	1982.1	818.5	605.6	523.1	508.4	517.6	495.5	484.5	482.7
55°	8987.3	6397.6	2000.4	838.7	613.0	510.1	493.7	508.4	491.8	477.2	477.2
57.5°	9273.6	6461.9	1921.6	847.9	624.1	508.4	478.9	506.6	497.3	478.9	478.9
60°	9168.9	6089.3	1627.9	813.1	622.2	504.7	467.9	510.1	515.6	495.5	495.5
62.5°	8352.3	5094.6	1306.7	734.0	590.9	491.8	455.1	506.6	528.6	521.1	517.6
65°	6799.6	3736.6	1013.1	640.5	537.7	464.3	427.7	473.4	499.2	506.6	508.4
67.5°	4791.7	2365.6	787.4	545.1	471.7	423.9	396.4	418.4	427.7	431.2	438.6
70°	2620.7	1281.1	625.8	458.9	403.8	383.5	363.4	365.3	361.6	357.9	361.6
72°	1315.8	837.0	528.6	398.3	357.9	344.9	335.8	330.3	330.3	324.8	326.7
72.5°	1132.4	778.1	510.1	383.5	346.8	335.8	328.5	323.0	321.1	317.6	319.3
75°	754.2	616.6	425.7	321.1	295.5	288.1	291.8	286.3	288.1	284.5	286.3
77.5°	609.3	530.4	361.6	271.6	253.2	242.3	249.5	251.4	255.1	251.4	249.5
80°	510.1	451.5	302.8	223.9	211.0	201.8	205.5	218.4	220.3	209.2	207.4
82.5°	330.3	363.4	238.6	174.4	161.4	157.8	167.1	179.8	183.6	168.8	165.2
85°	277.1	291.8	172.6	119.3	106.4	102.8	121.1	133.9	143.2	128.5	124.9
87.5°	77.1	143.2	84.4	57.0	47.7	47.7	58.7	69.8	82.6	84.4	84.4
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)