

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: P270594

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270594
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17190.6 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

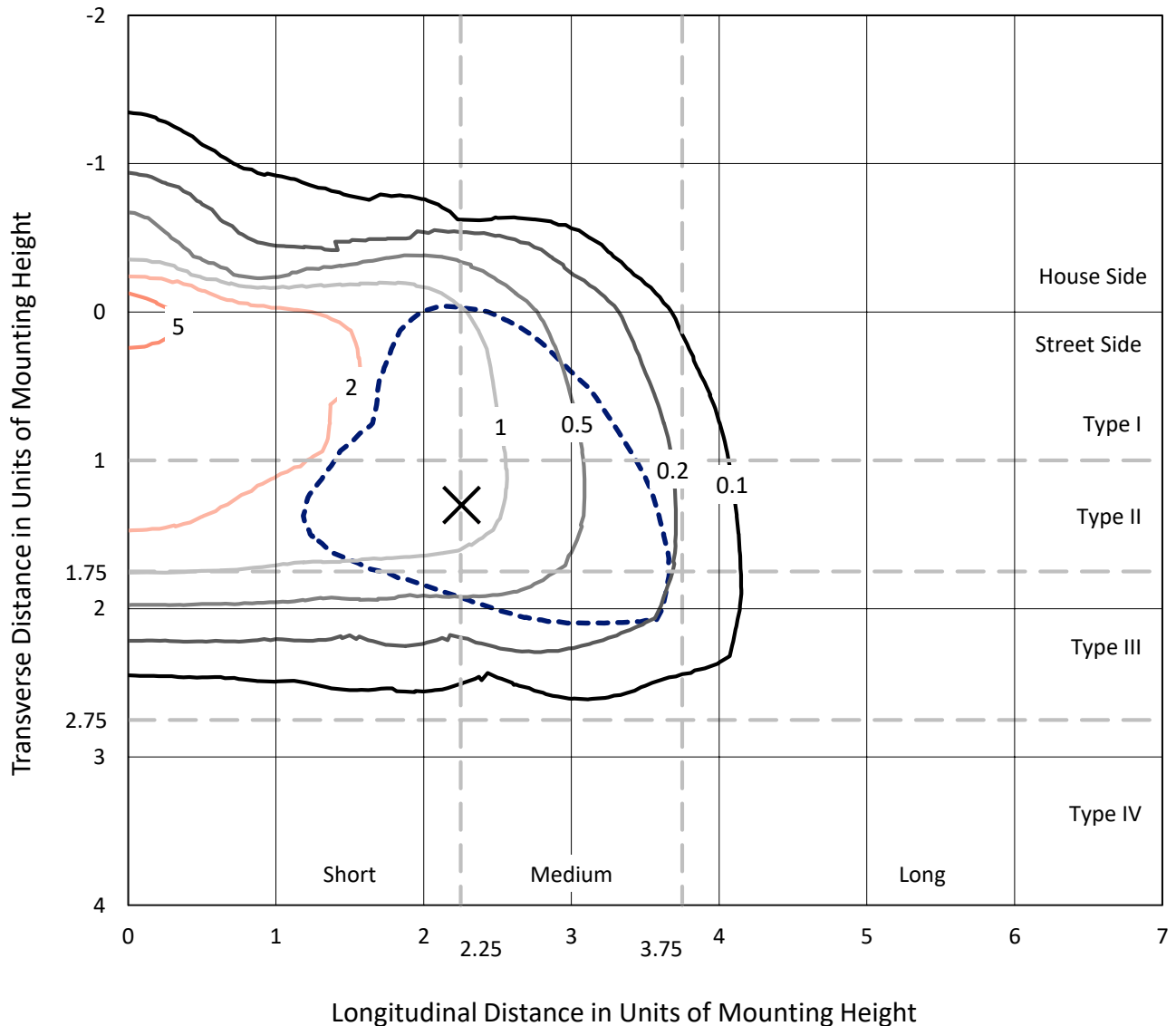
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

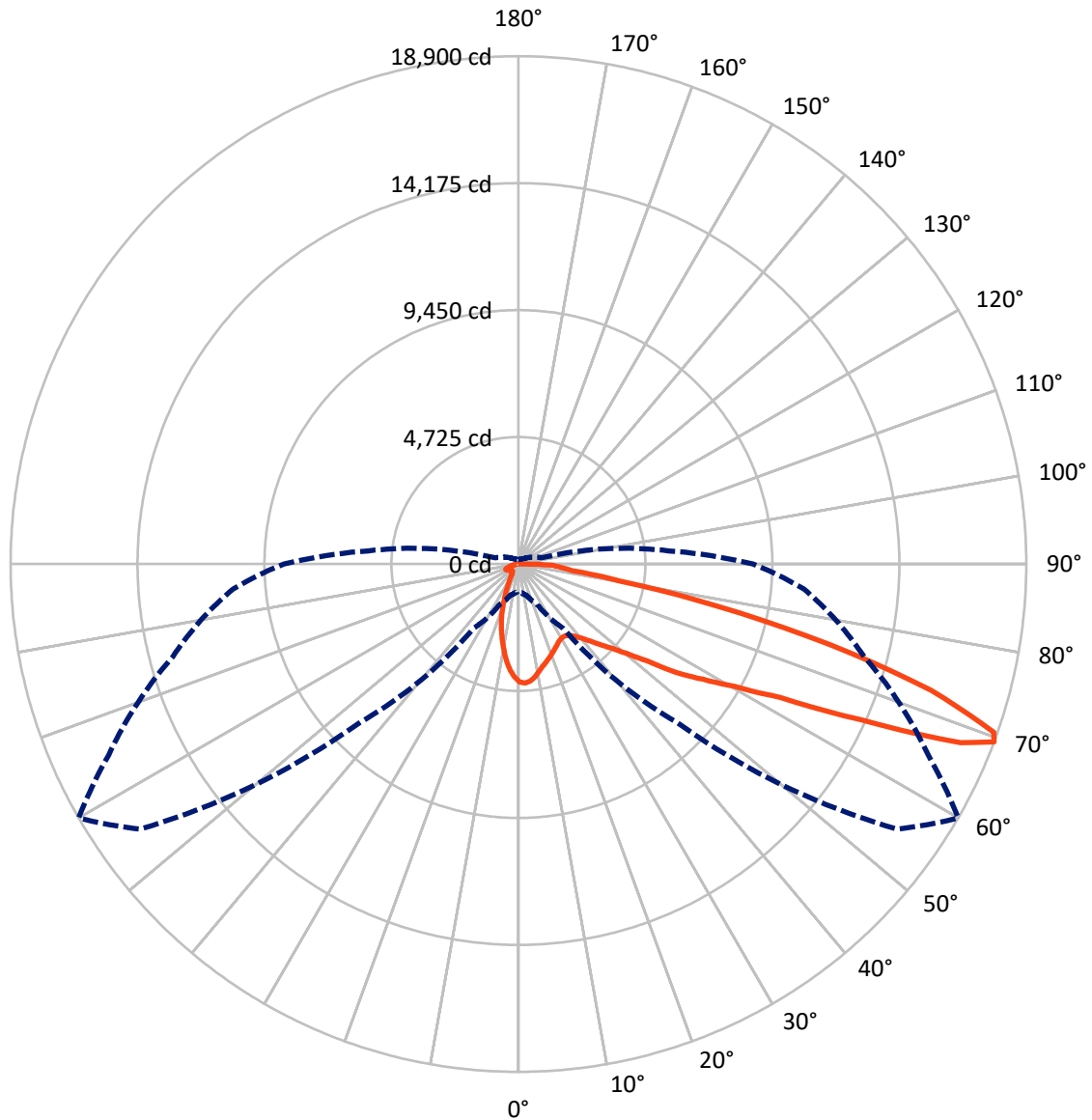
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2452.0	0.0	2452.0
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	14738.7	0.0	14738.7
	% Fixture	85.7	0.0	85.7
Total	Lumens	17190.6	0.0	17190.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	372.1	2.2
10°-20°	796.7	4.6
20°-30°	1016.4	5.9
30°-40°	1398.6	8.1
40°-50°	2265.5	13.2
50°-60°	3555.6	20.7
60°-70°	4740.2	27.6
70°-80°	2636.7	15.3
80°-90°	408.9	2.4
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°	17190.6	100.0
0°-180°	17190.6	100.0

Coefficient of Utilization



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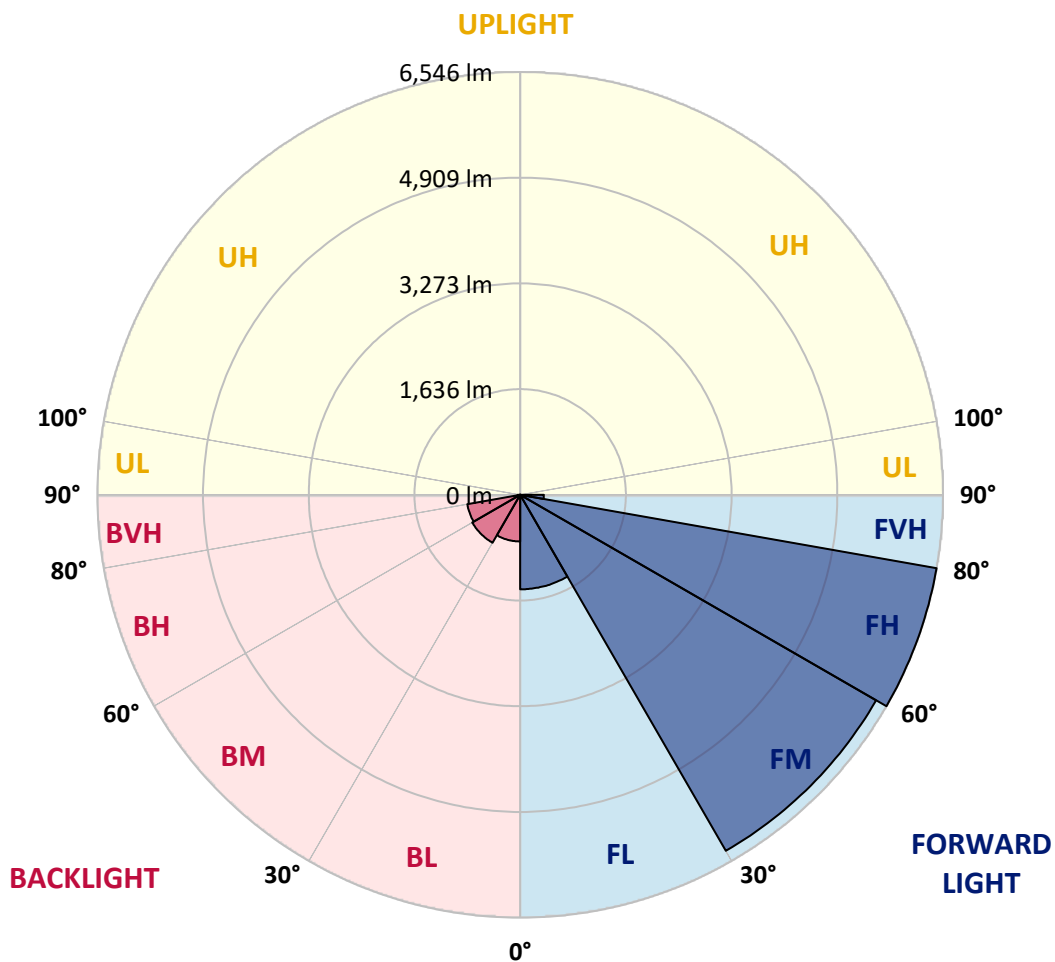
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1462.6	8.5			
FM (30°-60°)	6363.1	37.0			
FH (60°-80°)	6545.5	38.1			G3/7500
FVH (80°-90°)	367.5	2.1			G3/500
BL (0°-30°)	722.6	4.2	B2/1000		
BM (30°-60°)	856.6	5.0	B1/1000		
BH (60°-80°)	831.3	4.8	B2/1000		G2/1000
BVH (80°-90°)	41.4	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2
2.5°	4503.2	4515.2	4515.2	4505.3	4499.8	4467.8	4449.0	4435.8	4412.7	4369.7	4331.2
5°	4342.1	4365.4	4375.3	4379.6	4408.3	4398.5	4399.4	4390.6	4370.9	4324.5	4261.6
7.5°	4046.8	4051.1	4068.8	4098.5	4168.0	4216.5	4256.2	4263.9	4259.5	4225.3	4137.1
10°	3755.8	3763.4	3784.4	3835.0	3901.2	3970.7	4056.7	4091.9	4118.4	4107.4	3996.0
12.5°	3514.3	3515.3	3538.6	3597.0	3670.8	3757.9	3874.7	3929.8	3992.6	4018.1	3893.6
15°	3281.7	3297.0	3319.1	3389.8	3481.2	3591.5	3725.9	3801.9	3884.7	3957.5	3814.2
17.5°	3105.4	3117.5	3130.7	3189.2	3295.0	3432.8	3599.1	3680.7	3789.9	3901.2	3732.5
20°	3008.3	3012.7	3002.9	3031.5	3120.7	3269.7	3462.4	3560.6	3690.6	3847.3	3648.7
22.5°	2988.5	2988.5	2952.1	2946.6	2986.2	3111.9	3321.4	3441.5	3600.2	3809.7	3573.7
25°	3081.0	3074.4	3006.1	2943.2	2929.0	2992.9	3186.8	3334.6	3523.2	3808.6	3517.7
27.5°	3256.4	3247.6	3162.7	3056.8	2965.3	2937.7	3083.3	3234.3	3462.4	3846.2	3488.9
30°	3474.6	3471.3	3385.4	3253.0	3101.9	2959.8	3042.5	3182.4	3421.7	3915.5	3487.8
32.5°	3713.9	3698.4	3645.5	3513.2	3317.0	3082.2	3066.8	3184.8	3410.7	4017.0	3513.2
35°	3968.4	3957.5	3944.2	3810.8	3590.3	3298.2	3173.6	3260.8	3464.8	4158.1	3584.9
37.5°	4292.6	4280.5	4302.4	4156.9	3915.5	3581.5	3354.5	3412.9	3575.0	4363.1	3718.3
40°	4869.1	4833.8	4772.1	4548.3	4294.7	3928.7	3615.7	3624.5	3763.4	4637.6	3932.2
42.5°	5815.9	5702.4	5397.0	4986.0	4694.9	4332.3	3956.3	3914.5	4023.6	5000.2	4243.0
45°	6765.1	6637.2	6121.3	5463.2	5109.4	4765.5	4377.4	4277.1	4347.6	5422.4	4643.1
47.5°	7378.0	7315.2	6733.2	5940.5	5543.7	5237.3	4859.1	4693.9	4744.5	5900.8	5137.0
50°	7557.7	7503.7	7046.2	6314.2	5953.7	5807.2	5455.5	5236.2	5244.9	6459.8	5728.9
52.5°	7423.2	7401.1	7098.0	6545.8	6330.7	6408.0	6281.2	5975.9	5903.1	7072.6	6370.5
55°	7243.6	7251.3	7134.3	6778.3	6714.4	6968.0	7361.5	7115.7	6806.9	7711.0	7038.5
57.5°	6678.0	6683.5	6990.0	7221.5	7446.4	7752.8	8202.6	8098.9	7739.5	8400.0	7787.0
60°	5377.3	5420.3	6102.5	7129.9	8283.0	9299.4	9409.7	9231.1	8731.7	9193.7	8760.5
62.5°	3841.7	3880.3	4670.6	6189.7	8184.9	11050.0	11638.6	10928.7	10077.6	10380.9	10129.5
65°	2018.4	2011.8	2623.6	4277.1	6894.1	11455.6	15150.8	13942.6	12345.1	12013.5	11452.3
67.5°	1127.7	1164.1	1401.0	2157.3	4493.2	10082.0	17394.1	17750.0	15497.9	13308.7	11395.0
69°	1042.8	1055.0	1213.7	1667.9	2929.0	8318.3	17201.0	18899.8	16827.4	13314.1	10660.8
70°	1013.1	1026.4	1170.8	1536.7	2460.5	6815.8	16498.9	18765.4	17150.4	13018.7	9992.7
72.5°	908.4	926.0	1066.0	1381.2	2073.5	3513.2	13290.0	16061.2	15535.4	11378.4	7748.4
75°	775.0	804.7	1016.3	1371.4	1964.5	2233.4	8862.9	11966.1	11562.5	8137.6	4396.1
77.5°	320.8	324.1	444.2	1004.2	2061.4	2137.4	4763.3	7579.8	6710.0	3568.2	1323.9
80°	223.8	219.4	221.6	293.2	1663.4	2151.8	2443.8	3854.9	2996.1	941.5	619.6
82.5°	188.6	186.3	195.1	184.2	563.2	2441.8	2043.7	2009.6	1411.0	507.1	295.5
85°	124.5	121.2	159.9	167.5	267.9	1939.0	2198.2	1579.7	1051.6	271.2	125.7
87.5°	60.6	61.8	91.4	113.5	142.2	614.0	2105.4	1249.0	812.4	117.9	50.8
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°	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2	4386.2
2.5°	4315.6	4282.6	4252.8	4215.3	4186.7	4162.4	4129.4	4128.3	4122.9	4130.4	4132.7
5°	4219.8	4164.7	4080.9	3987.1	3921.0	3834.0	3749.0	3720.4	3688.5	3685.1	3695.1
7.5°	4075.4	3989.5	3846.2	3702.9	3559.4	3412.9	3274.1	3203.4	3135.1	3114.2	3124.0
10°	3914.5	3805.3	3585.9	3352.2	3150.5	2932.2	2720.5	2584.0	2459.3	2406.4	2419.7
12.5°	3788.8	3649.9	3341.2	3038.1	2736.1	2423.0	2144.1	1874.0	1670.0	1578.5	1584.2
15°	3680.7	3503.3	3111.9	2708.5	2330.4	1901.5	1514.6	1201.6	1023.0	956.9	954.5
17.5°	3563.8	3348.9	2872.7	2402.0	1911.5	1381.2	1014.1	829.0	758.3	736.4	736.4
20°	3439.3	3190.2	2622.5	2068.0	1470.5	964.6	762.8	691.2	664.7	658.1	657.0
22.5°	3323.5	3034.7	2371.2	1711.9	1063.8	731.9	649.3	621.7	617.3	622.9	622.9
25°	3232.1	2898.1	2116.4	1337.1	773.9	613.0	577.6	574.3	590.8	610.7	614.0
27.5°	3163.7	2775.8	1865.2	976.6	608.5	533.6	521.3	535.7	574.3	614.0	621.7
30°	3116.3	2671.0	1564.2	702.1	507.1	467.4	472.9	498.3	556.7	617.3	633.8
32.5°	3095.4	2586.1	1261.1	539.1	433.3	411.2	425.4	458.6	519.2	579.9	599.7
35°	3115.2	2524.3	981.0	447.5	379.3	362.6	379.3	413.4	453.0	482.7	495.0
37.5°	3186.8	2502.3	738.5	396.8	344.0	327.4	340.6	363.8	381.4	392.4	397.9
40°	3337.9	2525.4	578.8	370.5	324.1	305.3	308.7	319.6	331.8	340.6	341.7
42.5°	3578.2	2601.5	514.8	360.5	312.0	287.6	282.2	290.0	303.2	315.2	317.6
45°	3897.9	2728.3	508.3	363.8	306.4	273.4	262.3	270.1	287.6	307.6	310.9
47.5°	4311.2	2929.0	539.1	381.4	309.7	265.7	249.1	256.8	280.0	306.4	310.9
50°	4800.7	3206.7	596.4	407.9	325.1	265.7	243.6	250.3	274.5	304.3	308.7
52.5°	5377.3	3593.7	655.9	434.3	347.3	275.6	245.9	244.7	266.7	294.4	299.9
55°	6013.3	4074.4	713.3	457.4	359.3	288.9	251.3	238.1	255.7	277.8	282.2
57.5°	6761.8	4732.5	813.5	479.5	366.0	298.7	258.0	231.6	241.5	256.8	260.1
60°	7777.0	5699.1	1008.6	517.1	378.0	303.2	259.0	224.8	223.8	234.7	236.0
62.5°	9101.0	6831.3	1194.9	561.1	402.4	304.3	254.6	220.4	209.5	212.8	212.8
65°	10042.4	7248.0	1140.9	598.6	424.4	303.2	250.3	217.2	198.4	193.0	193.0
67.5°	9506.7	6402.4	968.9	608.5	426.6	291.1	240.2	209.5	188.6	175.3	175.3
69°	8719.6	5612.0	889.6	590.8	409.0	276.7	229.2	201.7	181.8	166.5	166.5
70°	8078.0	5013.5	841.2	570.0	388.0	264.6	219.4	194.0	175.3	162.1	160.9
72.5°	6031.0	3345.6	718.7	491.6	318.5	223.8	191.8	173.1	157.7	148.8	148.8
75°	3182.4	1676.6	588.7	401.3	245.9	178.7	157.7	145.5	136.7	135.6	134.4
77.5°	1042.8	758.3	423.3	302.0	180.7	138.9	125.7	117.9	116.9	121.2	121.2
80°	563.2	453.0	272.2	203.9	125.7	103.7	96.9	95.8	99.3	105.8	105.8
82.5°	273.4	223.8	162.1	125.7	86.0	76.0	76.0	77.2	81.6	89.3	89.3
85°	117.9	105.8	93.8	70.5	52.9	47.4	54.0	59.6	62.8	68.4	70.5
87.5°	56.2	49.5	42.9	27.6	23.1	24.3	28.7	35.3	42.0	46.4	47.4
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)