

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: P197070

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197070
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)
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-SL3-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16440 lumens
Efficiency: N/A
Efficacy: 85.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G3

Input Watts (W): 193
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

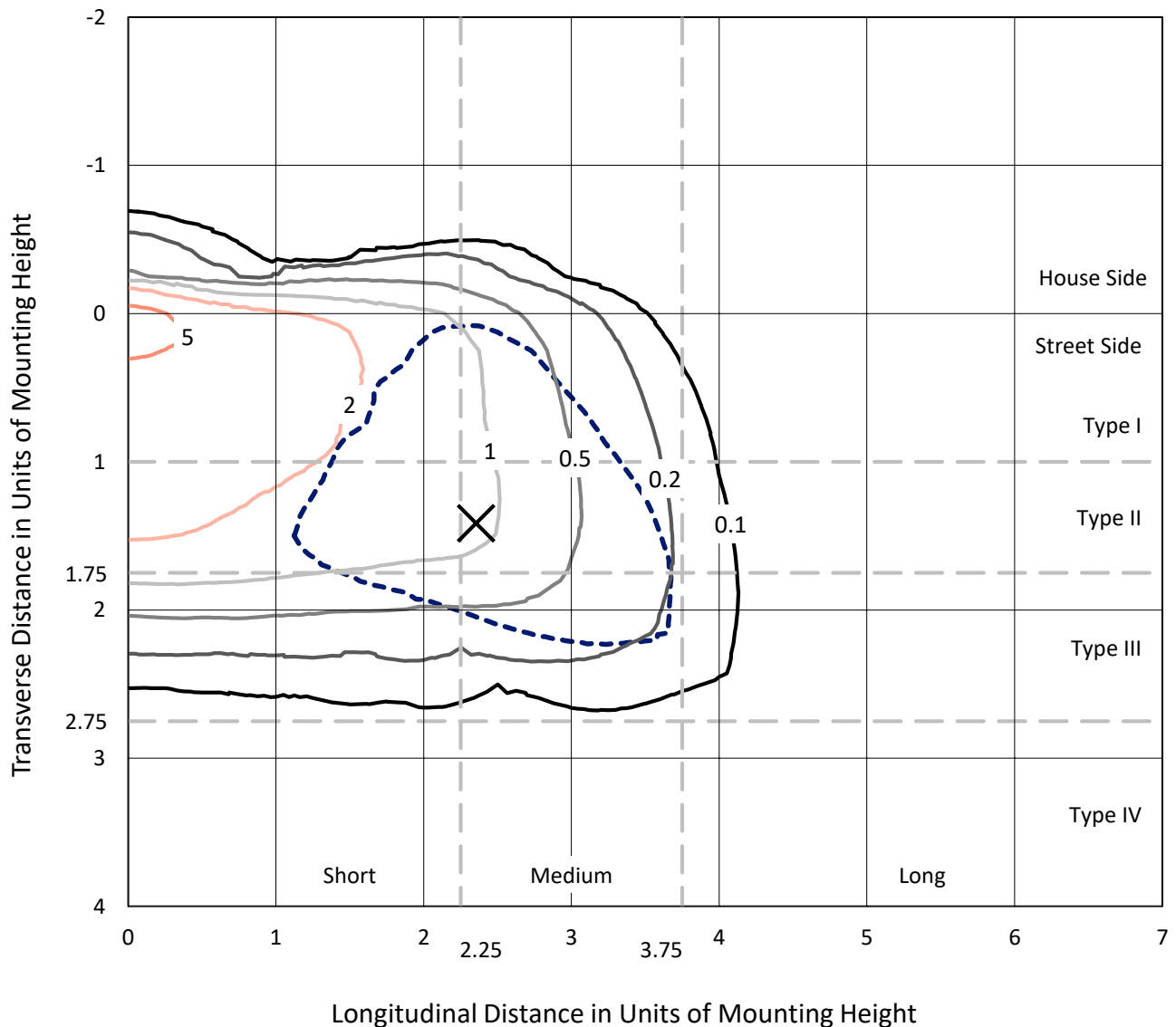


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

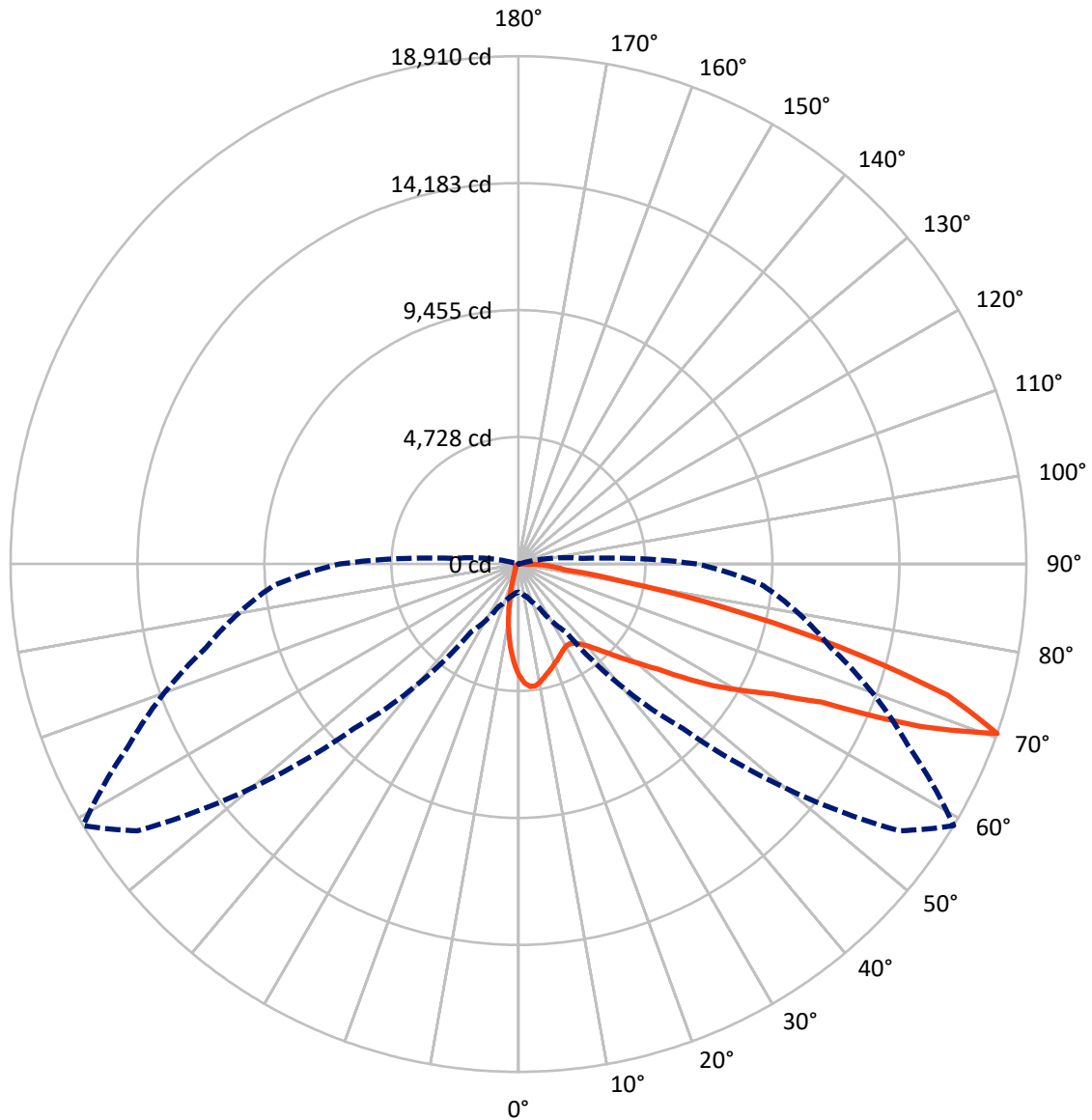


Based on 25 foot mounting height. Maximum calculated value = 7.1 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1263.8	0.0	1263.8
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	15176.2	0.0	15176.2
	% Fixture	92.3	0.0	92.3
Total	Lumens	16440.0	0.0	16440.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.8	2.1
10°-20°	717.0	4.4
20°-30°	970.6	5.9
30°-40°	1400.7	8.5
40°-50°	2326.2	14.1
50°-60°	3558.2	21.6
60°-70°	4425.5	26.9
70°-80°	2446.4	14.9
80°-90°	253.7	1.5
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°	16440.0	100.0
0°-180°	16440.0	100.0



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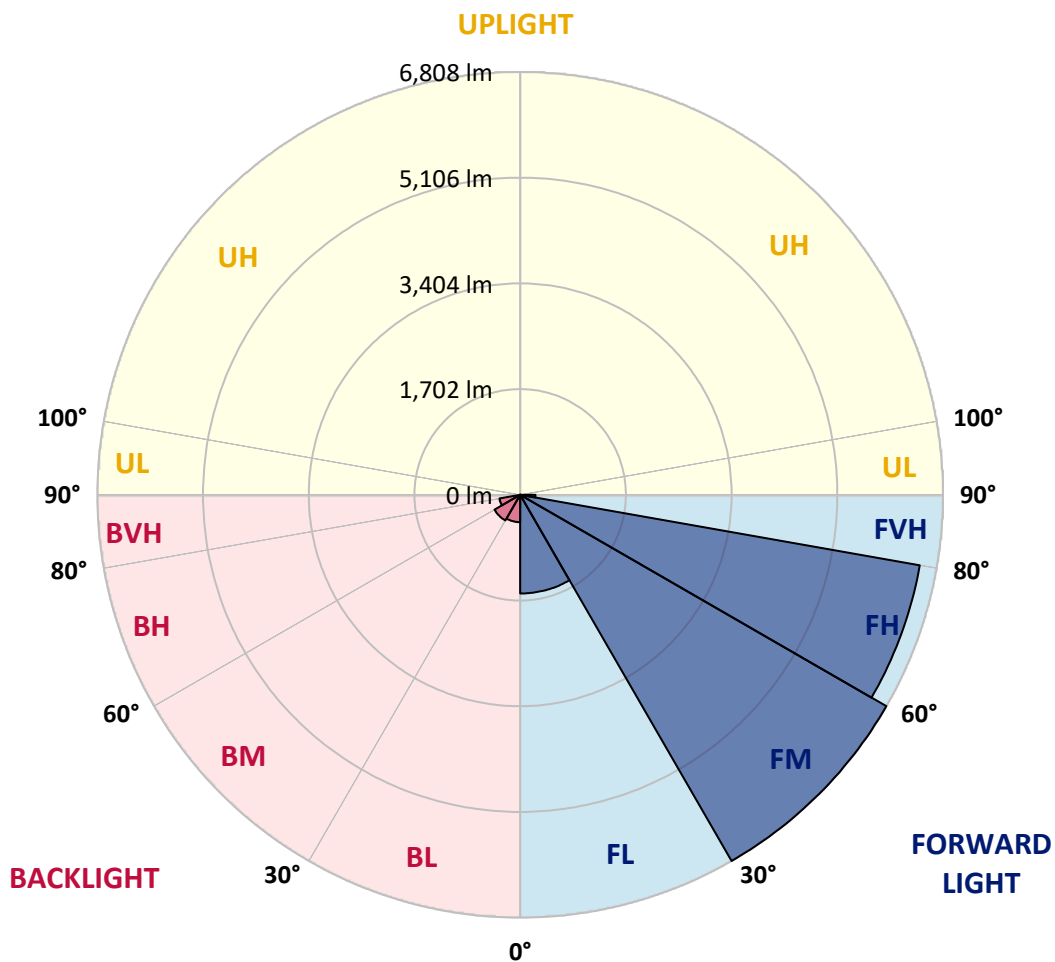
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1589.0	9.7			
FM (30°-60°)	6808.0	41.4			
FH (60°-80°)	6532.9	39.7			G3/7500
FVH (80°-90°)	246.3	1.5			G3/500
BL (0°-30°)	440.4	2.7	B1/500		
BM (30°-60°)	477.0	2.9	B1/1000		
BH (60°-80°)	339.0	2.1	B1/500		G1/500
BVH (80°-90°)	7.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1
2.5°	4699.0	4691.6	4660.6	4654.4	4619.7	4550.2	4469.6	4437.4	4371.6	4267.5	4152.1
5°	4777.2	4780.9	4783.4	4769.7	4764.8	4707.7	4618.4	4580.0	4491.9	4320.8	4110.0
7.5°	4484.5	4494.4	4525.4	4539.1	4598.6	4620.9	4602.3	4577.5	4508.1	4305.9	4009.5
10°	4175.7	4194.3	4227.8	4250.1	4323.3	4382.8	4458.4	4464.6	4449.8	4256.3	3896.6
12.5°	3910.3	3927.7	3964.9	4009.5	4083.9	4160.8	4273.7	4313.3	4363.0	4224.1	3816.0
15°	3682.1	3687.1	3723.0	3778.8	3876.8	3982.2	4116.2	4174.4	4271.2	4211.7	3754.0
17.5°	3482.4	3483.7	3507.2	3558.1	3677.1	3816.0	3972.3	4049.2	4172.0	4194.3	3699.5
20°	3351.0	3349.7	3351.0	3378.3	3483.7	3648.6	3838.4	3919.0	4076.5	4173.2	3643.6
22.5°	3306.3	3300.1	3271.6	3261.7	3328.6	3473.7	3700.7	3806.1	3990.9	4167.0	3602.7
25°	3360.9	3357.2	3296.4	3239.4	3245.6	3336.1	3560.6	3689.5	3923.9	4189.3	3592.8
27.5°	3537.0	3529.6	3436.5	3324.9	3254.2	3270.4	3456.4	3591.6	3870.6	4243.9	3606.4
30°	3767.7	3768.9	3669.7	3534.5	3368.3	3276.6	3400.6	3528.3	3834.6	4325.7	3636.2
32.5°	4024.4	4023.1	3952.5	3796.2	3584.1	3390.7	3425.4	3533.3	3839.6	4446.0	3693.3
35°	4289.8	4276.1	4252.6	4114.9	3866.9	3590.3	3538.2	3617.6	3891.7	4604.8	3790.0
37.5°	4596.1	4591.1	4614.7	4469.6	4216.6	3884.2	3736.7	3790.0	4023.1	4839.2	3946.3
40°	5083.5	5056.2	5067.4	4870.2	4611.0	4279.9	4014.5	4028.1	4232.7	5149.2	4193.0
42.5°	6012.4	5902.0	5694.9	5325.3	5045.1	4718.9	4377.8	4354.3	4529.1	5525.0	4518.0
45°	7122.4	6995.9	6473.7	5827.6	5479.1	5190.2	4826.8	4763.5	4893.8	5972.7	4937.2
47.5°	8048.8	7912.4	7220.3	6352.2	5920.6	5676.3	5324.1	5249.7	5330.3	6492.3	5440.7
50°	8365.0	8289.4	7681.7	6788.7	6365.8	6222.0	5947.9	5823.9	5843.7	7052.9	6028.5
52.5°	8219.9	8193.9	7787.1	7087.6	6777.6	6824.7	6631.2	6501.0	6478.7	7665.6	6678.4
55°	7913.6	7901.2	7702.8	7253.8	7141.0	7376.6	7589.9	7477.0	7266.2	8316.6	7215.4
57.5°	7475.8	7522.9	7665.6	7573.8	7587.4	7959.5	8480.4	8538.6	8223.6	8835.0	7613.5
60°	6306.3	6432.8	7086.4	7917.3	8553.5	8929.3	9434.1	9543.2	9034.7	9189.7	8073.6
62.5°	4661.8	4842.9	5774.3	7300.9	9085.6	10773.4	10702.8	10654.4	9808.6	9664.7	8910.7
65°	2738.3	2950.4	3737.9	5704.8	8283.2	11959.1	13071.5	12401.8	10988.0	10651.9	10243.9
67.5°	1364.2	1365.4	1721.4	3011.2	6121.5	11131.9	16529.1	16142.2	13495.6	12106.6	10769.7
70°	1049.2	1077.7	1273.7	1749.9	3095.5	8670.1	17321.6	18910.3	16015.7	12042.2	9137.6
72.5°	889.2	907.8	1133.5	1522.9	2314.2	4759.8	14995.0	16715.2	15282.7	10174.4	6735.4
75°	639.9	654.8	1003.3	1381.6	2130.6	2361.3	10286.1	12396.8	11466.7	7157.1	3706.9
77.5°	158.7	157.5	349.7	1121.1	1906.2	1966.9	5902.0	7949.6	6579.2	2930.5	952.5
80°	70.7	68.2	79.4	235.6	1773.5	1856.5	2595.7	4014.5	2523.8	475.0	291.4
82.5°	49.6	47.1	49.6	86.8	592.8	1722.6	1568.8	1740.0	923.9	162.5	124.0
85°	16.1	14.9	27.3	73.2	166.2	993.4	1530.4	1299.7	687.1	69.5	83.1
87.5°	2.5	2.5	9.9	39.7	48.4	331.1	897.9	900.4	308.8	40.9	37.2
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°	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1	4157.1
2.5°	4093.8	4020.7	3917.7	3814.8	3721.8	3626.3	3549.4	3513.4	3497.3	3475.0	3426.6
5°	3999.6	3866.9	3641.2	3419.2	3212.1	3013.6	2843.7	2747.0	2642.8	2637.9	2587.0
7.5°	3848.3	3659.8	3303.8	2959.1	2642.8	2340.2	2079.8	1911.1	1795.8	1723.9	1674.2
10°	3679.6	3437.8	2966.5	2481.6	2051.3	1647.0	1312.1	1093.8	961.1	894.2	855.7
12.5°	3545.7	3241.8	2634.1	2024.0	1484.5	1020.7	709.4	550.6	479.9	452.7	440.3
15°	3430.3	3062.0	2322.9	1614.7	990.9	586.6	410.5	358.4	347.3	347.3	346.0
17.5°	3313.8	2888.4	2020.3	1212.9	623.8	384.5	323.7	316.2	317.5	321.2	321.2
20°	3203.4	2723.4	1728.8	864.4	409.3	307.6	293.9	291.4	295.2	300.1	298.9
22.5°	3114.1	2578.3	1456.0	594.0	315.0	279.0	270.4	266.6	269.1	272.8	271.6
25°	3050.8	2454.3	1205.5	414.2	274.1	254.2	244.3	239.4	236.9	239.4	238.1
27.5°	3012.4	2350.1	969.8	311.3	245.6	229.4	217.0	207.1	200.9	200.9	198.4
30°	2987.6	2252.2	760.2	258.0	222.0	204.6	187.3	173.6	163.7	161.2	160.0
32.5°	2986.4	2167.8	568.0	228.2	199.7	179.8	158.7	141.4	130.2	127.7	126.5
35°	3017.4	2099.6	417.9	205.9	179.8	156.3	132.7	114.1	104.2	104.2	102.9
37.5°	3098.0	2059.9	316.2	188.5	163.7	136.4	111.6	94.3	85.6	88.1	88.1
40°	3248.0	2052.5	258.0	174.9	150.1	119.1	90.5	76.9	73.2	76.9	76.9
42.5°	3477.5	2092.2	229.4	164.9	137.7	101.7	75.7	65.7	64.5	68.2	68.2
45°	3776.3	2170.3	213.3	156.3	124.0	84.3	63.2	57.0	55.8	60.8	60.8
47.5°	4138.5	2275.7	198.4	146.3	110.4	69.5	53.3	48.4	48.4	53.3	54.6
50°	4567.6	2418.4	183.5	136.4	99.2	58.3	44.6	40.9	42.2	47.1	48.4
52.5°	5061.2	2593.2	169.9	127.7	86.8	47.1	37.2	34.7	36.0	40.9	42.2
55°	5486.6	2745.8	153.8	119.1	70.7	38.4	31.0	29.8	31.0	37.2	37.2
57.5°	5857.4	2892.1	138.9	105.4	55.8	31.0	24.8	24.8	27.3	33.5	34.7
60°	6349.7	3122.8	126.5	89.3	42.2	23.6	19.8	21.1	24.8	29.8	31.0
62.5°	7221.6	3514.7	110.4	74.4	31.0	18.6	16.1	17.4	22.3	28.5	29.8
65°	8312.9	3885.5	91.8	62.0	23.6	13.6	12.4	16.1	22.3	28.5	29.8
67.5°	8201.3	3379.5	71.9	49.6	17.4	11.2	9.9	14.9	21.1	28.5	29.8
70°	6651.1	2368.7	53.3	33.5	13.6	9.9	9.9	14.9	21.1	27.3	28.5
72.5°	4613.5	1318.3	40.9	22.3	12.4	9.9	8.7	13.6	19.8	27.3	28.5
75°	2195.1	404.3	32.2	16.1	11.2	8.7	7.4	13.6	19.8	27.3	28.5
77.5°	421.7	102.9	26.0	13.6	9.9	8.7	7.4	12.4	19.8	26.0	27.3
80°	142.6	45.9	21.1	12.4	9.9	8.7	7.4	12.4	18.6	24.8	26.0
82.5°	78.1	26.0	18.6	11.2	9.9	7.4	6.2	11.2	17.4	24.8	26.0
85°	60.8	18.6	14.9	11.2	9.9	7.4	6.2	11.2	17.4	23.6	24.8
87.5°	31.0	13.6	12.4	11.2	9.9	7.4	6.2	9.9	16.1	22.3	24.8
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)