

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: P197130

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197130
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24285)
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-SL4-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23946 lumens
Efficiency: N/A
Efficacy: 71.9 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 - G4

Input Watts (W): 333
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

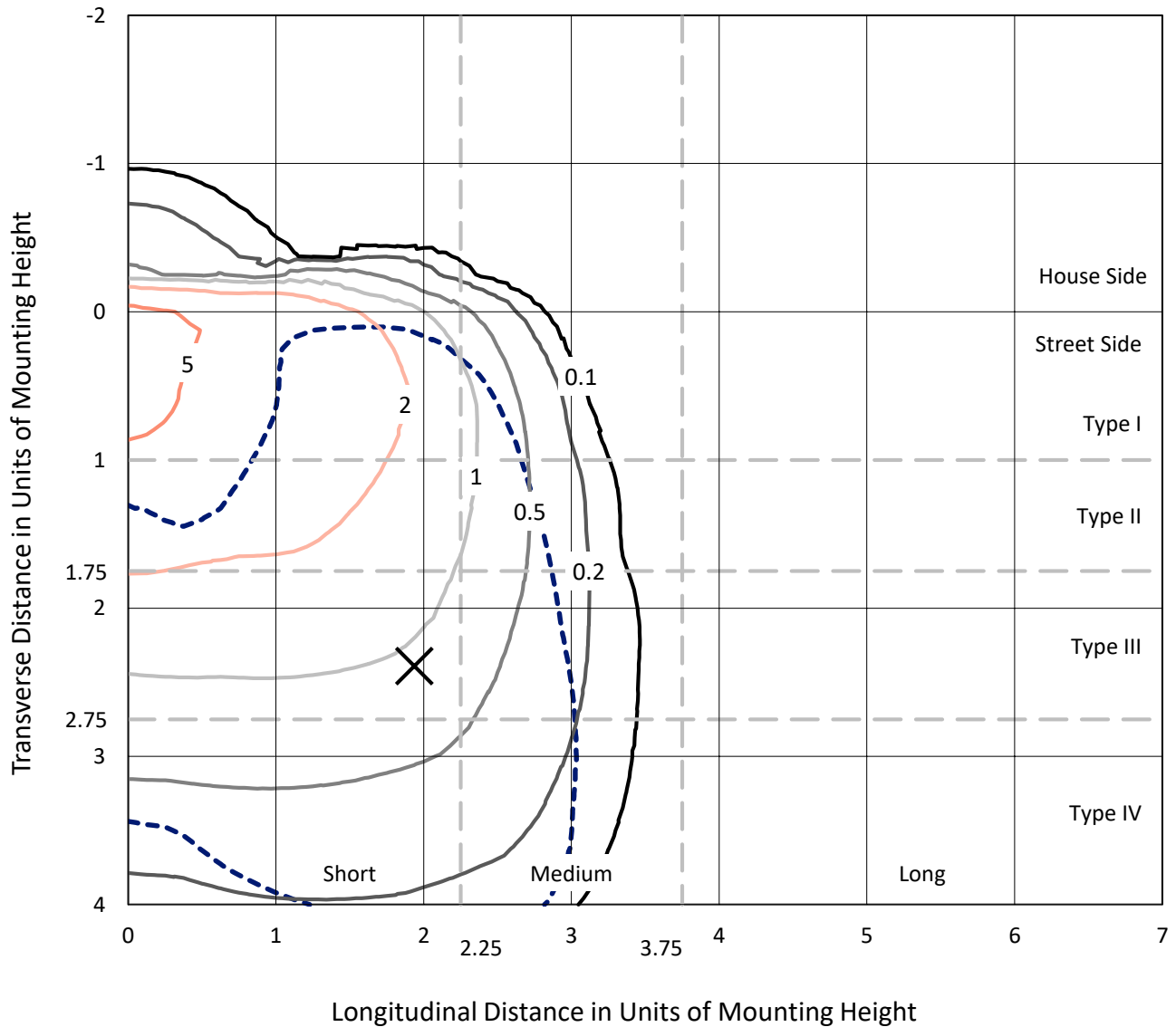


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Iso-Footcandle Lines of Horizontal Illumination

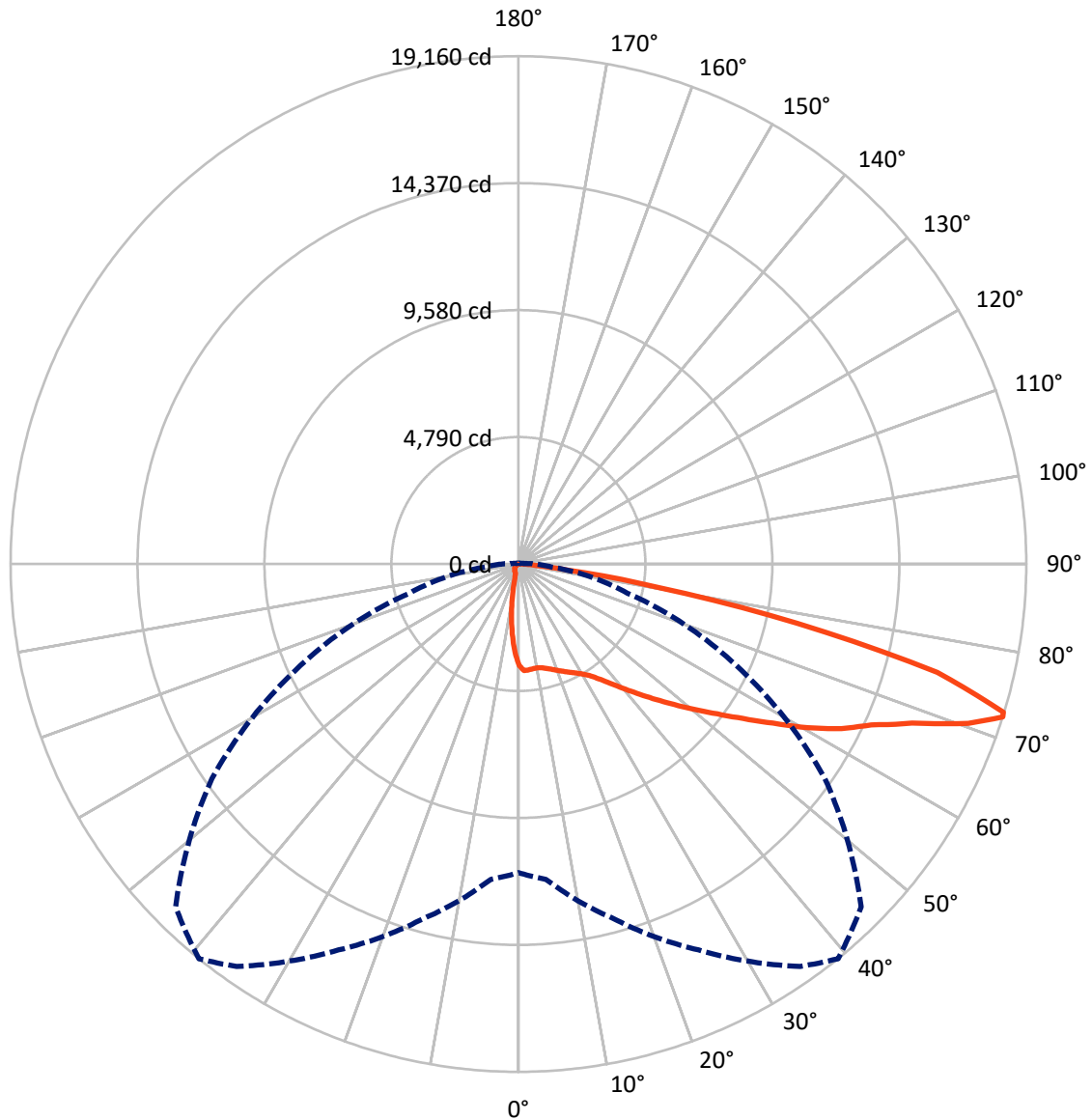
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.4 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1569.4	0.0	1569.4
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	22376.6	0.0	22376.6
	% Fixture	93.4	0.0	93.4
Total	Lumens	23946.0	0.0	23946.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.7	1.3
10°-20°	754.7	3.2
20°-30°	1253.5	5.2
30°-40°	1997.8	8.3
40°-50°	3297.6	13.8
50°-60°	4979.9	20.8
60°-70°	6487.2	27.1
70°-80°	4383.5	18.3
80°-90°	480.1	2.0
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°	23946.0	100.0
0°-180°	23946.0	100.0

Coefficient of Utilization



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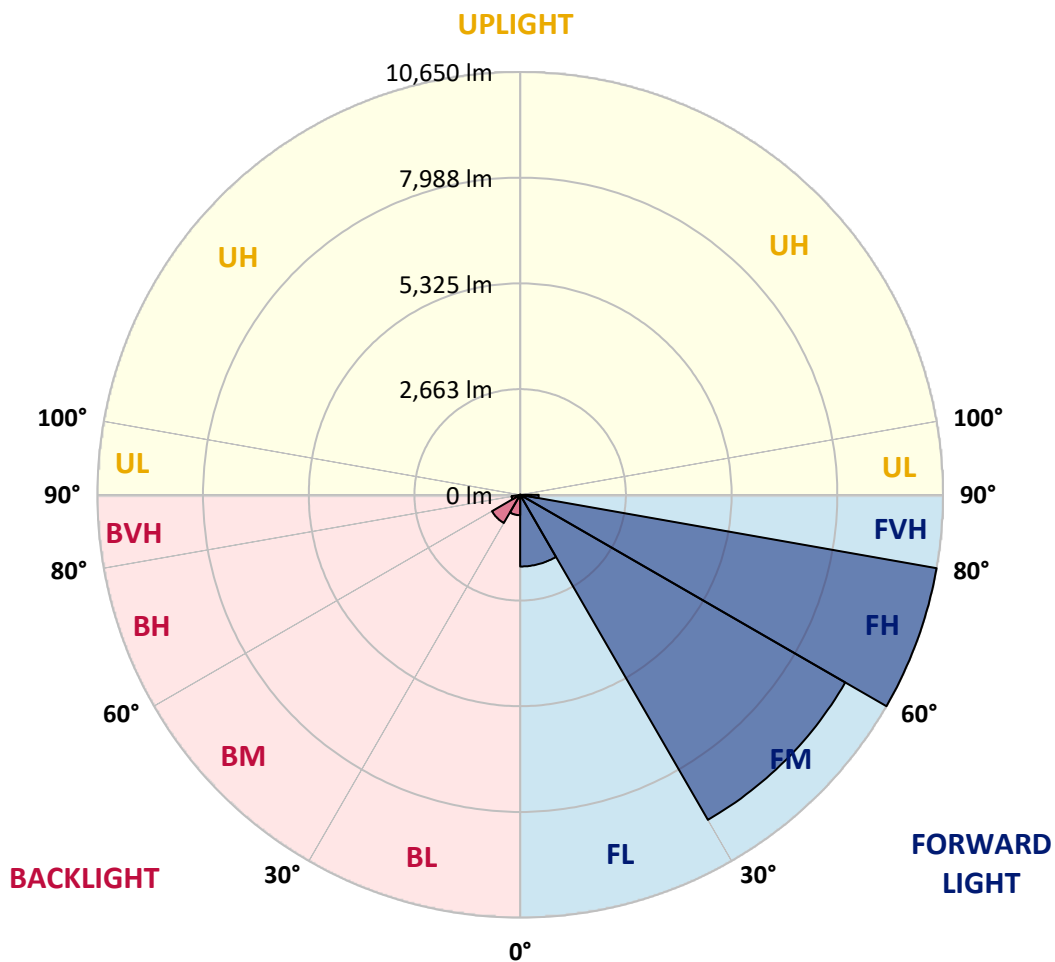
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1806.1	7.5			
FM	(30°-60°)	9454.2	39.5			
FH	(60°-80°)	10650.1	44.5			G4/12000
FVH	(80°-90°)	466.3	1.9			G3/500
BL	(0°-30°)	513.9	2.1	B2/1000		
BM	(30°-60°)	821.1	3.4	B1/1000		
BH	(60°-80°)	220.6	0.9	B1/500		G1/500
BVH	(80°-90°)	13.8	0.1			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7
2.5°	4081.2	4088.7	4079.3	4062.4	4037.9	4022.8	4002.1	3957.0	3900.5	3851.5	3795.1
5°	4113.2	4117.0	4105.7	4073.7	4036.0	4015.3	3989.0	3940.0	3881.7	3813.9	3712.2
7.5°	4122.6	4120.7	4107.6	4068.0	4009.7	3983.3	3938.1	3877.9	3817.7	3755.5	3640.7
10°	4118.8	4118.8	4109.4	4071.8	4005.9	3981.4	3930.6	3866.6	3791.3	3729.2	3606.8
12.5°	4105.7	4113.2	4107.6	4086.8	4037.9	4019.1	3973.9	3909.9	3838.4	3774.4	3644.5
15°	4122.6	4133.9	4145.2	4137.7	4109.4	4092.5	4051.1	3985.2	3926.8	3859.1	3719.8
17.5°	4190.4	4214.9	4241.2	4243.1	4213.0	4182.9	4135.8	4068.0	4011.5	3949.4	3798.8
20°	4318.4	4337.2	4386.2	4395.6	4335.3	4292.0	4226.1	4147.1	4090.6	4037.9	3872.2
22.5°	4508.5	4529.2	4568.8	4555.6	4453.9	4403.1	4320.3	4229.9	4171.6	4141.4	3957.0
25°	4796.5	4802.2	4811.6	4753.2	4585.7	4529.2	4427.6	4325.9	4278.9	4275.1	4077.4
27.5°	5135.4	5142.9	5101.5	4971.6	4732.5	4659.1	4544.3	4452.0	4429.5	4457.7	4229.9
30°	5523.2	5525.1	5410.2	5199.4	4902.0	4821.0	4702.4	4600.8	4621.5	4691.1	4425.7
32.5°	5920.4	5901.5	5743.4	5468.6	5133.5	5035.6	4934.0	4832.3	4892.5	5033.7	4711.8
35°	6283.7	6276.2	6089.8	5769.8	5434.7	5348.1	5274.7	5167.4	5265.3	5494.9	5101.5
37.5°	6647.0	6641.4	6428.6	6095.4	5805.5	5743.4	5688.8	5606.0	5766.0	6103.0	5622.9
40°	7048.0	7038.6	6776.9	6456.9	6236.6	6202.7	6170.7	6135.0	6407.9	6876.7	6272.4
42.5°	7543.1	7501.6	7145.9	6850.3	6711.0	6720.4	6722.3	6758.1	7185.4	7797.2	7038.6
45°	8111.6	8019.3	7516.7	7272.0	7232.5	7288.9	7345.4	7494.1	8090.9	8857.0	7885.7
47.5°	8663.1	8514.4	7944.0	7725.7	7806.6	7923.3	8058.9	8348.8	9107.4	9965.8	8653.7
50°	9137.5	8985.0	8367.6	8186.9	8444.8	8618.0	8858.9	9297.5	10180.4	10903.3	9137.5
52.5°	9510.2	9389.8	8815.6	8695.1	9152.6	9389.8	9768.1	10344.2	11193.2	11520.7	9476.4
55°	9785.1	9724.8	9244.8	9261.8	9939.5	10282.1	10752.7	11404.0	12047.8	12000.8	9730.5
57.5°	10095.7	10048.6	9694.7	9930.0	10886.3	11328.7	11872.7	12396.1	12669.0	12386.7	9979.0
60°	10413.8	10428.9	10240.6	10739.5	12057.2	12546.7	13021.1	13150.9	13201.8	12778.2	10240.6
62.5°	10654.8	10718.8	10735.7	11613.0	13258.2	13676.2	13881.3	13789.1	13777.8	13303.4	10219.9
65°	10931.5	11099.1	11377.7	12571.1	14350.1	14624.9	14771.8	14905.4	14623.0	13459.7	9214.7
67.5°	11409.7	11673.2	12300.1	13745.8	15611.3	16018.0	16434.0	16292.8	14749.2	11872.7	7019.7
70°	12053.5	12375.4	13482.3	15280.0	17322.5	18004.0	18352.2	16181.7	12522.2	8203.8	3702.8
72°	11646.9	11938.6	13847.5	16063.1	18534.8	19159.8	18288.2	14114.8	9077.3	4252.5	1240.5
72.5°	11251.5	11552.7	13730.7	16053.7	18655.3	19133.4	17872.2	13299.7	8032.5	3309.4	854.6
75°	7806.6	8186.9	11771.1	14431.0	16846.2	16321.0	13674.3	8053.2	2910.3	568.5	282.4
77.5°	4036.0	4329.7	7140.2	10197.3	11741.0	10752.7	8081.5	3493.9	805.7	301.2	186.4
80°	2501.8	2646.8	3339.5	5024.3	6099.2	5334.9	3565.4	1411.9	515.8	178.8	148.7
82.5°	1295.1	1406.2	2102.7	2027.4	2253.3	1873.1	1315.8	1182.2	318.1	111.1	152.5
85°	425.4	451.8	1291.4	1347.8	963.8	647.6	583.6	1127.6	92.2	71.5	129.9
87.5°	56.5	65.9	453.7	771.8	474.4	293.7	350.1	397.2	32.0	39.5	35.8
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°	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7	3832.7
2.5°	3757.4	3732.9	3655.8	3578.6	3490.1	3409.2	3345.2	3303.7	3322.6	3260.4	3269.9
5°	3650.1	3588.0	3418.6	3236.0	3038.3	2853.8	2707.0	2597.8	2577.1	2483.0	2486.7
7.5°	3546.6	3444.9	3170.1	2868.9	2541.3	2275.9	2035.0	1824.1	1748.8	1671.6	1626.5
10°	3490.1	3350.8	2961.1	2522.5	2061.3	1671.6	1332.8	1067.4	956.3	875.3	835.8
12.5°	3507.0	3322.6	2804.9	2208.1	1602.0	1106.9	753.0	559.1	491.3	453.7	440.5
15°	3563.5	3328.2	2663.7	1901.3	1165.2	670.2	442.4	378.4	372.7	370.8	369.0
17.5°	3616.2	3333.9	2515.0	1581.3	779.3	427.3	355.8	350.1	350.1	350.1	350.1
20°	3670.8	3335.7	2351.2	1246.2	512.0	350.1	335.1	331.3	335.1	335.1	335.1
22.5°	3734.8	3348.9	2193.1	920.5	378.4	329.4	320.0	318.1	320.0	320.0	318.1
25°	3813.9	3377.2	2021.8	658.9	342.6	316.3	306.8	305.0	306.8	305.0	305.0
27.5°	3919.3	3414.8	1822.2	472.5	327.6	303.1	293.7	293.7	293.7	291.8	291.8
30°	4054.8	3460.0	1554.9	372.7	312.5	289.9	282.4	282.4	280.5	278.6	278.6
32.5°	4248.7	3533.4	1263.1	337.0	295.5	273.0	265.4	267.3	265.4	263.5	261.7
35°	4523.6	3648.2	975.1	318.1	278.6	256.0	248.5	248.5	248.5	244.7	244.7
37.5°	4913.3	3823.3	730.4	299.3	261.7	239.1	229.7	229.7	227.8	224.0	225.9
40°	5395.2	4043.5	529.0	282.4	244.7	220.2	212.7	209.0	205.2	201.4	201.4
42.5°	5975.0	4258.2	397.2	265.4	227.8	205.2	195.8	192.0	184.5	180.7	178.8
45°	6624.4	4485.9	329.4	244.7	209.0	188.2	180.7	173.2	163.8	158.1	156.2
47.5°	7172.2	4625.2	293.7	224.0	190.1	171.3	163.8	152.5	141.2	137.4	137.4
50°	7501.6	4566.9	263.5	203.3	171.3	154.4	145.0	129.9	122.4	118.6	116.7
52.5°	7686.1	4393.7	239.1	186.4	154.4	135.5	122.4	109.2	105.4	101.7	101.7
55°	7812.3	4143.3	212.7	169.4	139.3	118.6	103.5	94.1	90.4	88.5	86.6
57.5°	7932.7	3838.4	188.2	154.4	124.2	105.4	88.5	84.7	77.2	75.3	75.3
60°	7968.5	3418.6	165.7	137.4	111.1	92.2	77.2	71.5	64.0	62.1	62.1
62.5°	7512.9	2720.2	146.8	116.7	97.9	79.1	67.8	60.2	52.7	52.7	52.7
65°	6278.0	1846.7	126.1	101.7	86.6	67.8	58.4	48.9	45.2	45.2	45.2
67.5°	4373.0	1029.7	107.3	86.6	73.4	56.5	48.9	41.4	39.5	41.4	41.4
70°	1970.9	408.5	90.4	71.5	60.2	47.1	41.4	35.8	39.5	39.5	39.5
72°	591.1	218.4	75.3	58.4	48.9	41.4	35.8	33.9	37.6	39.5	39.5
72.5°	438.6	195.8	71.5	56.5	48.9	39.5	33.9	33.9	37.6	39.5	39.5
75°	225.9	133.7	54.6	41.4	35.8	32.0	28.2	32.0	37.6	37.6	37.6
77.5°	177.0	109.2	45.2	32.0	30.1	28.2	26.4	30.1	33.9	33.9	33.9
80°	165.7	71.5	35.8	30.1	26.4	24.5	24.5	26.4	30.1	32.0	32.0
82.5°	167.5	58.4	32.0	28.2	24.5	22.6	22.6	24.5	28.2	30.1	30.1
85°	107.3	39.5	28.2	24.5	22.6	20.7	20.7	22.6	26.4	28.2	28.2
87.5°	35.8	30.1	24.5	22.6	18.8	18.8	18.8	18.8	22.6	24.5	26.4
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)