

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: P196655

Luminaire Tested: **NAV-AF-05-D-UNV-SL4-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196655
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-05-D-UNV-SL4-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1200mA 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: 25989.5 lumens
Efficiency: N/A
Efficacy: 81.2 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): 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

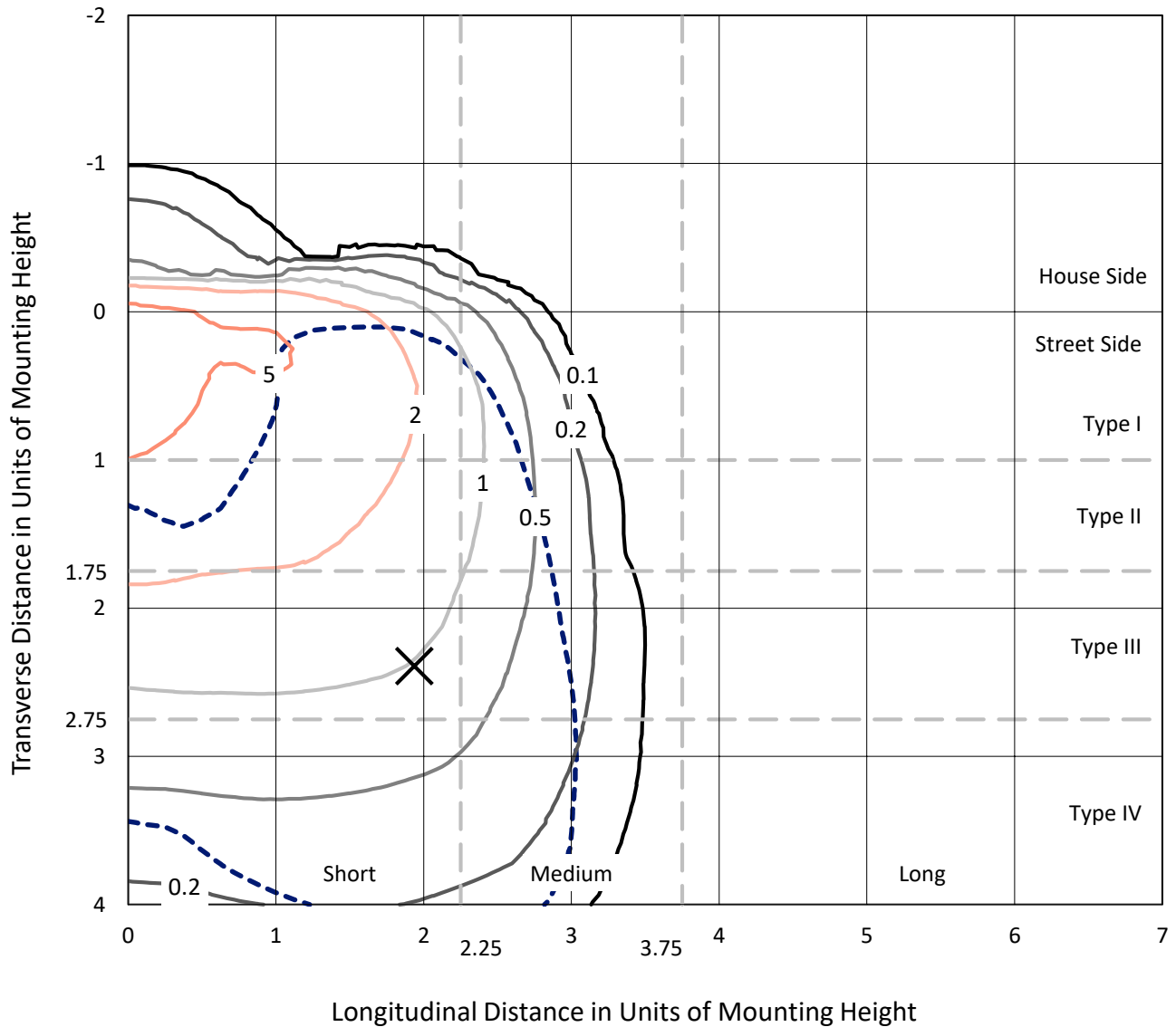


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Iso-Footcandle Lines of Horizontal Illumination

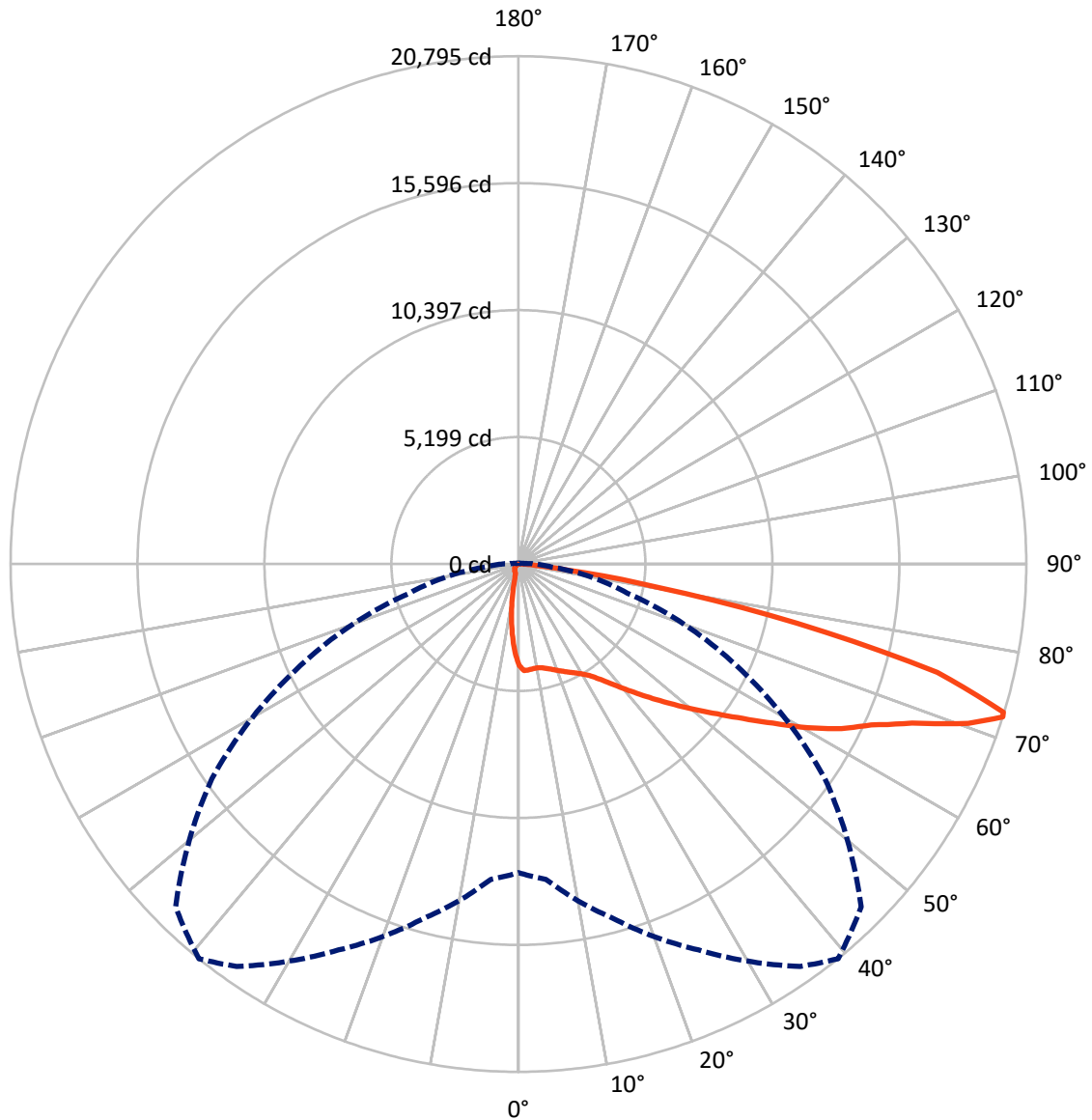
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7 fc
 Type 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	1703.3	0.0	1703.3
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	24286.2	0.0	24286.2
	% Fixture	93.4	0.0	93.4
Total	Lumens	25989.5	0.0	25989.5
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.3	1.3
10°-20°	819.2	3.2
20°-30°	1360.4	5.2
30°-40°	2168.3	8.3
40°-50°	3579.0	13.8
50°-60°	5404.9	20.8
60°-70°	7040.8	27.1
70°-80°	4757.5	18.3
80°-90°	521.0	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°	25989.5	100.0
0°-180°	25989.5	100.0



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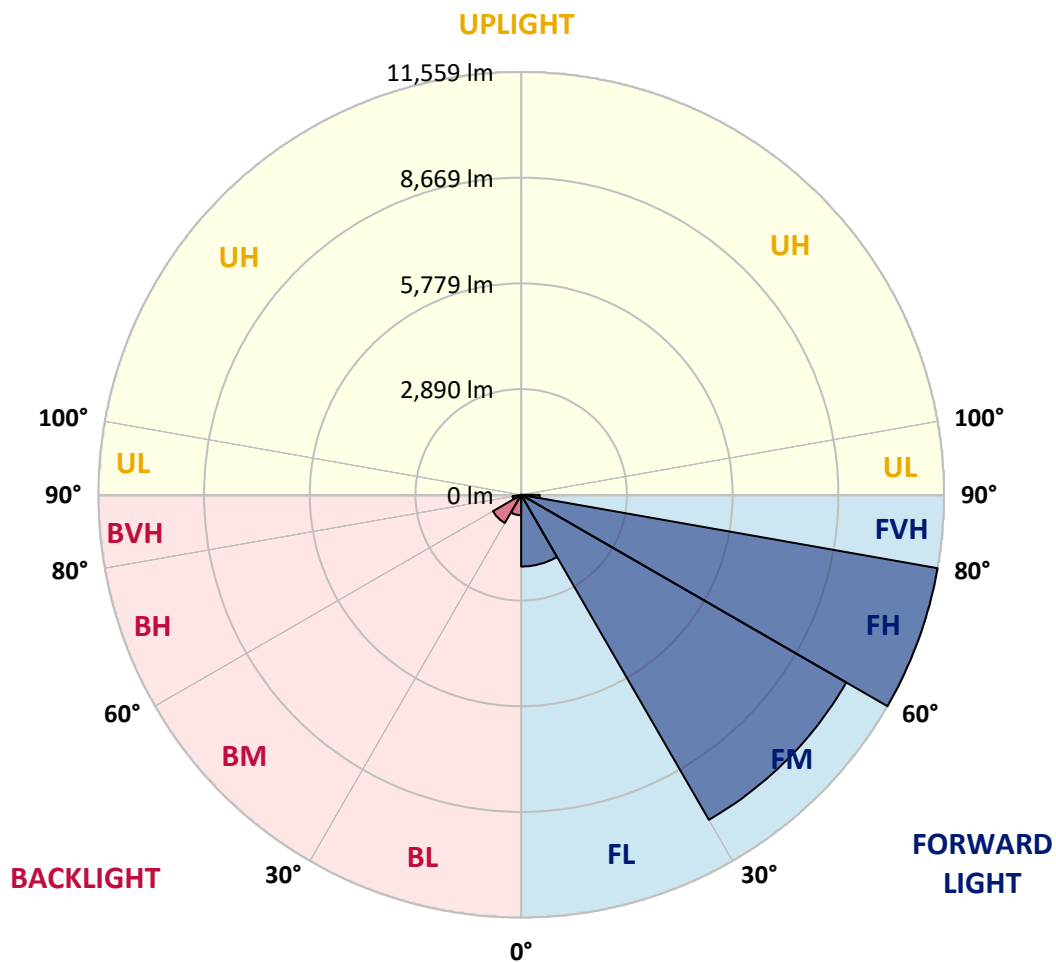
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1960.2	7.5			
FM	(30°-60°)	10261.0	39.5			
FH	(60°-80°)	11558.9	44.5			G4/12000
FVH	(80°-90°)	506.1	1.9			G4/750
BL	(0°-30°)	557.7	2.1	B2/1000		
BM	(30°-60°)	891.2	3.4	B1/1000		
BH	(60°-80°)	239.4	0.9	B1/500		G1/500
BVH	(80°-90°)	15.0	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°	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8
2.5°	4429.5	4437.7	4427.4	4409.0	4382.5	4366.1	4343.7	4294.7	4233.4	4180.3	4119.0
5°	4464.3	4468.2	4456.0	4421.2	4380.4	4358.1	4329.4	4276.3	4212.9	4139.4	4029.1
7.5°	4474.3	4472.4	4458.1	4415.1	4351.8	4323.3	4274.2	4208.7	4143.4	4076.0	3951.4
10°	4470.4	4470.4	4460.1	4419.2	4347.8	4321.2	4266.0	4196.5	4114.8	4047.4	3914.6
12.5°	4456.0	4464.3	4458.1	4435.6	4382.5	4362.0	4313.0	4243.5	4165.9	4096.4	3955.5
15°	4474.3	4486.7	4499.0	4490.8	4460.1	4441.7	4396.8	4325.2	4261.9	4188.4	4037.2
17.5°	4548.0	4574.5	4603.1	4605.2	4572.5	4539.8	4488.7	4415.1	4353.9	4286.5	4123.0
20°	4686.9	4707.3	4760.4	4770.7	4705.2	4658.3	4586.8	4500.9	4439.6	4382.5	4202.6
22.5°	4893.2	4915.8	4958.6	4944.3	4834.0	4778.9	4689.0	4590.8	4527.6	4494.8	4294.7
25°	5205.8	5212.0	5222.1	5158.9	4977.1	4915.8	4805.4	4695.1	4643.9	4639.9	4425.4
27.5°	5573.7	5581.8	5536.8	5395.9	5136.4	5056.7	4932.1	4832.0	4807.4	4838.1	4590.8
30°	5994.5	5996.5	5871.9	5643.1	5320.3	5232.4	5103.7	4993.3	5015.9	5091.5	4803.4
32.5°	6425.6	6405.3	6233.6	5935.3	5571.5	5465.3	5355.1	5244.7	5310.1	5463.3	5113.9
35°	6820.0	6811.8	6609.5	6262.2	5898.5	5804.5	5724.8	5608.4	5714.6	5963.8	5536.8
37.5°	7214.3	7208.2	6977.3	6615.6	6301.0	6233.6	6174.3	6084.4	6258.1	6623.8	6102.7
40°	7649.5	7639.2	7355.3	7007.9	6768.8	6732.1	6697.4	6658.5	6954.8	7463.5	6807.6
42.5°	8186.8	8141.8	7755.7	7434.9	7283.8	7293.9	7296.0	7334.8	7798.6	8462.5	7639.2
45°	8803.8	8703.7	8158.2	7892.6	7849.6	7910.9	7972.2	8133.7	8781.2	9612.8	8558.6
47.5°	9402.5	9241.0	8621.9	8385.0	8472.8	8599.5	8746.6	9061.2	9884.5	10816.2	9392.3
50°	9917.3	9751.8	9081.6	8885.5	9165.4	9353.3	9615.0	10090.9	11049.2	11833.8	9917.3
52.5°	10321.8	10191.0	9568.0	9437.2	9933.7	10191.0	10601.8	11226.9	12148.4	12503.8	10285.0
55°	10620.1	10554.8	10033.8	10052.2	10787.7	11159.5	11670.3	12377.2	13075.9	13024.9	10560.9
57.5°	10957.3	10906.1	10522.1	10777.5	11815.3	12295.5	12885.9	13453.9	13750.2	13443.7	10830.6
60°	11302.6	11318.8	11114.5	11656.0	13086.2	13617.4	14132.2	14273.2	14328.4	13868.8	11114.5
62.5°	11564.0	11633.5	11652.0	12604.0	14389.7	14843.2	15066.0	14965.8	14953.6	14438.7	11092.1
65°	11864.4	12046.3	12348.6	13644.0	15574.7	15872.9	16032.3	16177.4	15870.9	14608.3	10001.0
67.5°	12383.3	12669.3	13349.8	14918.8	16943.6	17384.9	17836.5	17683.2	16007.8	12885.9	7618.7
70°	13082.0	13431.5	14632.8	16584.0	18800.8	19540.4	19918.4	17562.7	13590.9	8903.9	4018.8
72°	12640.7	12957.5	15029.1	17434.0	20116.5	20794.9	19848.9	15319.4	9851.9	4615.4	1346.4
72.5°	12211.7	12538.6	14902.5	17423.7	20247.3	20766.3	19397.4	14434.7	8718.1	3591.8	927.6
75°	8472.8	8885.5	12775.5	15662.6	18283.9	17713.8	14841.2	8740.4	3158.6	617.0	306.5
77.5°	4380.4	4699.1	7749.5	11067.5	12742.9	11670.3	8771.2	3792.1	874.4	326.9	202.2
80°	2715.3	2872.7	3624.4	5453.1	6619.7	5790.2	3869.6	1532.4	559.9	194.1	161.3
82.5°	1405.6	1526.3	2282.2	2200.5	2445.7	2032.9	1428.1	1283.0	345.3	120.5	165.5
85°	461.7	490.3	1401.6	1462.9	1046.0	702.9	633.3	1223.8	100.1	77.7	141.0
87.5°	61.3	71.4	492.4	837.7	514.8	318.7	380.0	431.1	34.8	42.9	38.8
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°	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8	4159.8
2.5°	4078.1	4051.6	3967.7	3883.9	3787.9	3700.1	3630.5	3585.7	3606.1	3538.7	3548.8
5°	3961.6	3894.2	3710.3	3512.1	3297.6	3097.4	2938.0	2819.6	2797.0	2694.9	2698.9
7.5°	3849.2	3738.9	3440.6	3113.7	2758.2	2470.2	2208.5	1979.8	1898.1	1814.2	1765.3
10°	3787.9	3636.8	3213.9	2737.8	2237.2	1814.2	1446.5	1158.4	1037.9	950.0	907.2
12.5°	3806.4	3606.1	3044.3	2396.6	1738.7	1201.3	817.3	606.8	533.3	492.4	478.1
15°	3867.7	3612.2	2891.0	2063.6	1264.6	727.3	480.0	410.7	404.6	402.5	400.4
17.5°	3924.8	3618.3	2729.7	1716.3	845.8	463.8	386.1	380.0	380.0	380.0	380.0
20°	3984.0	3620.5	2551.9	1352.5	555.7	380.0	363.8	359.6	363.8	363.8	363.8
22.5°	4053.5	3634.7	2380.2	999.0	410.7	357.5	347.3	345.3	347.3	347.3	345.3
25°	4139.4	3665.3	2194.4	715.1	371.8	343.3	333.0	330.9	333.0	330.9	330.9
27.5°	4253.8	3706.2	1977.7	512.9	355.5	329.0	318.7	318.7	318.7	316.7	316.7
30°	4400.9	3755.2	1687.6	404.6	339.1	314.6	306.5	306.5	304.4	302.4	302.4
32.5°	4611.3	3834.9	1370.9	365.7	320.7	296.2	288.1	290.1	288.1	286.0	284.0
35°	4909.6	3959.5	1058.2	345.3	302.4	277.8	269.7	269.7	269.7	265.6	265.6
37.5°	5332.5	4149.5	792.6	324.8	284.0	259.5	249.2	249.2	247.3	243.1	245.2
40°	5855.5	4388.6	574.1	306.5	265.6	239.1	230.9	226.8	222.7	218.6	218.6
42.5°	6484.9	4621.5	431.1	288.1	247.3	222.7	212.5	208.3	200.3	196.1	194.1
45°	7189.7	4868.7	357.5	265.6	226.8	204.4	196.1	187.9	177.8	171.6	169.6
47.5°	7784.2	5019.9	318.7	243.1	206.4	186.0	177.8	165.5	153.2	149.1	149.1
50°	8141.8	4956.6	286.0	220.7	186.0	167.5	157.4	141.0	132.8	128.7	126.6
52.5°	8342.1	4768.6	259.5	202.2	167.5	147.1	132.8	118.5	114.4	110.4	110.4
55°	8478.9	4496.9	230.9	183.9	151.3	128.7	112.3	102.1	98.2	96.0	94.0
57.5°	8609.7	4165.9	204.4	167.5	134.8	114.4	96.0	91.9	83.8	81.7	81.7
60°	8648.5	3710.3	179.8	149.1	120.5	100.1	83.8	77.7	69.5	67.4	67.4
62.5°	8154.1	2952.3	159.4	126.6	106.2	85.8	73.5	65.3	57.3	57.3	57.3
65°	6813.9	2004.3	136.9	110.4	94.0	73.5	63.4	53.1	49.0	49.0	49.0
67.5°	4746.1	1117.6	116.5	94.0	79.6	61.3	53.1	44.9	42.9	44.9	44.9
70°	2139.2	443.4	98.2	77.7	65.3	51.1	44.9	38.8	42.9	42.9	42.9
72°	641.6	237.0	81.7	63.4	53.1	44.9	38.8	36.8	40.9	42.9	42.9
72.5°	476.1	212.5	77.7	61.3	53.1	42.9	36.8	36.8	40.9	42.9	42.9
75°	245.2	145.1	59.2	44.9	38.8	34.8	30.6	34.8	40.9	40.9	40.9
77.5°	192.1	118.5	49.0	34.8	32.7	30.6	28.6	32.7	36.8	36.8	36.8
80°	179.8	77.7	38.8	32.7	28.6	26.6	26.6	28.6	32.7	34.8	34.8
82.5°	181.8	63.4	34.8	30.6	26.6	24.5	24.5	26.6	30.6	32.7	32.7
85°	116.5	42.9	30.6	26.6	24.5	22.5	22.5	24.5	28.6	30.6	30.6
87.5°	38.8	32.7	26.6	24.5	20.4	20.4	20.4	20.4	24.5	26.6	28.6
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)