

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: P195708

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195708
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-06-D-UNV-SL4-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA 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: 27765 lumens
Efficiency: N/A
Efficacy: 111.5 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

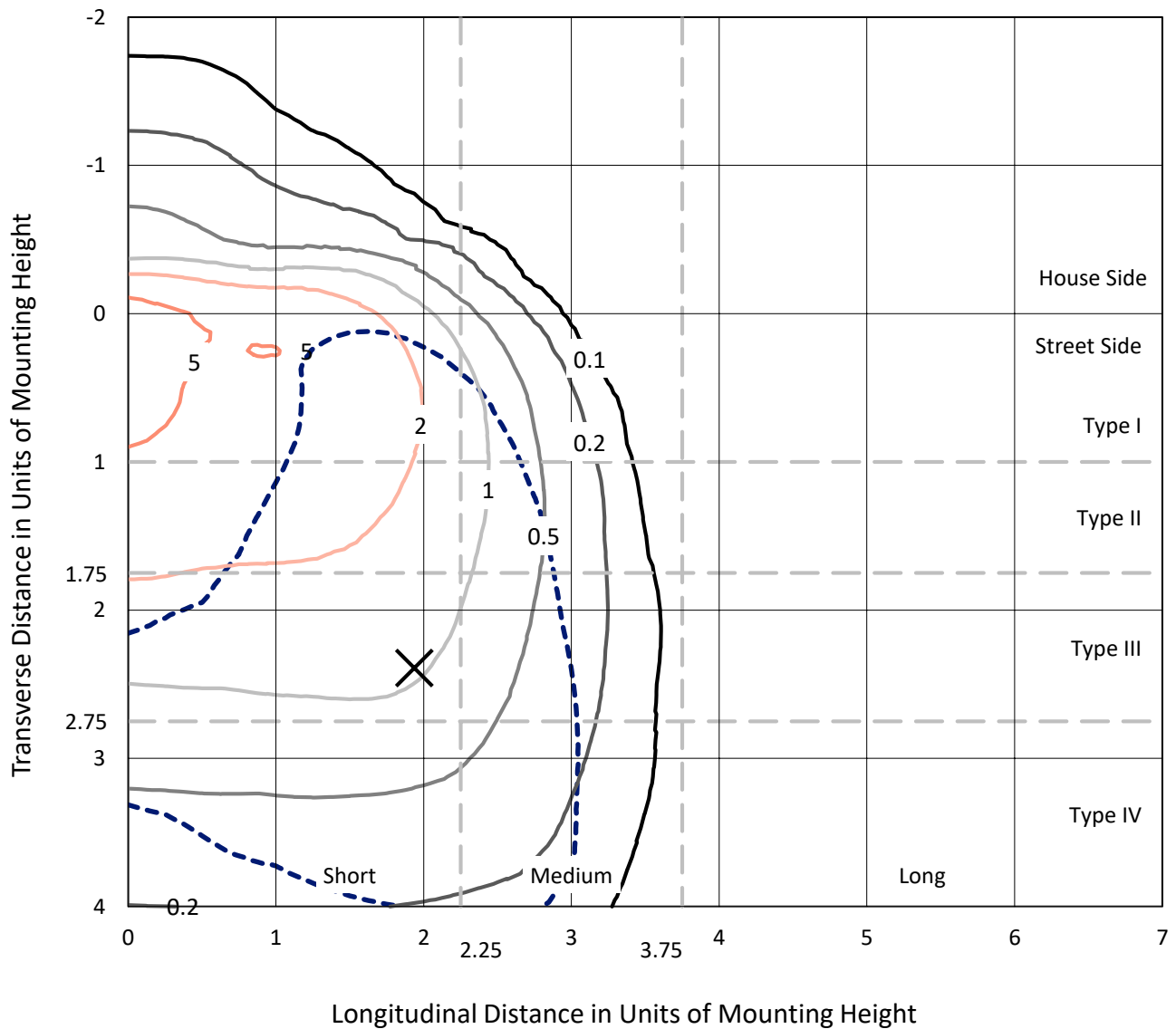
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

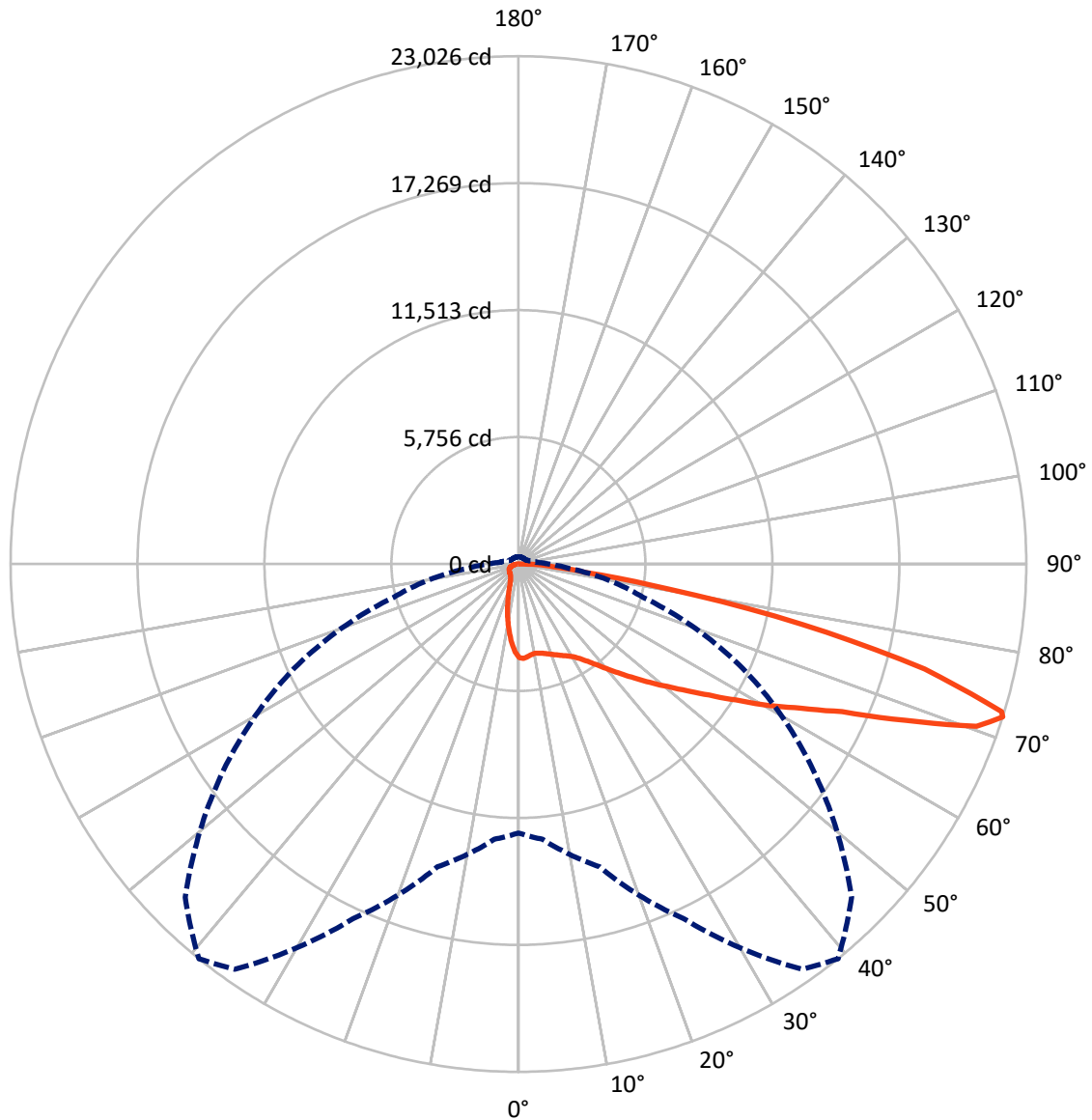


Based on 25 foot mounting height. Maximum calculated value = 6.8 fc
 Type IV - Short - Non-Cutoff

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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	3183.6	0.0	3183.6
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	24581.4	0.0	24581.4
	% Fixture	88.5	0.0	88.5
Total	Lumens	27765.0	0.0	27765.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	364.4	1.3
10°-20°	915.6	3.3
20°-30°	1426.9	5.1
30°-40°	2197.0	7.9
40°-50°	3581.6	12.9
50°-60°	5565.4	20.0
60°-70°	7449.0	26.8
70°-80°	5357.0	19.3
80°-90°	908.1	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°	27765.0	100.0
0°-180°	27765.0	100.0



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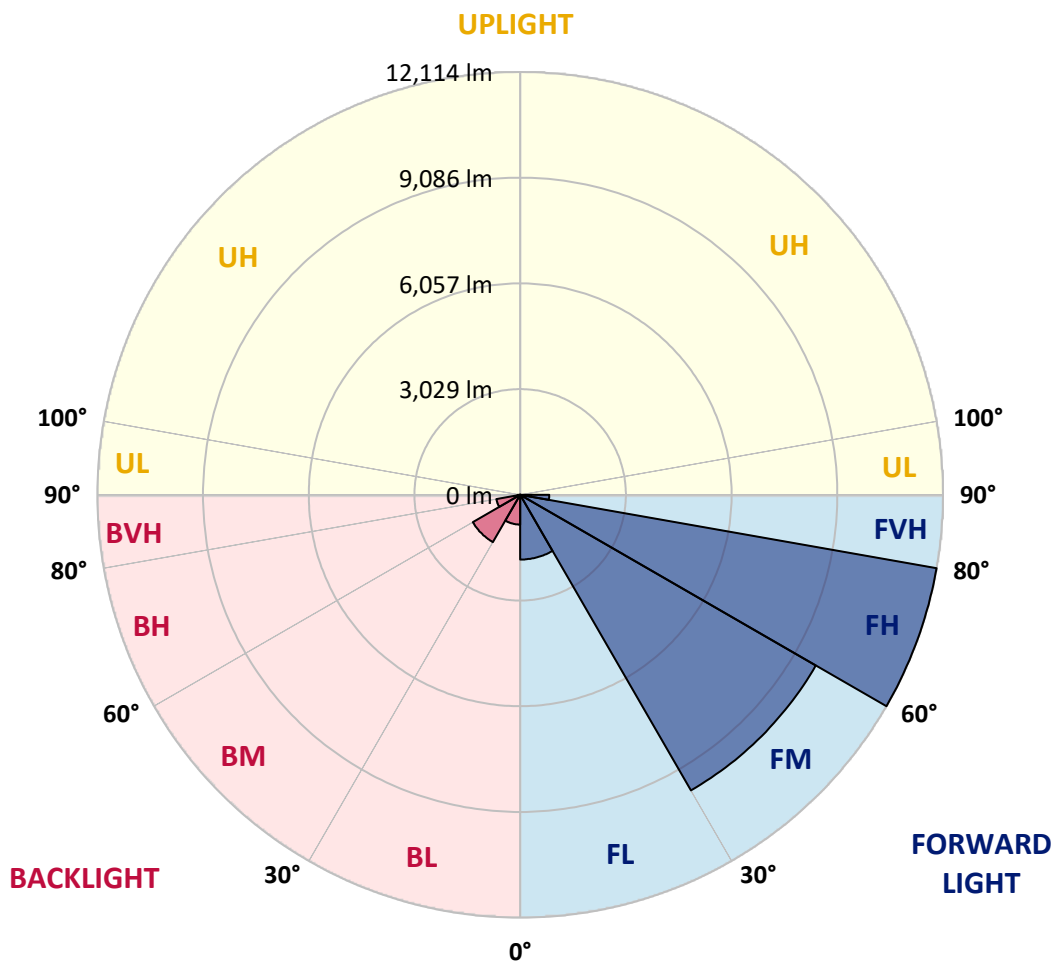
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1854.6	6.7			
FM	(30°-60°)	9779.4	35.2			
FH	(60°-80°)	12114.3	43.6			G5
FVH	(80°-90°)	833.0	3.0			G5
BL	(0°-30°)	852.3	3.1	B2/1000		
BM	(30°-60°)	1564.6	5.6	B2/2500		
BH	(60°-80°)	691.7	2.5	B2/1000		G2/1000
BVH	(80°-90°)	75.1	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2
2.5°	4331.5	4333.4	4327.8	4311.0	4296.1	4288.7	4275.6	4253.3	4223.4	4202.9	4186.2
5°	4290.5	4296.1	4292.4	4264.4	4238.4	4223.4	4202.9	4171.3	4132.1	4115.3	4076.2
7.5°	4258.9	4262.6	4251.4	4219.7	4169.4	4150.8	4113.5	4072.5	4037.1	4012.8	3966.2
10°	4236.5	4240.2	4230.9	4199.2	4143.3	4120.9	4076.2	4031.5	3984.9	3955.0	3902.9
12.5°	4204.8	4212.3	4212.3	4197.3	4160.1	4145.2	4100.4	4052.0	4009.1	3977.4	3912.2
15°	4199.2	4208.5	4225.3	4223.4	4212.3	4201.1	4165.7	4117.2	4079.9	4042.6	3962.5
17.5°	4245.8	4266.3	4299.9	4311.0	4303.6	4279.4	4238.4	4193.6	4152.6	4117.2	4018.4
20°	4363.2	4374.4	4424.7	4447.1	4409.8	4374.4	4320.4	4262.6	4225.3	4197.3	4070.6
22.5°	4540.3	4555.2	4596.2	4598.1	4519.8	4476.9	4408.0	4337.1	4301.7	4290.5	4141.4
25°	4823.6	4819.9	4831.0	4784.5	4642.8	4592.5	4508.6	4426.6	4402.4	4424.7	4245.8
27.5°	5162.8	5153.5	5118.1	4996.9	4782.6	4717.4	4616.7	4544.0	4544.0	4596.2	4387.5
30°	5554.2	5544.9	5429.3	5226.2	4948.5	4873.9	4767.7	4691.3	4730.4	4831.0	4579.4
32.5°	5968.0	5934.4	5772.3	5500.2	5185.2	5103.2	5000.7	4922.4	4996.9	5168.4	4855.3
35°	6357.5	6338.9	6139.5	5817.0	5490.8	5421.9	5351.1	5254.1	5373.4	5640.0	5244.8
37.5°	6760.1	6745.2	6501.0	6158.1	5863.6	5817.0	5757.4	5690.3	5882.2	6232.6	5772.3
40°	7209.3	7179.5	6871.9	6529.0	6297.9	6275.5	6243.8	6225.2	6534.6	7056.5	6439.5
42.5°	7718.1	7660.3	7263.3	6937.2	6771.3	6789.9	6773.2	6847.7	7321.1	8007.0	7233.5
45°	8299.6	8184.1	7652.9	7371.4	7295.0	7369.6	7405.0	7595.1	8251.2	9104.8	8120.7
47.5°	8843.9	8694.8	8079.7	7843.0	7885.9	8014.5	8115.1	8450.6	9270.7	10189.6	9026.5
50°	9345.2	9177.5	8536.3	8331.3	8540.1	8722.7	8931.5	9404.9	10355.4	11306.0	9857.8
52.5°	9716.1	9595.0	8993.0	8864.4	9291.2	9533.5	9867.1	10465.4	11451.4	12370.2	10599.6
55°	10003.2	9937.9	9438.4	9475.7	10141.1	10487.8	10892.2	11580.0	12610.7	13324.5	11196.0
57.5°	10334.9	10286.5	9947.3	10213.8	11196.0	11632.2	12109.3	12873.5	13714.1	14165.1	11663.9
60°	10685.3	10685.3	10513.9	11102.8	12515.6	13015.1	13490.4	14085.0	14813.7	14921.8	11854.0
62.5°	10950.0	11019.0	11080.5	12049.7	13768.1	14388.8	14910.6	15481.0	15952.5	15294.6	11406.6
65°	11334.0	11481.2	11827.9	13143.7	15318.8	16131.5	16836.0	17315.0	16875.1	14998.2	9947.3
67.5°	11993.7	12211.8	12949.9	14772.7	17693.3	18910.4	19594.4	18766.9	16694.3	13132.5	7619.3
70°	12588.3	12895.8	14157.7	16839.7	20779.8	22043.5	21728.5	18429.6	14539.7	9626.7	4687.5
72°	12193.2	12528.7	14213.6	17739.9	22429.3	23025.8	21365.1	16332.7	11235.2	5874.8	2311.1
72.5°	11934.1	12282.6	14032.8	17717.6	22474.1	22900.9	20860.0	15499.6	10198.9	5140.4	1869.4
75°	9969.6	10267.8	12066.4	15702.8	19805.1	19022.3	16278.7	10031.1	4687.5	1660.7	961.7
77.5°	6510.4	6737.7	8320.1	10879.2	13872.5	13119.5	9908.1	4696.9	1757.6	1008.3	723.2
80°	3271.0	3433.2	4452.7	5720.1	7487.0	6888.7	4573.8	2272.0	1176.1	728.8	568.5
82.5°	2275.7	2424.8	3066.0	2920.6	3129.4	3028.7	2150.9	1895.5	879.7	460.4	298.2
85°	1908.6	2063.3	2536.7	2081.9	1703.5	1552.6	1541.4	1791.1	581.5	227.4	251.6
87.5°	1664.4	1899.2	2093.1	1520.9	1168.6	1030.7	1135.1	1642.0	184.5	124.9	76.4
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°	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2	4240.2
2.5°	4158.2	4152.6	4124.7	4081.8	4050.1	4029.6	3990.5	3988.6	3992.3	3958.8	3971.8
5°	4040.8	4018.4	3945.7	3846.9	3766.8	3690.4	3606.5	3578.6	3554.3	3504.0	3509.6
7.5°	3917.8	3878.6	3751.9	3589.7	3435.0	3293.4	3153.6	3084.6	3032.5	2967.2	2967.2
10°	3845.1	3783.6	3589.7	3353.0	3107.0	2900.1	2691.4	2566.5	2475.2	2391.3	2385.7
12.5°	3841.4	3748.2	3477.9	3151.7	2814.4	2523.6	2238.5	2046.5	1910.4	1811.6	1802.3
15°	3871.2	3740.7	3384.7	2963.5	2538.5	2160.2	1807.9	1563.8	1390.4	1280.5	1269.3
17.5°	3897.3	3731.4	3284.1	2765.9	2270.1	1809.8	1418.4	1164.9	1000.9	911.4	902.1
20°	3921.5	3710.9	3155.5	2557.2	1973.8	1481.7	1109.0	904.0	795.9	745.5	739.9
22.5°	3956.9	3692.2	3021.3	2322.3	1683.0	1205.9	915.1	767.9	710.1	685.9	682.2
25°	4014.7	3694.1	2890.8	2081.9	1416.5	1004.6	792.1	700.8	669.1	652.3	652.3
27.5°	4098.6	3716.5	2762.2	1837.7	1191.0	866.7	719.4	665.4	644.9	631.8	628.1
30°	4221.6	3757.5	2626.1	1606.6	1012.1	771.6	676.6	643.0	626.2	615.1	613.2
32.5°	4400.5	3830.2	2482.6	1396.0	876.0	704.5	644.9	624.4	611.3	602.0	600.2
35°	4667.0	3958.8	2342.8	1217.1	779.1	656.1	618.8	602.0	594.6	590.8	589.0
37.5°	5058.4	4165.7	2210.5	1077.3	715.7	624.4	592.7	583.4	579.7	579.7	579.7
40°	5550.5	4437.8	2091.2	978.5	680.3	600.2	574.1	566.6	566.6	568.5	568.5
42.5°	6148.8	4778.9	1988.7	911.4	659.8	583.4	561.0	557.3	555.4	555.4	557.3
45°	6844.0	5181.4	1925.3	859.2	644.9	574.1	551.7	549.8	542.4	538.6	538.6
47.5°	7542.9	5612.0	1921.6	829.4	626.2	562.9	542.4	542.4	527.5	520.0	521.9
50°	8195.3	5997.8	1962.6	821.9	615.1	546.1	533.1	534.9	514.4	505.1	503.2
52.5°	8720.9	6292.3	2012.9	831.3	615.1	531.2	516.3	525.6	503.2	492.1	490.2
55°	9127.2	6497.3	2031.6	851.8	622.5	518.1	501.4	516.3	499.5	484.6	484.6
57.5°	9417.9	6562.5	1951.4	861.1	633.7	516.3	486.5	514.4	505.1	486.5	486.5
60°	9311.7	6184.2	1653.2	825.7	631.8	512.6	475.3	518.1	523.7	503.2	503.2
62.5°	8482.3	5174.0	1327.0	745.5	600.2	499.5	462.2	514.4	536.8	529.3	525.6
65°	6905.5	3794.8	1028.8	650.5	546.1	471.5	434.3	480.9	507.0	514.4	516.3
67.5°	4866.5	2402.5	799.6	553.6	479.0	430.5	402.6	425.0	434.3	438.0	445.5
70°	2661.5	1301.0	635.6	466.0	410.0	389.5	369.0	370.9	367.2	363.4	367.2
72°	1336.4	849.9	536.8	404.5	363.4	350.4	341.1	335.5	335.5	329.9	331.8
72.5°	1150.0	790.3	518.1	389.5	352.3	341.1	333.6	328.0	326.2	322.4	324.3
75°	766.0	626.2	432.4	326.2	300.1	292.6	296.3	290.8	292.6	288.9	290.8
77.5°	618.8	538.6	367.2	275.8	257.2	246.0	253.5	255.3	259.1	255.3	253.5
80°	518.1	458.5	307.5	227.4	214.3	205.0	208.7	221.8	223.7	212.5	210.6
82.5°	335.5	369.0	242.3	177.1	164.0	160.3	169.6	182.7	186.4	171.5	167.7
85°	281.4	296.3	175.2	121.1	108.1	104.4	123.0	136.1	145.4	130.5	126.7
87.5°	78.3	145.4	85.7	57.8	48.5	48.5	59.6	70.8	83.9	85.7	85.7
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)