

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: P197063

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197063  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)  
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-SL2-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26388 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B3 - 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

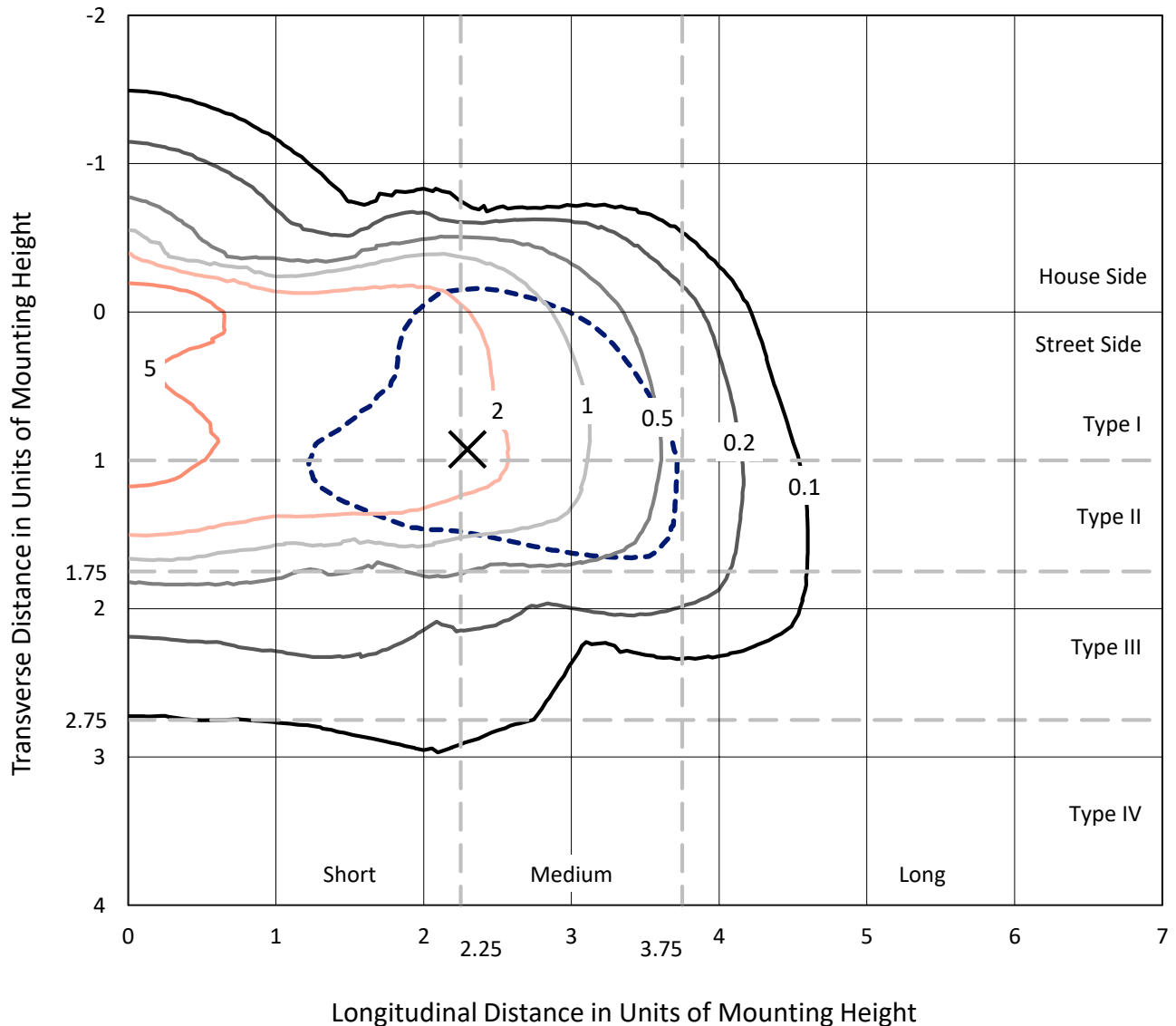


REPORT NUMBER: P197063

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-1200

### Iso-Footcandle Lines of Horizontal Illumination

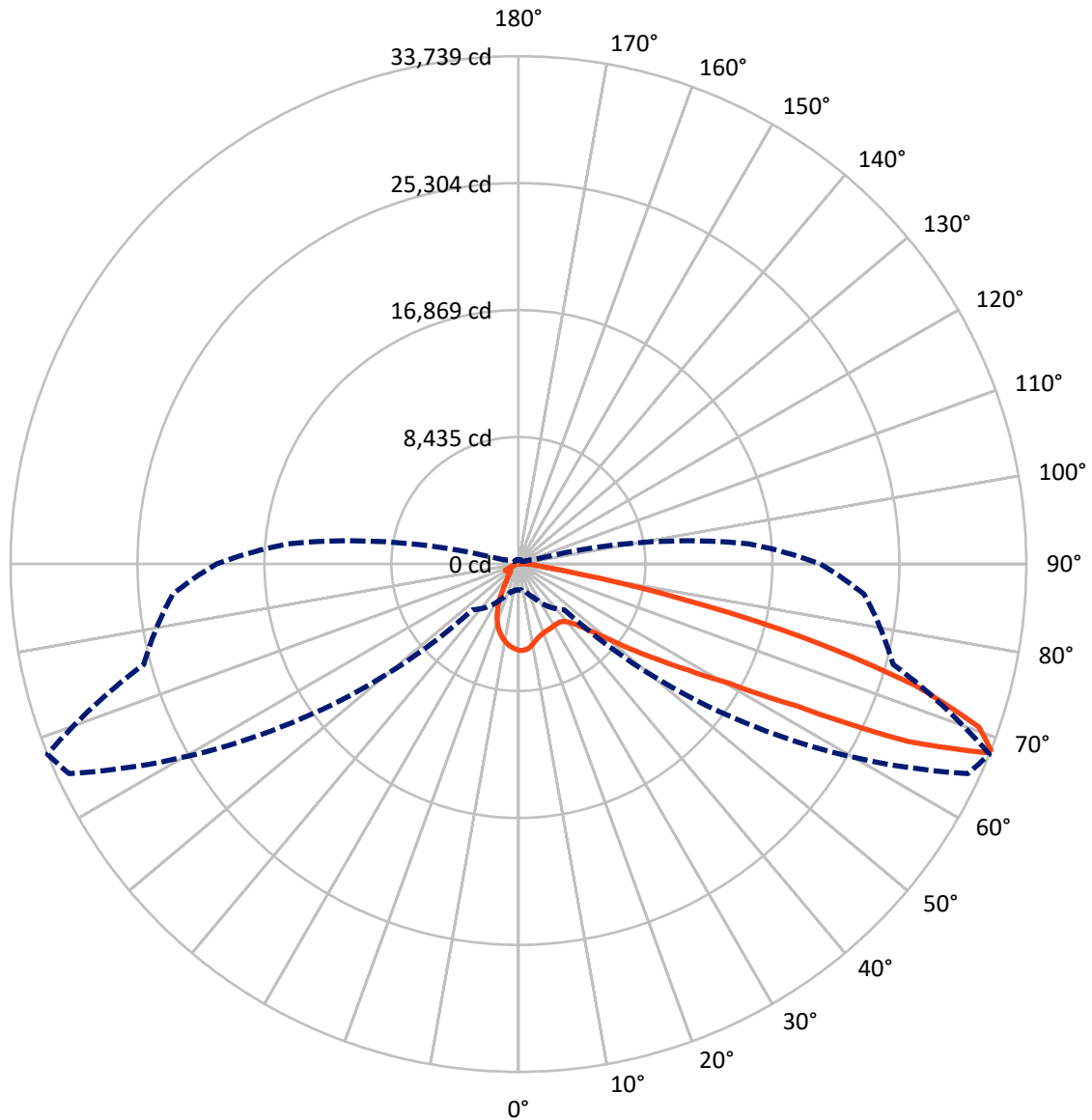
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.2 fc  
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P197063  
CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-1200

### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P197063

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4317.2	0.0	4317.2
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	22070.9	0.0	22070.9
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	26388.0	0.0	26388.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	492.0	1.9
10°-20°	1141.1	4.3
20°-30°	1543.2	5.8
30°-40°	2175.9	8.2
40°-50°	3578.0	13.6
50°-60°	5546.3	21.0
60°-70°	7191.1	27.3
70°-80°	4126.6	15.6
80°-90°	593.7	2.3
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°	26388.0	100.0
0°-180°	26388.0	100.0



REPORT NUMBER: P197063

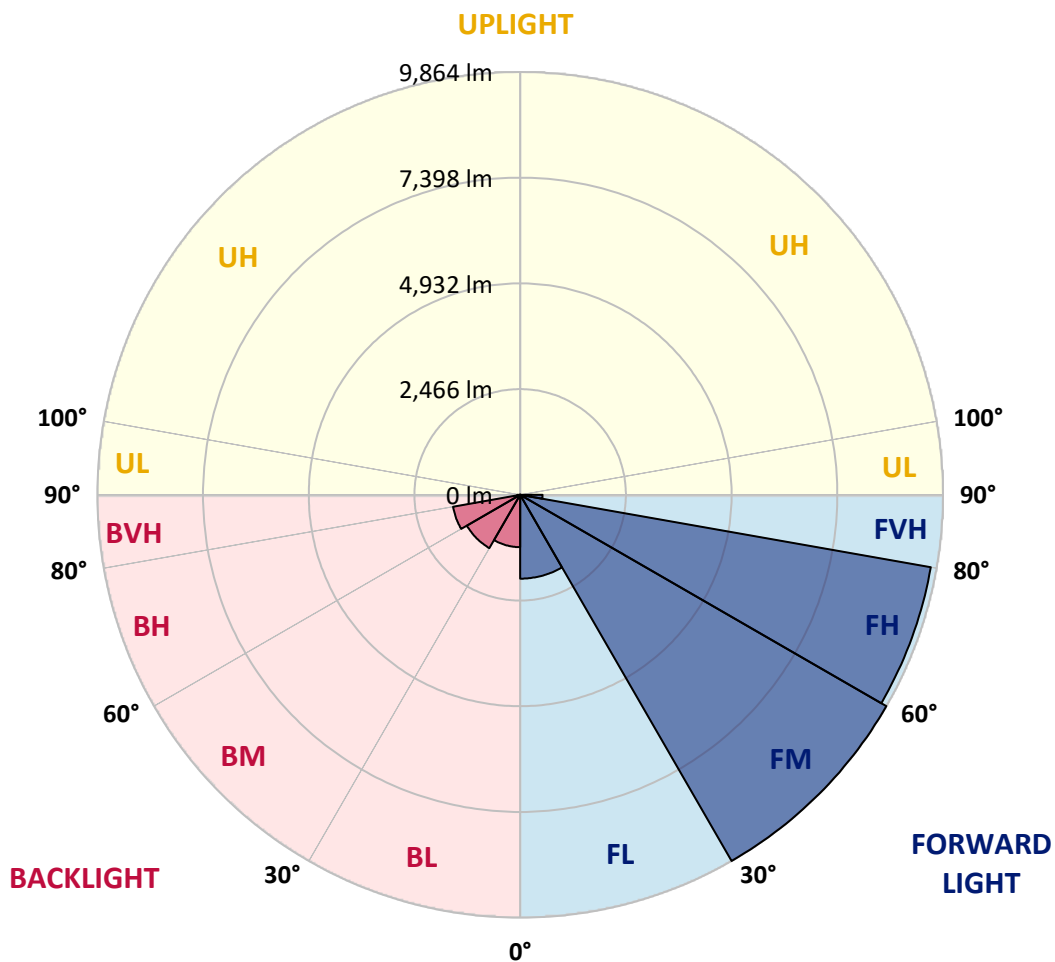
CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-1200

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1955.8	7.4			
FM	(30°-60°)	9864.3	37.4			
FH	(60°-80°)	9727.8	36.9			G4/12000
FVH	(80°-90°)	523.0	2.0			G4/750
BL	(0°-30°)	1220.5	4.6	B3/2500		
BM	(30°-60°)	1435.9	5.4	B2/2500		
BH	(60°-80°)	1590.0	6.0	B3/2500		G3/2500
BVH	(80°-90°)	70.8	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type II Medium





REPORT NUMBER: P197063

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8
2.5°	5588.4	5633.2	5633.2	5665.9	5695.3	5719.4	5740.1	5740.1	5740.1	5726.3	5714.2
5°	5000.6	5060.9	5069.5	5152.3	5260.9	5393.6	5541.8	5672.8	5698.7	5747.0	5765.9
7.5°	4592.1	4611.0	4643.8	4700.7	4811.0	4974.7	5207.4	5500.5	5571.1	5722.8	5802.1
10°	4302.5	4318.0	4345.6	4402.4	4502.4	4650.7	4879.9	5260.9	5378.1	5647.0	5803.8
12.5°	4090.4	4102.5	4128.4	4180.1	4281.8	4414.5	4648.9	5045.4	5190.2	5571.1	5828.0
15°	3925.0	3945.7	3966.3	4016.3	4119.7	4247.3	4485.2	4888.5	5045.4	5510.8	5872.8
17.5°	3859.5	3869.8	3873.3	3899.1	3992.2	4121.5	4359.4	4778.2	4940.3	5462.5	5907.3
20°	3900.8	3902.6	3868.1	3850.8	3904.3	4023.2	4254.2	4695.5	4861.0	5419.5	5921.1
22.5°	4081.8	4081.8	3992.2	3916.3	3880.1	3954.3	4183.5	4638.6	4817.9	5386.7	5921.1
25°	4426.6	4411.1	4271.4	4121.5	3961.2	3930.1	4138.7	4602.4	4785.1	5369.5	5898.7
27.5°	4879.9	4866.1	4688.6	4466.2	4176.6	3981.9	4123.2	4573.1	4752.4	5343.6	5850.4
30°	5431.5	5419.5	5217.8	4926.5	4499.0	4145.6	4159.4	4552.4	4726.5	5300.5	5769.4
32.5°	5981.4	5974.5	5814.2	5516.0	4943.7	4423.1	4254.2	4549.0	4712.7	5248.8	5671.1
35°	6534.7	6534.7	6436.5	6184.8	5541.8	4840.3	4452.4	4612.7	4738.6	5221.2	5586.7
37.5°	7351.8	7319.0	7136.3	6876.0	6295.1	5381.5	4773.0	4747.2	4838.6	5267.8	5559.1
40°	8617.0	8522.2	8065.4	7627.6	7117.3	6074.5	5241.9	5007.5	5062.6	5426.3	5624.6
42.5°	9940.8	9790.9	9185.8	8486.0	7967.1	6929.5	5857.3	5429.8	5428.1	5733.2	5833.2
45°	11076.8	10999.2	10344.2	9456.5	8937.6	7891.3	6634.7	6057.2	5995.2	6208.9	6234.8
47.5°	11737.0	11685.3	11290.5	10483.8	10089.1	9027.3	7620.7	6927.7	6810.5	6938.1	6898.4
50°	11554.3	11604.2	11490.5	11078.5	11326.7	10623.4	8877.3	8120.6	7898.2	8025.8	7929.2
52.5°	10592.4	10726.9	10828.6	10907.9	12038.6	12759.2	10456.2	9609.9	9425.4	9403.0	9309.9
55°	8860.0	9073.8	9394.4	9977.0	11847.3	14474.3	13214.2	11411.2	11142.3	11000.9	11037.1
57.5°	6029.7	6353.7	7044.9	8153.3	10852.7	15205.2	17292.6	13738.2	13283.2	12779.8	12897.1
60°	3321.7	3592.3	4414.5	5531.5	8582.5	15096.6	20907.3	17520.1	16087.7	14753.5	14994.9
62.5°	2149.5	2208.1	2820.0	3778.4	5267.8	13328.0	22915.5	23841.1	20805.6	17356.4	17696.0
65°	1727.2	1768.6	2068.5	3047.6	3669.9	8573.9	23005.1	30398.2	28397.0	20893.5	20903.9
67.5°	1687.5	1706.5	1880.6	2563.2	3442.3	4667.9	19885.1	32983.9	33447.5	25068.4	23049.9
68°	1711.7	1734.1	1909.9	2483.9	3440.6	4302.5	18378.6	32944.2	33738.9	25766.5	23049.9
70°	1510.0	1537.6	1947.8	2570.1	3294.1	3699.2	12585.1	31194.6	32473.6	27371.3	21870.9
72.5°	789.5	767.1	963.6	2028.8	3707.8	3854.3	6648.5	26061.3	27554.1	25349.4	18895.7
75°	615.4	560.2	539.5	801.5	3261.3	3997.4	3861.2	18523.4	19650.7	18273.4	12629.9
77.5°	579.2	512.0	472.3	474.0	1435.9	4159.4	3123.4	10901.0	10901.0	8717.0	4030.1
80°	465.4	403.4	377.5	430.9	692.9	3833.6	3259.6	4967.8	4237.0	2252.9	1110.1
82.5°	306.8	274.1	275.8	349.9	525.7	2559.8	3775.0	2452.9	1842.7	998.0	653.3
85°	194.8	167.2	186.2	244.8	393.0	1141.1	3737.1	1704.8	1220.4	560.2	325.8
87.5°	98.3	75.8	93.1	127.6	239.6	327.5	3076.9	1522.1	905.0	232.7	177.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P197063

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-1200

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8	5741.8
2.5°	5714.2	5676.3	5657.3	5626.3	5588.4	5550.5	5524.6	5512.5	5505.6	5509.1	5507.4
5°	5755.6	5705.6	5624.6	5509.1	5390.1	5264.3	5167.8	5093.7	5047.1	5033.3	5029.9
7.5°	5786.6	5714.2	5562.5	5352.2	5148.8	4928.2	4740.3	4590.3	4488.6	4442.1	4440.4
10°	5781.4	5688.4	5448.8	5138.5	4840.3	4516.2	4221.5	3969.8	3787.1	3699.2	3695.7
12.5°	5786.6	5659.1	5309.1	4888.5	4461.1	3997.4	3559.5	3168.2	2895.9	2766.6	2761.4
15°	5807.3	5628.0	5166.1	4609.3	4018.0	3363.0	2737.3	2246.0	1997.8	1913.4	1913.4
17.5°	5805.6	5576.3	5000.6	4285.2	3492.3	2614.9	1868.5	1565.2	1541.0	1618.6	1630.7
20°	5771.1	5493.6	4786.8	3900.8	2875.2	1809.9	1267.0	1223.9	1416.9	1630.7	1654.8
22.5°	5717.7	5386.7	4540.3	3454.4	2156.4	1179.0	977.4	1042.9	1304.9	1570.3	1608.3
25°	5643.5	5257.4	4257.6	2935.5	1434.2	848.1	815.3	896.3	1080.8	1258.3	1285.9
27.5°	5534.9	5093.7	3949.1	2373.6	915.3	698.1	710.2	767.1	846.4	922.2	937.7
30°	5398.8	4902.3	3613.0	1751.3	694.7	624.0	644.7	679.2	713.6	761.9	772.2
32.5°	5260.9	4707.5	3263.0	1203.2	606.8	584.3	605.0	624.0	653.3	686.1	692.9
35°	5136.8	4526.6	2902.8	839.5	568.8	558.5	568.8	580.9	610.2	643.0	646.4
37.5°	5047.1	4378.3	2527.0	663.6	546.4	536.1	541.3	546.4	580.9	629.2	634.3
40°	5035.1	4280.1	2146.1	596.4	529.2	515.4	512.0	515.4	560.2	615.4	620.5
42.5°	5152.3	4285.2	1773.7	568.8	515.4	499.9	486.1	493.0	532.6	575.7	579.2
45°	5429.8	4405.9	1451.4	556.8	503.3	491.3	470.6	474.0	493.0	515.4	518.8
47.5°	5919.3	4669.6	1204.9	549.9	493.0	482.6	456.8	446.4	448.2	460.2	460.2
50°	6701.9	5110.9	1054.9	543.0	484.4	465.4	436.1	415.4	410.3	417.1	418.9
52.5°	7868.9	5867.6	982.5	529.2	468.9	443.0	410.3	389.6	380.9	387.8	387.8
55°	9446.1	7076.0	948.1	510.2	449.9	415.4	386.1	368.9	362.0	367.2	367.2
57.5°	11244.0	8646.3	1006.7	484.4	425.8	386.1	365.4	353.4	348.2	353.4	355.1
60°	13379.7	10701.0	1410.0	451.6	399.9	360.3	348.2	341.3	337.9	343.0	343.0
62.5°	16218.7	13434.9	2182.3	425.8	372.3	336.1	332.7	329.2	325.8	331.0	331.0
65°	19283.5	15922.2	2246.0	410.3	348.2	315.4	317.2	317.2	313.7	318.9	318.9
67.5°	20259.2	15706.8	1254.9	391.3	318.9	294.8	301.7	301.7	299.9	305.1	303.4
68°	20052.3	15365.5	1092.9	386.1	313.7	289.6	296.5	298.2	296.5	301.7	299.9
70°	18511.3	13490.0	718.8	356.8	291.3	272.4	282.7	284.4	282.7	289.6	287.9
72.5°	15281.0	10118.4	530.9	312.0	263.7	249.9	260.3	262.0	263.7	270.6	268.9
75°	9704.7	5588.4	418.9	265.5	236.2	224.1	234.4	239.6	243.0	253.4	248.2
77.5°	2658.0	1696.2	339.6	225.8	203.4	198.2	205.1	212.0	215.5	227.5	218.9
80°	930.8	749.8	282.7	191.3	168.9	167.2	174.1	181.0	184.4	194.8	184.4
82.5°	565.4	489.5	225.8	150.0	132.7	131.0	139.6	146.5	150.0	150.0	143.1
85°	294.8	258.6	165.5	105.1	91.4	86.2	101.7	110.3	112.0	110.3	105.1
87.5°	165.5	146.5	87.9	50.0	41.4	43.1	53.4	65.5	70.7	68.9	65.5
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)