

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: P196613

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196613  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
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-SL3-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19136.8 lumens  
Efficiency: N/A  
Efficacy: 118.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B2 - U0 - G3

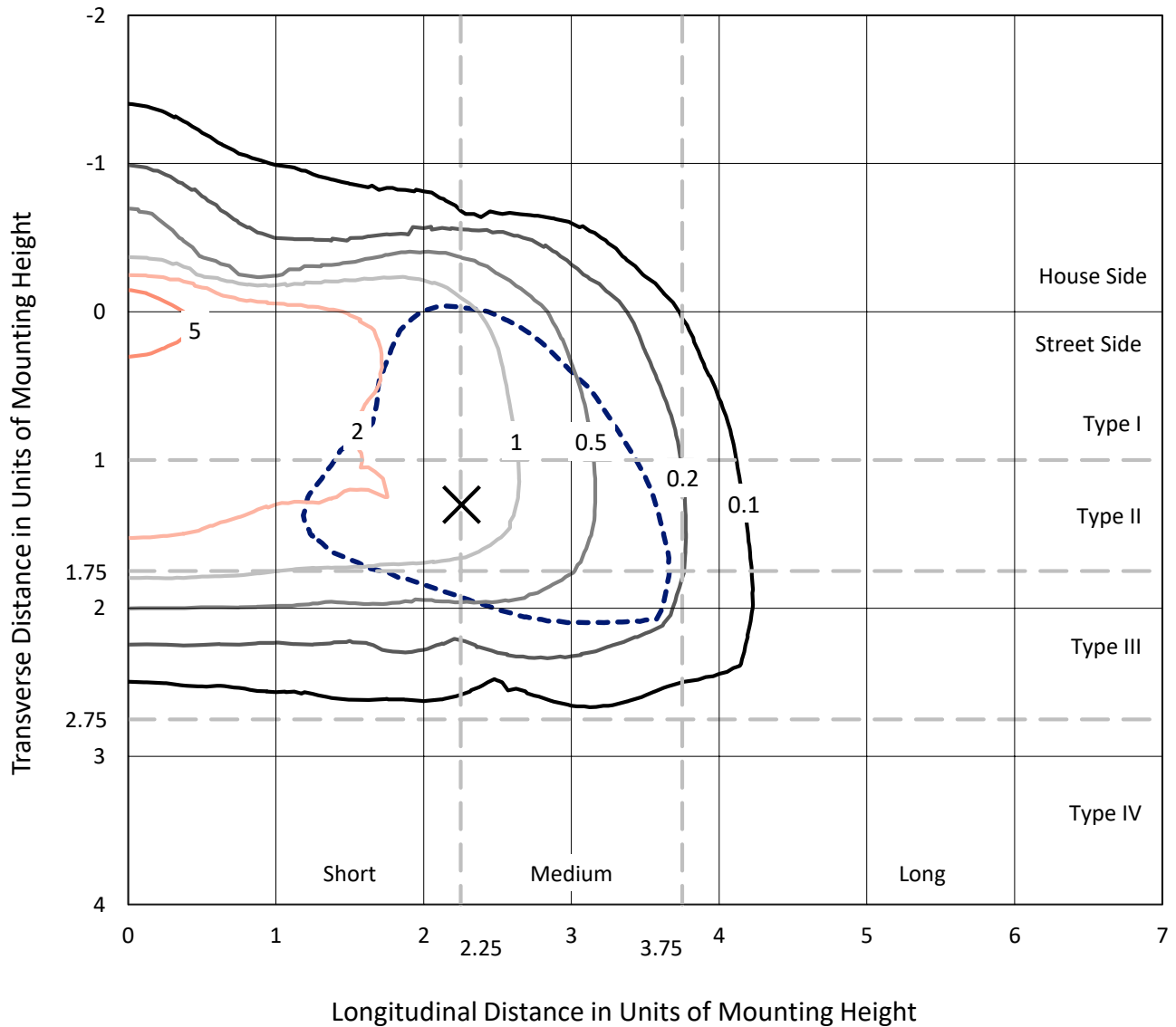
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

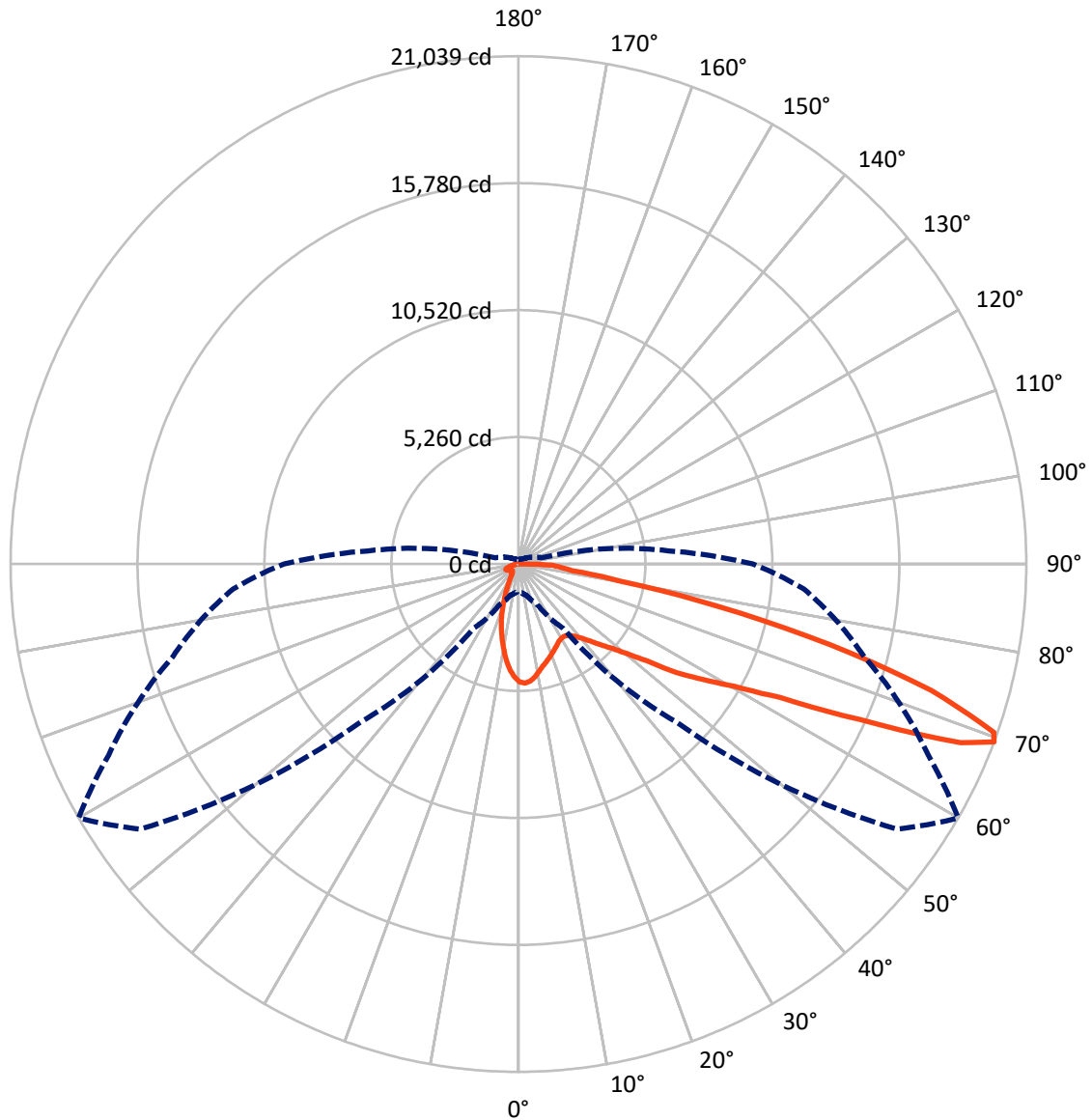
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.8 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2729.5	0.0	2729.5
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	16407.2	0.0	16407.2
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	19136.8	0.0	19136.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	414.2	2.2
10°-20°	886.9	4.6
20°-30°	1131.4	5.9
30°-40°	1556.9	8.1
40°-50°	2521.9	13.2
50°-60°	3958.1	20.7
60°-70°	5276.9	27.6
70°-80°	2935.1	15.3
80°-90°	455.2	2.4
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°	19136.8	100.0
0°-180°	19136.8	100.0

**Coefficient of Utilization**



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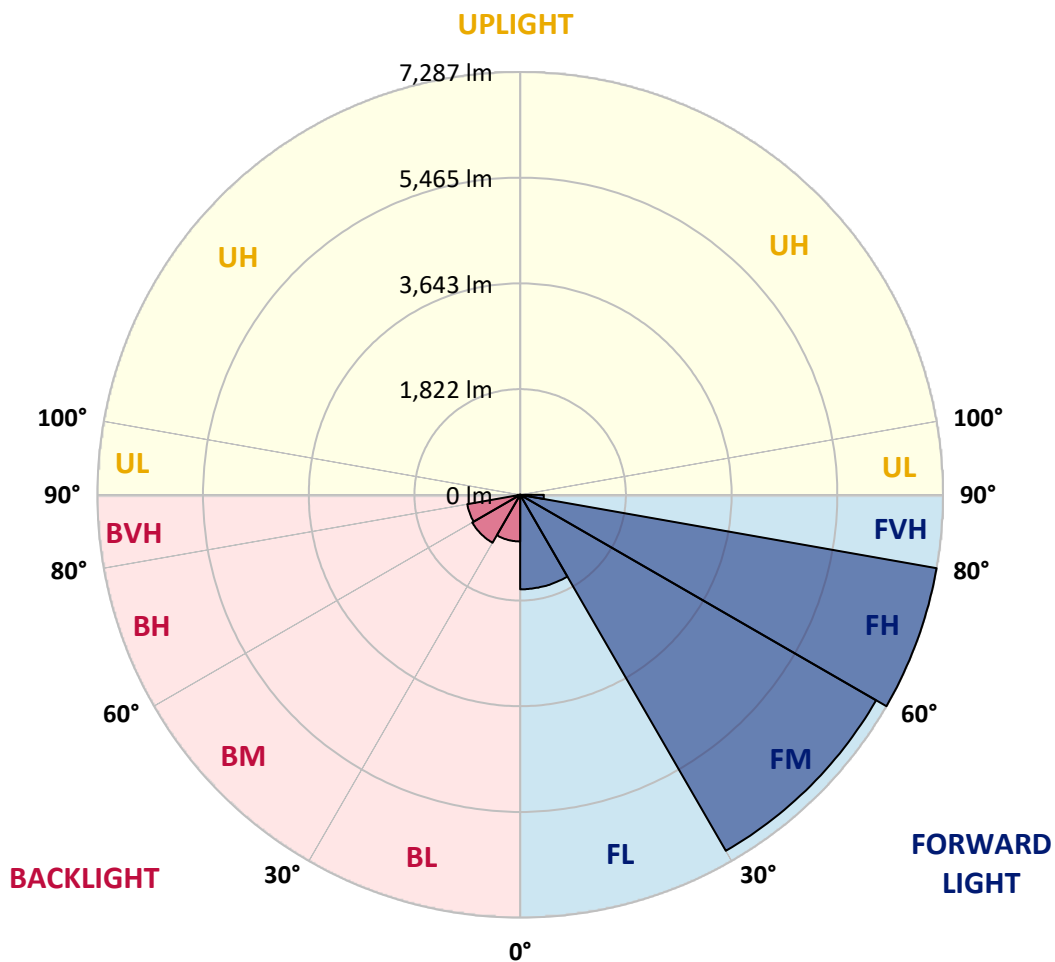
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1628.2	8.5			
FM (30°-60°)	7083.4	37.0			
FH (60°-80°)	7286.5	38.1			G3/7500
FVH (80°-90°)	409.1	2.1			G3/500
BL (0°-30°)	804.4	4.2	B2/1000		
BM (30°-60°)	953.5	5.0	B1/1000		
BH (60°-80°)	925.4	4.8	B2/1000		G2/1000
BVH (80°-90°)	46.1	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8
2.5°	5013.0	5026.4	5026.4	5015.3	5009.2	4973.6	4952.7	4938.0	4912.3	4864.4	4821.5
5°	4833.7	4859.6	4870.6	4875.4	4907.4	4896.4	4897.5	4887.7	4865.7	4814.1	4744.1
7.5°	4504.9	4509.7	4529.4	4562.5	4639.8	4693.8	4738.0	4746.6	4741.7	4703.6	4605.5
10°	4181.0	4189.4	4212.8	4269.2	4342.8	4420.2	4515.9	4555.1	4584.6	4572.4	4448.4
12.5°	3912.1	3913.3	3939.2	4004.2	4086.4	4183.3	4313.4	4374.7	4444.6	4473.0	4334.4
15°	3653.2	3670.3	3694.9	3773.5	3875.3	3998.1	4147.7	4232.3	4324.5	4405.5	4246.0
17.5°	3456.9	3470.4	3485.1	3550.2	3668.0	3821.4	4006.6	4097.4	4218.9	4342.8	4155.1
20°	3348.9	3353.8	3342.8	3374.7	3474.0	3639.8	3854.4	3963.7	4108.4	4282.8	4061.8
22.5°	3326.8	3326.8	3286.3	3280.2	3324.3	3464.2	3697.4	3831.1	4007.8	4241.0	3978.3
25°	3429.8	3422.5	3346.4	3276.4	3260.6	3331.7	3547.6	3712.1	3922.0	4239.8	3915.9
27.5°	3625.0	3615.2	3520.7	3402.9	3301.0	3270.3	3432.3	3600.4	3854.4	4281.6	3883.9
30°	3868.0	3864.3	3768.6	3621.3	3453.1	3294.9	3386.9	3542.7	3809.1	4358.8	3882.6
32.5°	4134.3	4117.1	4058.2	3910.9	3692.5	3431.1	3414.0	3545.3	3796.8	4471.8	3910.9
35°	4417.7	4405.5	4390.7	4242.2	3996.8	3671.6	3532.9	3629.9	3857.0	4628.8	3990.7
37.5°	4778.5	4765.1	4789.5	4627.5	4358.8	3987.0	3734.2	3799.3	3979.7	4857.0	4139.2
40°	5420.3	5381.0	5312.3	5063.2	4780.9	4373.5	4025.0	4034.8	4189.4	5162.6	4377.3
42.5°	6474.3	6348.0	6008.0	5550.4	5226.4	4822.7	4404.2	4357.6	4479.1	5566.3	4723.3
45°	7531.0	7388.6	6814.3	6081.7	5687.8	5305.0	4873.0	4761.3	4839.8	6036.3	5168.7
47.5°	8213.2	8143.3	7495.4	6613.0	6171.3	5830.2	5409.2	5225.3	5281.6	6568.8	5718.5
50°	8413.3	8353.2	7843.9	7029.0	6627.7	6464.6	6073.1	5829.0	5838.7	7191.1	6377.5
52.5°	8263.6	8239.0	7901.6	7286.8	7047.4	7133.4	6992.3	6652.4	6571.4	7873.3	7091.7
55°	8063.6	8072.2	7942.0	7545.7	7474.5	7756.8	8194.9	7921.2	7577.5	8583.9	7835.3
57.5°	7434.0	7440.1	7781.3	8039.0	8289.4	8630.5	9131.2	9015.8	8615.7	9350.9	8668.5
60°	5986.0	6033.9	6793.4	7937.1	9220.7	10352.2	10474.9	10276.1	9720.2	10234.5	9752.2
62.5°	4276.6	4319.6	5199.4	6890.4	9111.5	12300.9	12956.2	12165.9	11218.5	11556.1	11276.2
65°	2246.9	2239.5	2920.6	4761.3	7674.6	12752.5	16866.0	15521.0	13742.7	13373.5	12748.8
67.5°	1255.4	1295.9	1559.6	2401.5	5001.9	11223.4	19363.2	19759.4	17252.4	14815.3	12685.0
69°	1160.9	1174.4	1351.1	1856.7	3260.6	9260.0	19148.3	21039.4	18732.4	14821.4	11867.7
70°	1127.8	1142.6	1303.3	1710.7	2739.0	7587.4	18366.7	20889.8	19091.9	14492.5	11124.0
72.5°	1011.2	1030.8	1186.7	1537.6	2308.2	3910.9	14794.5	17879.5	17294.1	12666.5	8625.6
75°	862.7	895.8	1131.4	1526.6	2186.9	2486.2	9866.2	13320.7	12871.5	9058.8	4893.8
77.5°	357.1	360.8	494.5	1117.9	2294.8	2379.4	5302.5	8437.9	7469.6	3972.2	1473.8
80°	249.1	244.2	246.7	326.4	1851.7	2395.4	2720.5	4291.3	3335.3	1048.1	689.7
82.5°	209.9	207.4	217.2	205.0	627.0	2718.2	2275.1	2237.1	1570.7	564.5	328.9
85°	138.6	134.9	178.0	186.5	298.2	2158.5	2447.0	1758.5	1170.7	301.9	139.9
87.5°	67.5	68.8	101.8	126.4	158.3	683.5	2343.8	1390.4	904.4	131.3	56.5
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°	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8	4882.8
2.5°	4804.2	4767.4	4734.3	4692.5	4660.7	4633.6	4596.9	4595.7	4589.6	4598.0	4600.6
5°	4697.5	4636.2	4542.9	4438.5	4364.9	4268.0	4173.4	4141.6	4106.1	4102.3	4113.4
7.5°	4536.8	4441.1	4281.6	4122.1	3962.4	3799.3	3644.7	3566.1	3490.0	3466.7	3477.7
10°	4357.6	4236.1	3991.9	3731.7	3507.2	3264.2	3028.5	2876.5	2737.7	2678.8	2693.6
12.5°	4217.7	4063.1	3719.5	3382.0	3045.8	2697.3	2386.8	2086.2	1859.1	1757.2	1763.5
15°	4097.4	3899.9	3464.2	3015.1	2594.2	2116.8	1686.1	1337.6	1138.8	1065.2	1062.6
17.5°	3967.3	3728.0	3197.9	2673.9	2127.9	1537.6	1128.9	922.8	844.2	819.8	819.8
20°	3828.7	3551.4	2919.4	2302.1	1637.0	1073.8	849.2	769.4	740.0	732.6	731.4
22.5°	3699.8	3378.3	2639.6	1905.7	1184.2	814.8	722.8	692.1	687.2	693.4	693.4
25°	3598.0	3226.2	2356.0	1488.5	861.5	682.4	643.0	639.3	657.7	679.8	683.5
27.5°	3521.9	3090.0	2076.4	1087.2	677.4	594.0	580.3	596.4	639.3	683.5	692.1
30°	3469.1	2973.4	1741.3	781.6	564.5	520.3	526.4	554.7	619.7	687.2	705.6
32.5°	3445.8	2878.9	1403.9	600.1	482.3	457.7	473.6	510.5	578.0	645.5	667.6
35°	3467.9	2810.1	1092.1	498.2	422.2	403.7	422.2	460.2	504.3	537.4	551.0
37.5°	3547.6	2785.6	822.1	441.7	382.9	364.5	379.2	405.0	424.6	436.8	443.0
40°	3715.8	2811.3	644.3	412.4	360.8	339.9	343.6	355.8	369.4	379.2	380.4
42.5°	3983.3	2896.0	573.1	401.3	347.3	320.2	314.1	322.8	337.5	350.9	353.5
45°	4339.2	3037.2	565.8	405.0	341.1	304.3	292.0	300.7	320.2	342.4	346.1
47.5°	4799.3	3260.6	600.1	424.6	344.8	295.8	277.3	285.9	311.7	341.1	346.1
50°	5344.2	3569.7	663.9	454.1	361.9	295.8	271.2	278.6	305.6	338.7	343.6
52.5°	5986.0	4000.5	730.2	483.5	386.6	306.8	273.7	272.4	296.9	327.7	333.8
55°	6694.1	4535.6	794.0	509.2	400.0	321.6	279.8	265.1	284.7	309.2	314.1
57.5°	7527.3	5268.2	905.6	533.8	407.4	332.5	287.2	257.8	268.8	285.9	289.6
60°	8657.4	6344.3	1122.8	575.6	420.8	337.5	288.3	250.3	249.1	261.3	262.7
62.5°	10131.3	7604.7	1330.2	624.6	447.9	338.7	283.4	245.4	233.2	236.9	236.9
65°	11179.3	8068.5	1270.1	666.4	472.4	337.5	278.6	241.8	220.9	214.8	214.8
67.5°	10582.9	7127.2	1078.6	677.4	474.9	324.0	267.4	233.2	209.9	195.1	195.1
69°	9706.7	6247.3	990.3	657.7	455.3	308.0	255.2	224.5	202.4	185.3	185.3
70°	8992.5	5581.1	936.4	634.5	431.9	294.6	244.2	216.0	195.1	180.4	179.1
72.5°	6713.7	3724.4	800.1	547.3	354.6	249.1	213.5	192.7	175.5	165.6	165.6
75°	3542.7	1866.4	655.3	446.7	273.7	198.9	175.5	162.0	152.2	150.9	149.6
77.5°	1160.9	844.2	471.2	336.2	201.2	154.6	139.9	131.3	130.1	134.9	134.9
80°	627.0	504.3	303.0	227.0	139.9	115.4	107.9	106.7	110.5	117.8	117.8
82.5°	304.3	249.1	180.4	139.9	95.7	84.6	84.6	85.9	90.8	99.4	99.4
85°	131.3	117.8	104.4	78.5	58.9	52.8	60.1	66.3	69.9	76.1	78.5
87.5°	62.6	55.1	47.8	30.7	25.7	27.0	31.9	39.3	46.7	51.6	52.8
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)