

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: P270618

Luminaire Tested: **NAV-AF-05-D-UNV-T2-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270618  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
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-T2-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16848.1 lumens  
Efficiency: N/A  
Efficacy: 104.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G3

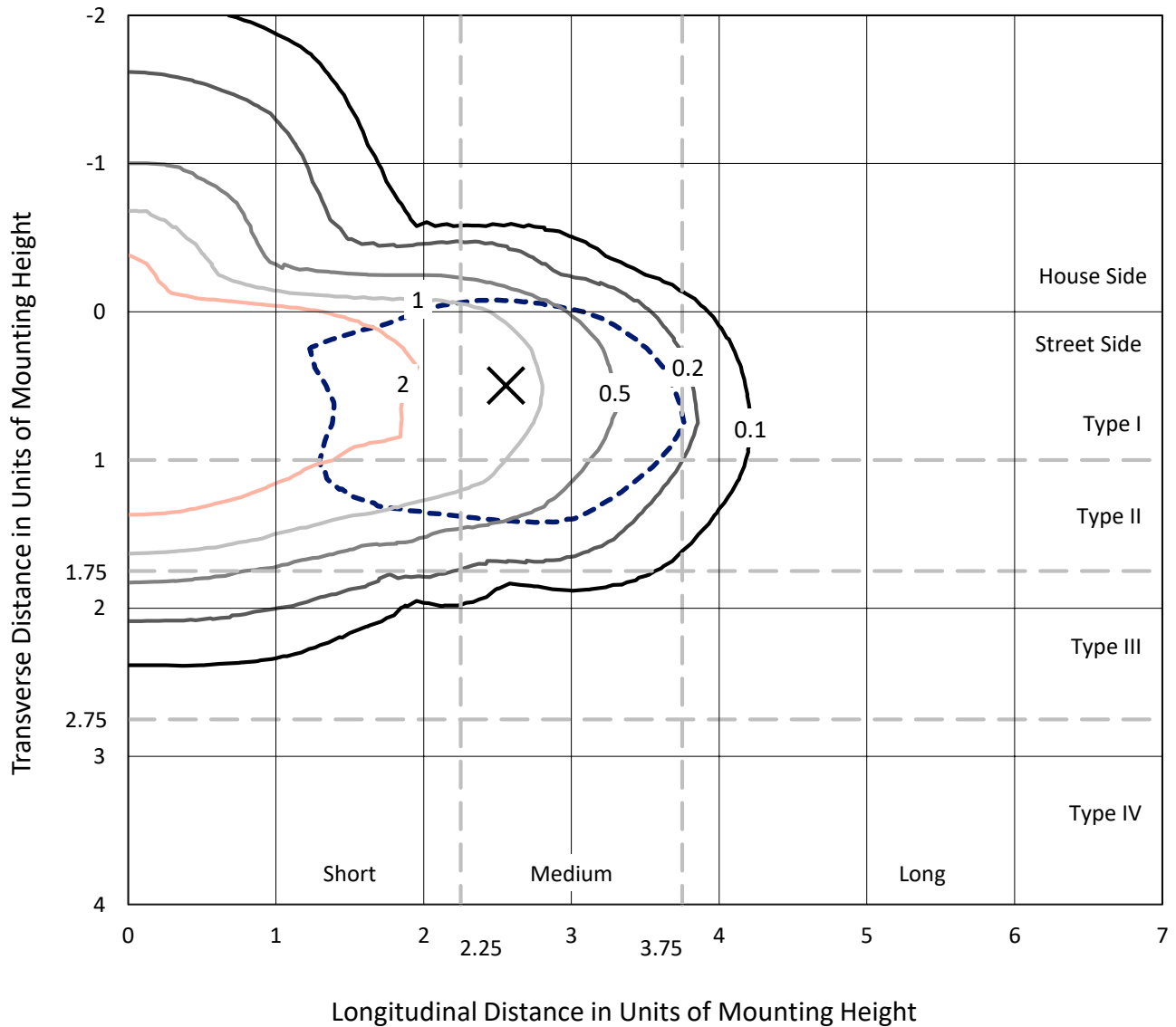
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

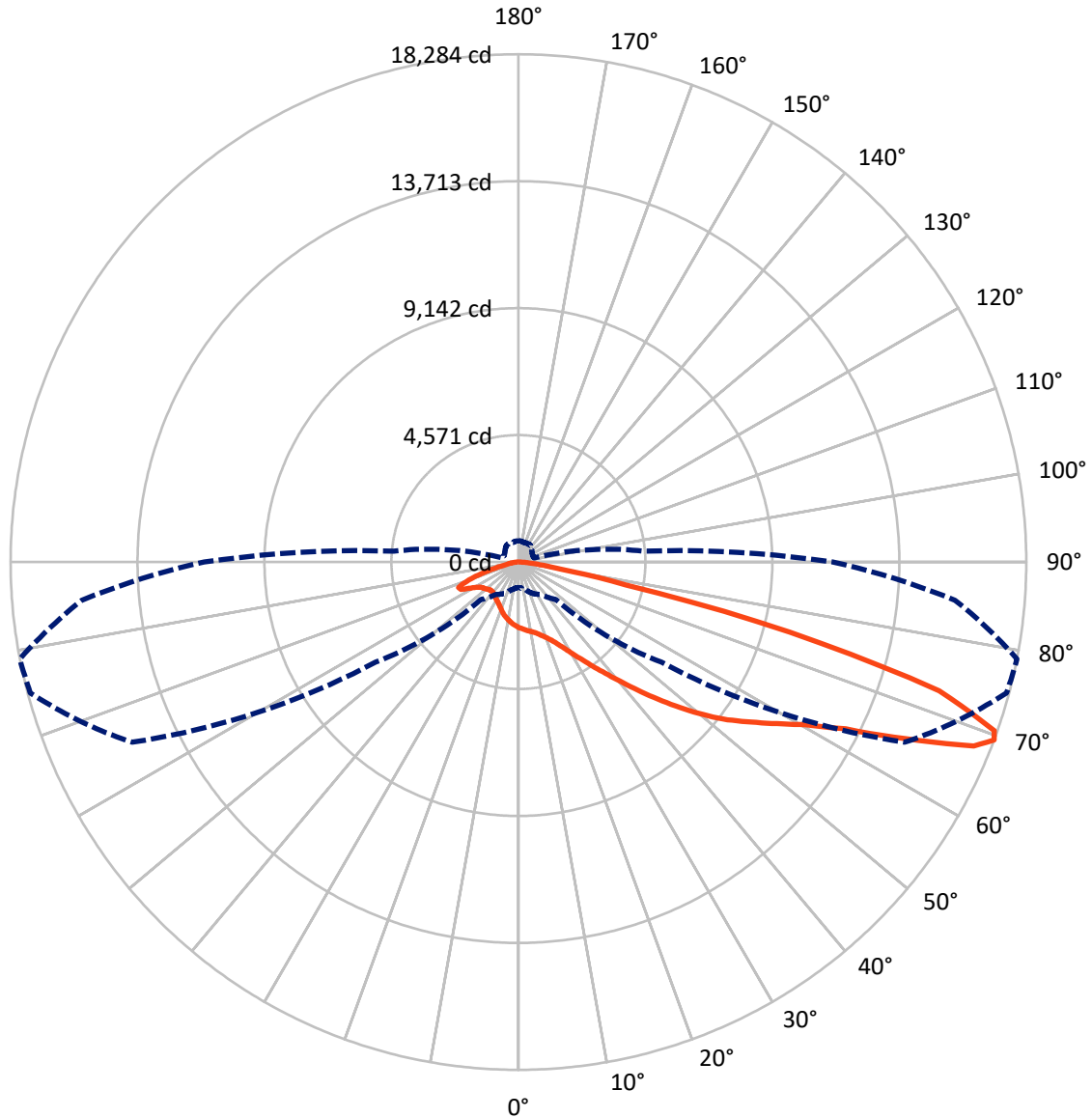
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3169.4	0.0	3169.4
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	13678.7	0.0	13678.7
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	16848.1	0.0	16848.1
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	219.2	1.3
10°-20°	628.4	3.7
20°-30°	1038.4	6.2
30°-40°	1681.4	10.0
40°-50°	2686.0	15.9
50°-60°	3846.7	22.8
60°-70°	4285.8	25.4
70°-80°	2144.1	12.7
80°-90°	318.2	1.9
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°	16848.1	100.0
0°-180°	16848.1	100.0

**Coefficient of Utilization**



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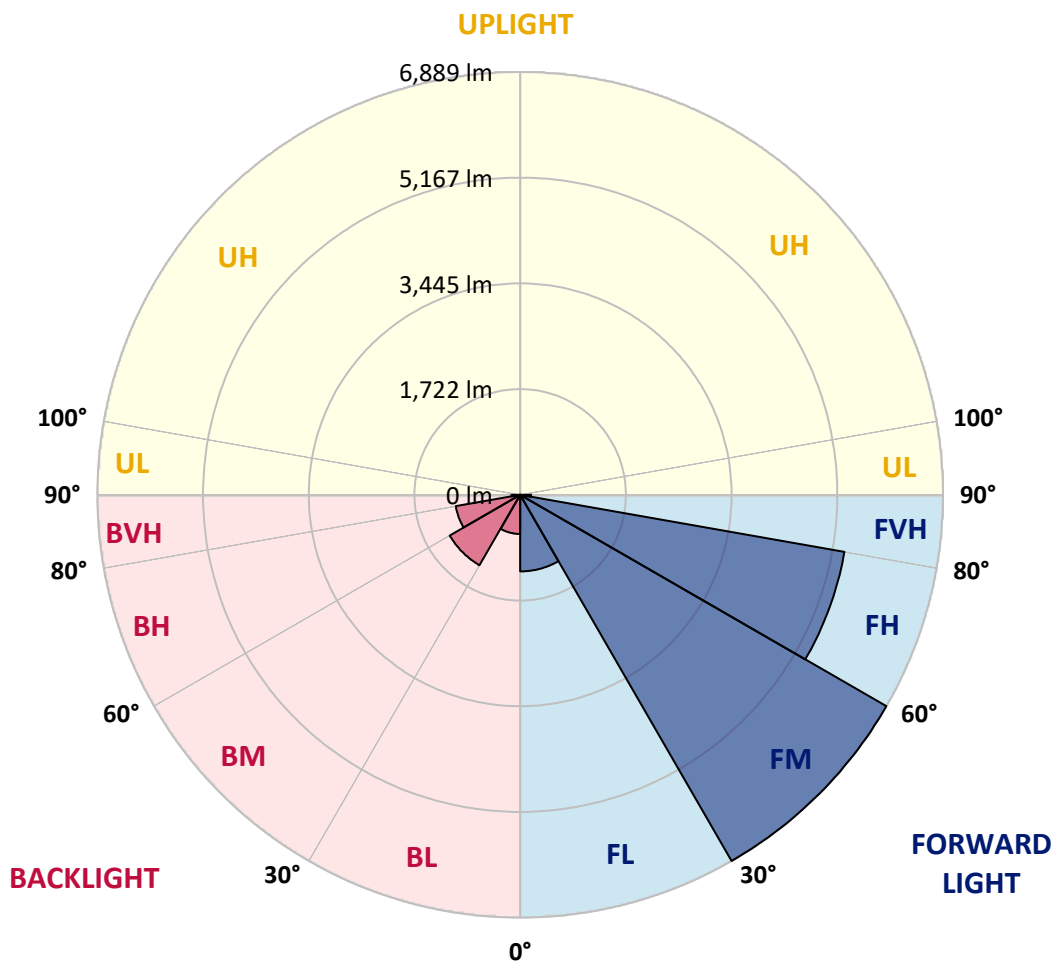
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1247.5	7.4			
FM (30°-60°)	6889.2	40.9			
FH (60°-80°)	5364.2	31.8			G3/7500
FVH (80°-90°)	177.8	1.1			G2/225
BL (0°-30°)	638.5	3.8	B2/1000		
BM (30°-60°)	1324.9	7.9	B2/2500		
BH (60°-80°)	1065.7	6.3	B3/2500		G3/2500
BVH (80°-90°)	140.4	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2
2.5°	2595.8	2590.4	2589.2	2572.7	2563.9	2545.1	2501.1	2455.7	2413.9	2391.8	2368.7
5°	2813.0	2802.0	2796.5	2768.8	2744.6	2702.7	2633.3	2561.6	2486.7	2448.2	2401.8
7.5°	2944.1	2945.3	2945.3	2923.2	2898.9	2848.2	2760.0	2661.9	2550.6	2500.0	2427.1
10°	2955.2	2956.2	2972.9	2978.3	2983.8	2957.3	2875.7	2752.2	2608.9	2542.9	2448.2
12.5°	2846.0	2853.7	2881.3	2921.0	2977.2	3005.8	2970.5	2849.3	2684.0	2603.5	2487.8
15°	2699.3	2707.1	2742.3	2803.0	2893.4	2989.3	3038.8	2960.6	2782.1	2687.3	2546.2
17.5°	2627.7	2636.5	2660.8	2709.3	2797.5	2926.5	3075.3	3079.7	2897.8	2788.7	2615.7
20°	2593.5	2600.2	2631.0	2670.8	2737.9	2861.5	3078.6	3205.3	3035.6	2908.8	2700.6
22.5°	2671.9	2674.1	2689.4	2711.5	2756.7	2851.5	3076.3	3335.3	3207.6	3059.8	2809.5
25°	2901.2	2886.9	2875.7	2848.2	2859.2	2926.5	3111.6	3474.3	3428.0	3258.2	2955.2
27.5°	3172.3	3170.1	3141.5	3077.5	3036.7	3079.7	3212.0	3629.7	3698.1	3510.7	3145.9
30°	3474.3	3475.5	3445.5	3367.3	3284.7	3289.1	3371.8	3809.4	4021.1	3814.9	3380.6
32.5°	3790.7	3810.5	3755.4	3677.1	3576.8	3544.8	3601.0	4026.6	4394.7	4174.2	3652.9
35°	4168.8	4172.0	4111.5	3996.7	3896.5	3845.7	3897.6	4297.8	4825.6	4596.4	3984.6
37.5°	4561.1	4563.3	4500.5	4353.8	4227.2	4194.0	4251.4	4627.2	5281.9	5077.0	4374.8
40°	4881.8	4905.0	4855.3	4717.5	4589.8	4569.9	4652.6	5021.9	5865.0	5645.7	4838.9
42.5°	5245.7	5272.1	5212.5	5069.2	4967.8	4961.2	5090.2	5471.5	6444.8	6303.8	5364.7
45°	5655.5	5693.1	5610.5	5449.5	5363.5	5509.0	5516.8	5969.7	7112.8	7040.0	5956.5
47.5°	6103.2	6133.9	6066.8	5893.7	5800.0	6010.6	5934.6	6508.8	7834.7	7829.3	6597.0
50°	6448.2	6482.3	6488.9	6412.9	6314.7	6341.2	6393.1	7075.3	8554.6	8640.5	7259.5
52.5°	6385.3	6418.4	6567.1	6766.8	6924.3	6856.0	6918.8	7677.2	9250.0	9431.9	7888.7
55°	5878.2	5895.9	6174.8	6648.7	7320.0	7646.4	7650.8	8331.9	9911.4	10165.9	8486.2
57.5°	4964.6	4966.6	5329.4	6028.2	7089.7	8158.9	8805.8	9154.2	10601.4	10977.3	9226.9
60°	3512.8	3521.6	3943.9	4857.7	6264.2	8097.1	10048.1	10625.7	11400.6	11888.9	10181.5
62.5°	2085.4	2105.3	2423.8	3156.9	4652.6	7303.5	10782.1	13243.5	12577.8	13225.8	11709.1
65°	1356.9	1373.4	1564.0	1932.3	2749.1	5314.0	10540.8	15778.6	14805.3	15328.9	13904.9
67.5°	1044.9	1058.2	1208.1	1430.7	1686.5	2872.5	8427.8	16309.9	17516.9	17680.0	15757.8
69°	918.2	929.1	1039.3	1253.2	1419.7	1901.4	6280.6	15345.4	18194.8	18284.1	15780.9
70°	851.0	859.8	963.3	1148.6	1304.0	1517.7	4806.9	14225.6	17946.8	18175.0	15325.7
72.5°	701.0	708.8	782.7	924.7	1065.8	1081.3	2129.5	10387.6	15111.8	15841.5	12969.1
75°	585.2	589.6	638.2	741.8	863.0	860.8	1087.8	5883.8	9221.5	10091.1	8007.9
77.5°	488.3	491.6	523.5	587.5	681.2	678.0	766.1	2539.6	4071.7	3928.4	2756.7
80°	430.9	433.3	449.7	466.2	525.8	522.5	567.6	1166.2	1656.7	1531.0	1042.8
82.5°	327.3	331.7	415.6	423.2	407.8	393.5	395.8	678.9	848.7	772.7	560.0
85°	185.2	186.3	266.7	311.9	354.9	266.7	256.8	350.5	418.9	367.0	244.7
87.5°	82.6	86.0	127.9	147.7	191.8	156.6	146.7	148.8	180.7	149.8	96.9
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°	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2	2364.2
2.5°	2346.7	2328.0	2283.9	2238.7	2193.5	2164.8	2135.0	2107.6	2096.5	2095.3	2074.5
5°	2356.7	2312.4	2212.3	2101.9	1997.3	1915.7	1847.4	1803.3	1760.3	1752.6	1733.9
7.5°	2359.8	2288.3	2125.1	1948.8	1789.0	1676.5	1608.1	1578.4	1557.5	1551.9	1545.4
10°	2358.8	2257.4	2028.2	1786.8	1604.9	1520.0	1494.6	1501.2	1510.1	1514.5	1514.5
12.5°	2376.5	2243.1	1931.1	1634.6	1485.8	1445.1	1464.9	1499.0	1525.5	1536.6	1538.7
15°	2408.4	2234.3	1824.2	1502.3	1402.1	1412.0	1460.5	1510.1	1547.6	1564.0	1568.5
17.5°	2448.2	2222.1	1700.9	1393.2	1353.6	1387.7	1450.6	1513.4	1558.6	1579.5	1582.9
20°	2492.2	2204.5	1572.9	1311.6	1310.5	1353.6	1416.4	1487.0	1535.5	1558.6	1557.5
22.5°	2551.7	2187.9	1453.8	1252.1	1263.1	1302.8	1354.6	1418.7	1463.8	1484.7	1480.2
25°	2631.0	2172.6	1347.0	1199.2	1209.2	1235.6	1272.0	1320.5	1352.5	1363.4	1355.7
27.5°	2737.9	2160.5	1263.1	1150.8	1149.7	1161.8	1183.8	1210.2	1225.6	1222.5	1210.2
30°	2869.1	2148.2	1201.5	1107.8	1092.2	1091.3	1101.1	1116.6	1126.6	1106.6	1096.7
32.5°	3015.8	2127.4	1146.3	1070.3	1042.8	1032.8	1037.3	1058.2	1098.9	1079.1	1071.4
35°	3188.9	2103.1	1091.3	1029.5	1008.5	989.8	993.2	1038.4	1161.8	1147.5	1139.7
37.5°	3397.1	2081.1	1040.5	985.4	984.4	961.1	958.9	1013.0	1178.2	1147.5	1140.8
40°	3647.4	2076.6	995.3	936.9	954.5	945.7	938.0	971.1	1086.8	1024.0	1011.9
42.5°	3949.4	2096.5	962.3	890.6	920.4	941.3	927.1	934.6	982.0	926.0	916.0
45°	4302.1	2150.5	938.0	849.8	884.0	938.0	921.5	914.8	922.6	891.7	885.1
47.5°	4713.1	2246.4	921.5	815.8	849.8	929.1	919.2	906.0	902.7	885.1	880.7
50°	5152.9	2375.4	910.4	784.8	819.0	913.8	918.2	899.5	894.0	886.2	884.0
52.5°	5589.6	2515.3	897.2	758.3	793.7	895.0	919.2	892.8	885.1	880.7	878.5
55°	6023.8	2660.8	873.1	735.3	774.9	873.1	918.2	884.0	875.2	875.2	875.2
57.5°	6587.0	2882.4	841.1	716.5	750.7	844.3	903.9	874.1	862.0	863.0	864.2
60°	7400.4	3253.8	805.7	695.5	718.6	811.3	881.7	856.4	842.2	846.6	847.6
62.5°	8759.6	3903.0	757.2	665.7	685.5	776.0	853.1	832.2	819.0	826.7	827.8
65°	10571.7	4689.0	693.3	628.3	651.5	736.3	816.7	803.5	789.3	807.9	806.9
67.5°	11677.2	4919.4	626.1	588.6	618.4	694.4	771.6	766.1	756.2	789.3	787.0
69°	11314.6	4502.7	587.5	563.2	595.1	665.7	742.9	740.7	732.9	764.9	762.8
70°	10751.4	4113.6	563.2	546.7	583.1	648.1	724.2	724.2	716.5	744.1	738.4
72.5°	8636.1	3051.1	507.1	504.8	541.1	599.6	673.5	678.9	674.5	684.5	678.9
75°	5070.4	1838.6	451.8	458.6	490.6	547.8	617.2	621.6	617.2	616.1	617.2
77.5°	1758.2	824.5	398.9	408.9	436.4	494.8	555.5	564.3	557.8	550.0	552.2
80°	687.8	479.4	341.6	356.0	379.2	435.4	493.8	499.3	489.3	488.3	479.4
82.5°	413.3	292.0	265.7	288.7	317.5	378.0	426.5	424.4	416.6	461.9	404.5
85°	179.8	162.1	194.0	217.1	231.5	283.2	360.4	350.5	331.7	292.0	285.5
87.5°	72.8	83.8	106.9	128.9	138.9	183.0	246.9	238.1	241.4	198.3	197.3
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)