

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: P196829

Luminaire Tested: **NAV-AF-05-D-UNV-T4FT-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196829  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)  
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-T4FT-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19312.6 lumens  
Efficiency: N/A  
Efficacy: 119.2 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

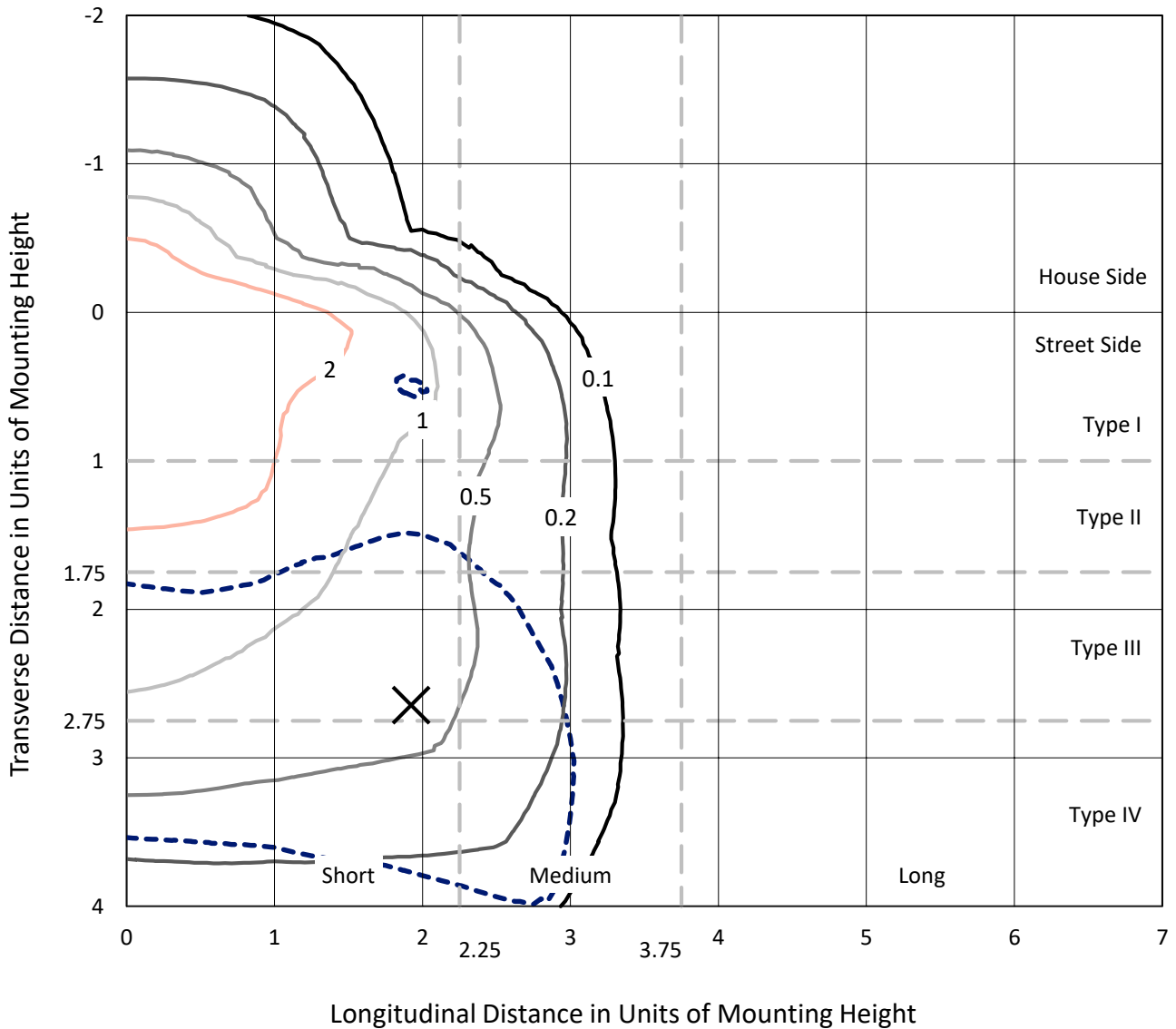
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

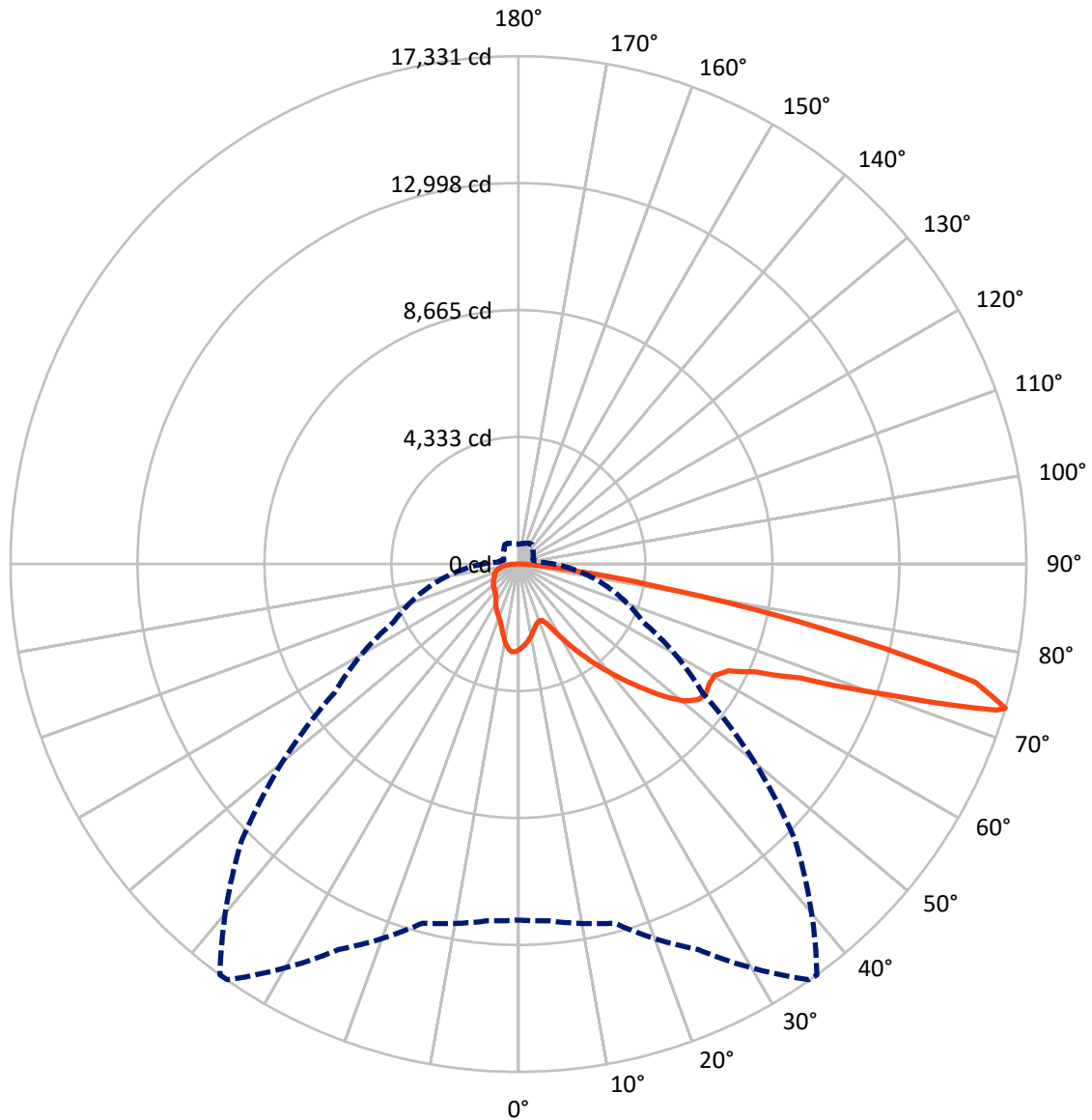
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196829  
CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7030-600

### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 73-Deg Vertical

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CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7030-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3724.0	0.0	3724.0
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	15588.6	0.0	15588.6
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	19312.6	0.0	19312.6
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	265.7	1.4
10°-20°	667.3	3.5
20°-30°	1069.9	5.5
30°-40°	1769.7	9.2
40°-50°	2738.4	14.2
50°-60°	3665.9	19.0
60°-70°	4788.8	24.8
70°-80°	3911.6	20.3
80°-90°	435.4	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°	19312.6	100.0
0°-180°	19312.6	100.0

**Coefficient of Utilization**



REPORT NUMBER: P196829

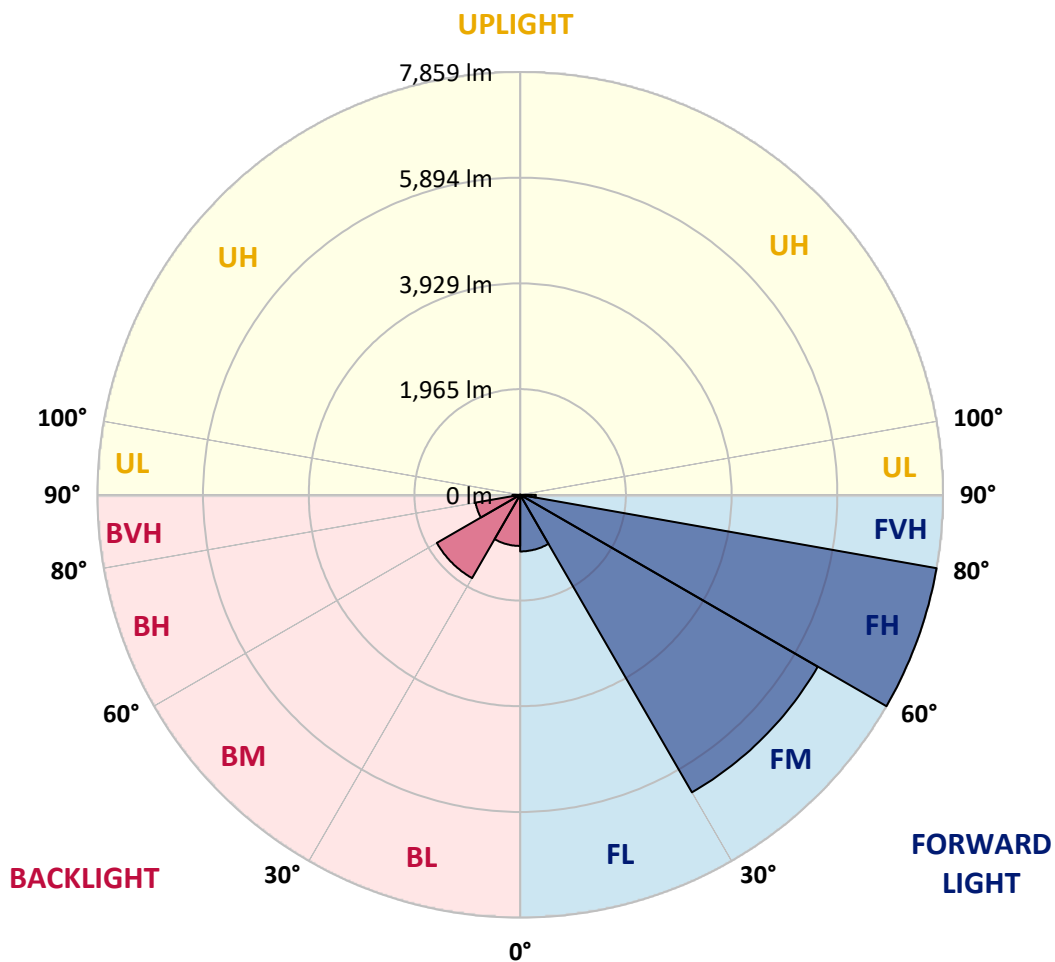
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1052.3	5.4			
FM (30°-60°)	6385.4	33.1			
FH (60°-80°)	7858.8	40.7			G4/12000
FVH (80°-90°)	292.0	1.5			G3/500
BL (0°-30°)	950.6	4.9	B2/1000		
BM (30°-60°)	1788.5	9.3	B2/2500		
BH (60°-80°)	841.5	4.4	B2/1000		G2/1000
BVH (80°-90°)	143.4	0.7			G2/225
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





REPORT NUMBER: P196829

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7030-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3
2.5°	2813.7	2821.0	2822.2	2830.8	2830.8	2829.6	2833.3	2848.0	2855.4	2872.5	2887.2
5°	2675.0	2683.6	2687.2	2702.0	2720.3	2721.6	2735.1	2763.3	2790.4	2828.4	2860.3
7.5°	2519.2	2529.0	2538.7	2569.4	2596.4	2599.0	2624.6	2670.1	2705.7	2752.2	2809.9
10°	2368.2	2370.7	2380.5	2419.8	2455.4	2459.0	2495.8	2547.4	2595.2	2660.3	2725.3
12.5°	2244.3	2251.7	2249.2	2278.6	2309.3	2311.8	2360.9	2425.9	2495.8	2569.4	2646.8
15°	2201.3	2200.2	2174.4	2173.1	2186.6	2189.1	2237.0	2313.0	2391.5	2482.4	2581.7
17.5°	2230.7	2221.0	2153.5	2111.8	2103.1	2105.7	2141.3	2224.6	2308.1	2412.5	2531.4
20°	2392.8	2354.7	2196.4	2095.8	2067.6	2067.6	2088.5	2155.9	2248.0	2369.4	2519.2
22.5°	2776.9	2718.0	2380.5	2201.3	2101.9	2092.1	2076.2	2127.8	2229.6	2375.7	2569.4
25°	3260.3	3232.1	2718.0	2482.4	2277.4	2245.5	2140.0	2158.4	2267.5	2441.8	2706.9
27.5°	3708.2	3659.1	3160.9	2891.0	2601.4	2552.3	2329.0	2254.1	2358.4	2564.6	2905.6
30°	3969.5	3936.4	3616.2	3358.4	3013.7	2951.1	2630.9	2443.0	2520.4	2767.0	3187.8
32.5°	4254.2	4234.6	4072.6	3838.3	3460.3	3387.9	3021.0	2751.0	2768.2	3035.8	3527.8
35°	4530.3	4556.1	4464.0	4292.2	3941.3	3873.8	3545.0	3153.5	3073.8	3337.7	3891.0
37.5°	4861.6	4867.7	4810.0	4698.3	4446.9	4391.6	4120.5	3583.0	3406.2	3659.1	4242.0
40°	5522.9	5426.1	5200.3	5111.9	4962.2	4927.9	4618.6	3976.9	3715.6	3989.2	4573.3
42.5°	6238.3	6087.5	5734.0	5589.2	5529.2	5497.3	5033.3	4239.5	4005.1	4319.2	4898.4
45°	6815.0	6692.3	6346.4	6167.2	6174.6	6123.0	5395.3	4473.8	4319.2	4650.5	5261.6
47.5°	7383.2	7178.4	6790.6	6764.8	6850.7	6774.6	5741.3	4708.2	4646.9	5011.2	5624.8
50°	7420.1	7233.5	7076.4	7282.5	7429.8	7335.3	6055.5	5015.0	4986.8	5448.1	6093.6
52.5°	6972.2	6945.2	7184.5	7531.7	7775.9	7691.2	6312.0	5330.3	5334.0	5994.2	6664.2
55°	6808.9	6774.6	7061.8	7488.7	7818.8	7768.6	6503.4	5686.2	5719.2	6656.8	7276.4
57.5°	7083.9	6997.9	7054.4	7407.8	7718.2	7688.8	6702.2	6081.3	6141.5	7420.1	7842.1
60°	7936.6	7761.1	7461.8	7528.0	7721.9	7704.8	6986.9	6521.8	6622.4	8215.2	8200.5
62.5°	9214.0	9015.2	8405.4	8110.9	8067.9	8034.8	7456.8	7062.9	7113.3	8789.5	7991.9
65°	10615.3	10401.8	9676.5	9194.3	8941.6	8870.4	8215.2	7715.8	7400.3	8788.2	7179.5
67.5°	12188.4	11962.6	11239.8	10779.7	10506.1	10384.5	9445.9	8243.4	7307.2	8044.5	5745.1
70°	13799.6	13584.7	13253.4	13414.2	13534.5	13349.2	11384.6	8418.9	6637.2	6307.1	3857.8
72.5°	12944.3	12927.0	13178.7	14702.6	17020.5	17057.3	13321.0	7923.2	5127.9	3748.6	2056.6
73°	12150.2	12222.8	12689.1	14512.5	17318.6	17330.9	13359.0	7666.6	4708.2	3229.6	1806.3
75°	6294.9	6785.6	8515.7	11767.4	16036.4	16094.1	11776.1	5804.0	2806.4	1793.9	1217.2
77.5°	1686.0	1663.9	2743.7	5732.9	10691.3	10615.3	7440.9	2809.9	1344.9	1125.3	854.1
80°	578.0	585.3	933.8	2097.0	4990.4	5168.4	3229.6	1225.8	884.7	784.1	605.0
82.5°	294.5	304.3	488.4	892.1	2087.2	2043.0	1039.3	721.5	592.6	476.2	338.7
85°	157.2	161.9	268.8	462.6	765.7	774.3	365.7	385.2	376.7	270.0	166.8
87.5°	77.3	79.8	128.8	203.7	283.4	273.5	127.7	166.8	185.3	152.2	92.0
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: P196829

CATALOG NUMBER: NAV-AF-05-D-UNV-T4FT-7030-600

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3	2925.3
2.5°	2905.6	2905.6	2921.6	2948.6	2968.2	2986.7	2998.9	3018.7	3029.6	3028.3	3027.1
5°	2886.1	2898.3	2930.3	2963.3	2985.4	3000.2	3000.2	3008.8	3008.8	3005.0	3000.2
7.5°	2840.6	2861.5	2908.2	2937.6	2943.7	2927.7	2895.8	2871.4	2840.6	2824.7	2818.6
10°	2768.2	2795.3	2854.2	2867.6	2835.8	2779.3	2702.0	2635.8	2576.8	2549.8	2541.3
12.5°	2697.1	2732.7	2787.9	2767.0	2690.9	2580.4	2461.5	2370.7	2304.4	2278.6	2270.1
15°	2638.2	2681.1	2724.1	2659.1	2526.5	2373.1	2241.8	2157.3	2106.8	2087.2	2082.4
17.5°	2599.0	2649.2	2664.0	2542.5	2358.4	2186.6	2070.0	2014.8	1992.8	1984.1	1981.8
20°	2601.4	2657.8	2622.2	2429.6	2196.4	2023.4	1946.1	1930.2	1930.2	1930.2	1929.0
22.5°	2668.8	2718.0	2605.1	2324.1	2040.6	1886.1	1852.8	1866.3	1876.2	1876.2	1875.0
25°	2808.7	2835.8	2617.3	2222.3	1894.5	1766.9	1768.2	1793.9	1802.6	1802.6	1800.0
27.5°	3022.2	3000.2	2639.3	2109.4	1751.0	1659.0	1676.1	1699.5	1705.6	1701.9	1700.7
30°	3289.8	3201.4	2657.8	1976.8	1616.1	1558.4	1573.2	1586.6	1581.6	1573.2	1571.9
32.5°	3589.1	3406.2	2646.8	1828.4	1497.0	1454.0	1462.7	1470.0	1462.7	1441.7	1441.7
35°	3886.2	3591.6	2586.6	1666.3	1402.6	1353.4	1352.2	1375.6	1374.3	1349.8	1351.0
37.5°	4146.3	3737.6	2470.1	1517.8	1321.5	1279.9	1284.8	1299.4	1306.8	1273.6	1270.0
40°	4373.2	3838.3	2305.6	1391.5	1256.5	1259.0	1245.4	1222.2	1213.6	1198.8	1196.4
42.5°	4586.7	3908.2	2131.4	1286.0	1223.3	1251.6	1206.2	1150.9	1127.7	1141.2	1149.7
45°	4796.6	3986.8	1963.3	1198.8	1181.6	1229.5	1166.9	1105.6	1078.6	1084.7	1093.3
47.5°	5053.0	4095.9	1760.8	1105.6	1117.8	1189.1	1142.5	1076.1	1035.7	1011.0	1003.8
50°	5390.5	4254.2	1498.3	1004.9	1050.3	1144.8	1121.5	1033.1	989.1	939.9	927.6
52.5°	5812.6	4403.9	1233.2	924.0	995.2	1106.8	1087.1	996.3	942.4	883.5	873.6
55°	6233.5	4424.8	1004.9	854.1	932.5	1055.2	1045.5	967.0	890.8	842.9	833.2
57.5°	6527.9	4227.2	851.5	795.1	872.4	991.4	1007.4	931.3	847.9	811.0	804.9
60°	6532.8	3754.8	758.4	755.8	827.0	936.3	968.1	889.6	820.9	796.4	791.5
62.5°	6013.8	3025.9	698.1	726.5	793.9	890.8	938.6	866.3	814.7	804.9	800.0
65°	5040.7	2235.7	650.3	699.5	763.1	852.8	914.2	858.9	812.4	808.6	804.9
67.5°	3721.7	1532.6	609.8	665.1	728.9	813.6	890.8	847.9	797.6	812.4	807.4
70°	2341.2	1023.3	571.9	625.8	683.5	768.1	860.2	828.3	779.1	770.6	754.7
72.5°	1321.5	739.9	526.4	575.5	624.5	708.0	818.5	795.1	737.5	703.1	687.1
73°	1193.8	700.7	515.3	563.2	611.1	695.8	808.6	785.3	725.2	687.1	672.4
75°	873.6	573.1	465.0	512.9	554.6	639.2	762.0	736.2	671.2	625.8	616.0
77.5°	633.1	441.7	400.0	442.9	479.7	560.7	692.0	662.6	598.8	574.2	564.5
80°	456.4	335.0	331.3	373.0	405.0	487.2	617.2	586.5	525.2	597.5	581.6
82.5°	272.4	214.7	243.0	289.5	322.8	408.6	536.3	500.6	441.7	446.7	380.4
85°	130.0	121.5	150.9	190.2	213.5	279.8	446.7	418.5	353.4	289.5	283.4
87.5°	57.7	55.1	72.4	84.6	114.0	168.2	305.5	271.2	256.4	153.4	120.3
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)