

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: P196745

Luminaire Tested: **NAV-AF-05-D-UNV-T2-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196745  
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-T2-7030  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 28466.4 lumens  
Efficiency: N/A  
Efficacy: 102.0 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 - G4

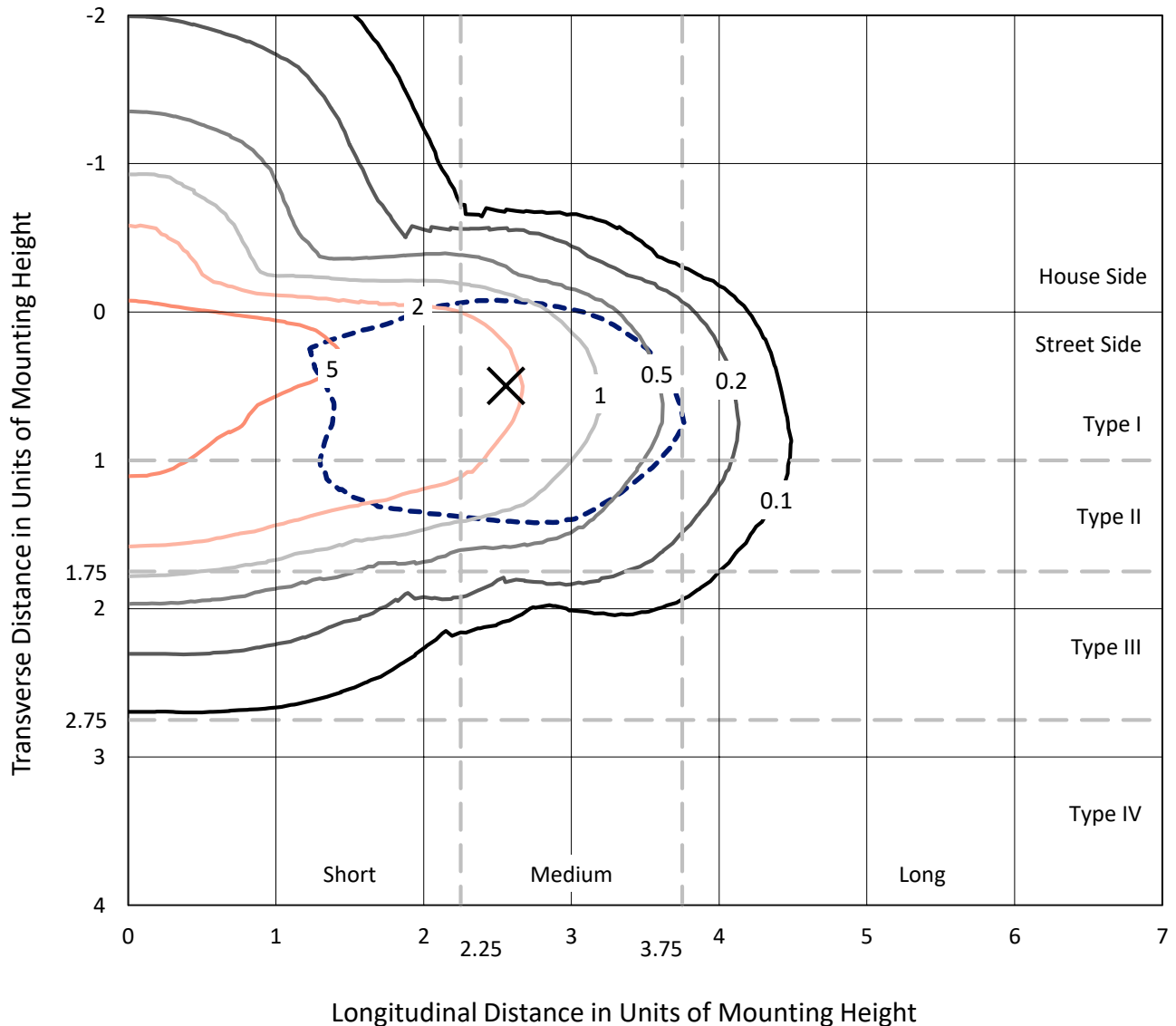
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

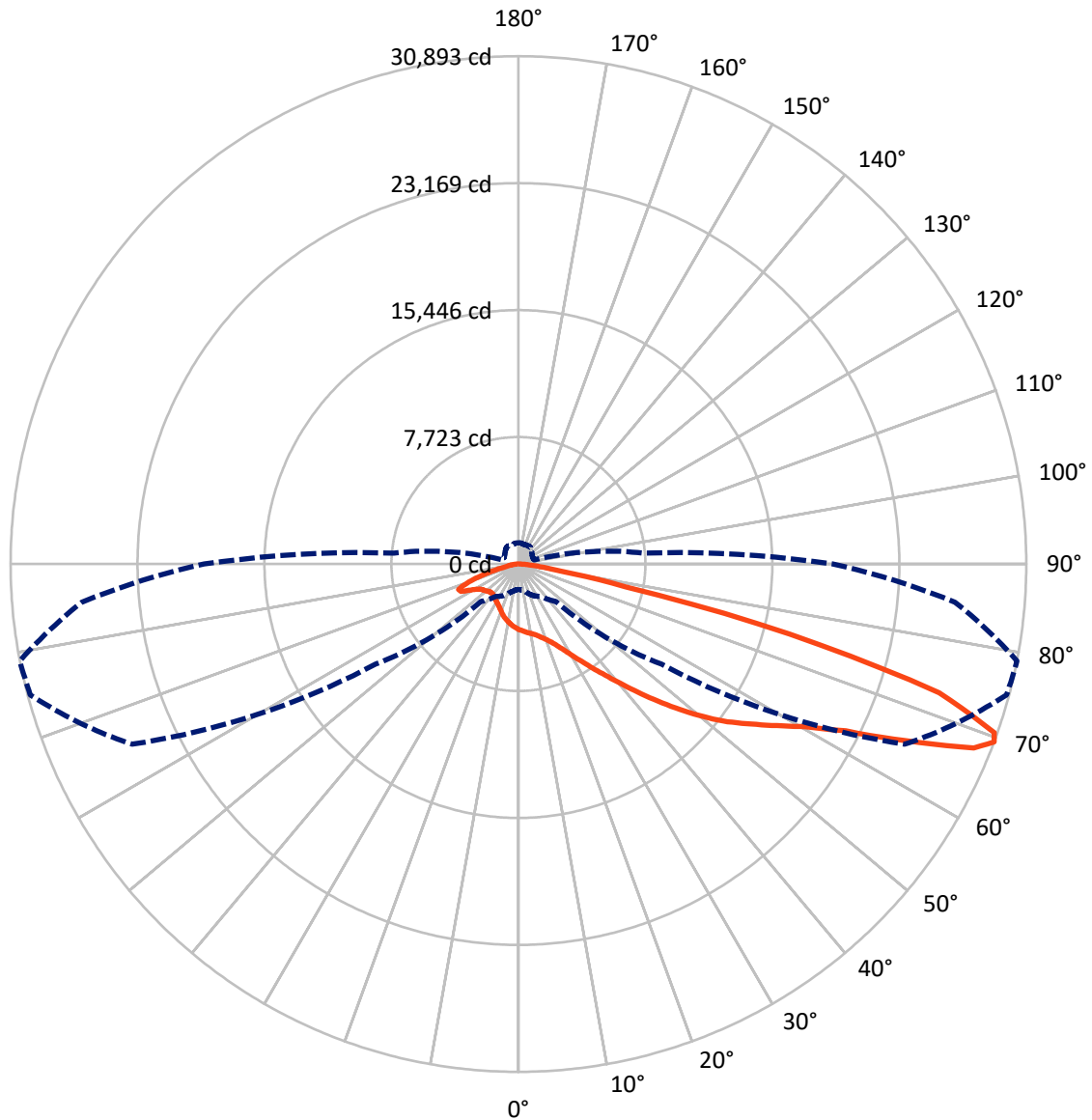
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.7 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	5355.0	0.0	5355.0
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	23111.4	0.0	23111.4
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	28466.4	0.0	28466.4
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	370.3	1.3
10°-20°	1061.7	3.7
20°-30°	1754.4	6.2
30°-40°	2840.9	10.0
40°-50°	4538.3	15.9
50°-60°	6499.3	22.8
60°-70°	7241.2	25.4
70°-80°	3622.7	12.7
80°-90°	537.6	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°	28466.4	100.0
0°-180°	28466.4	100.0



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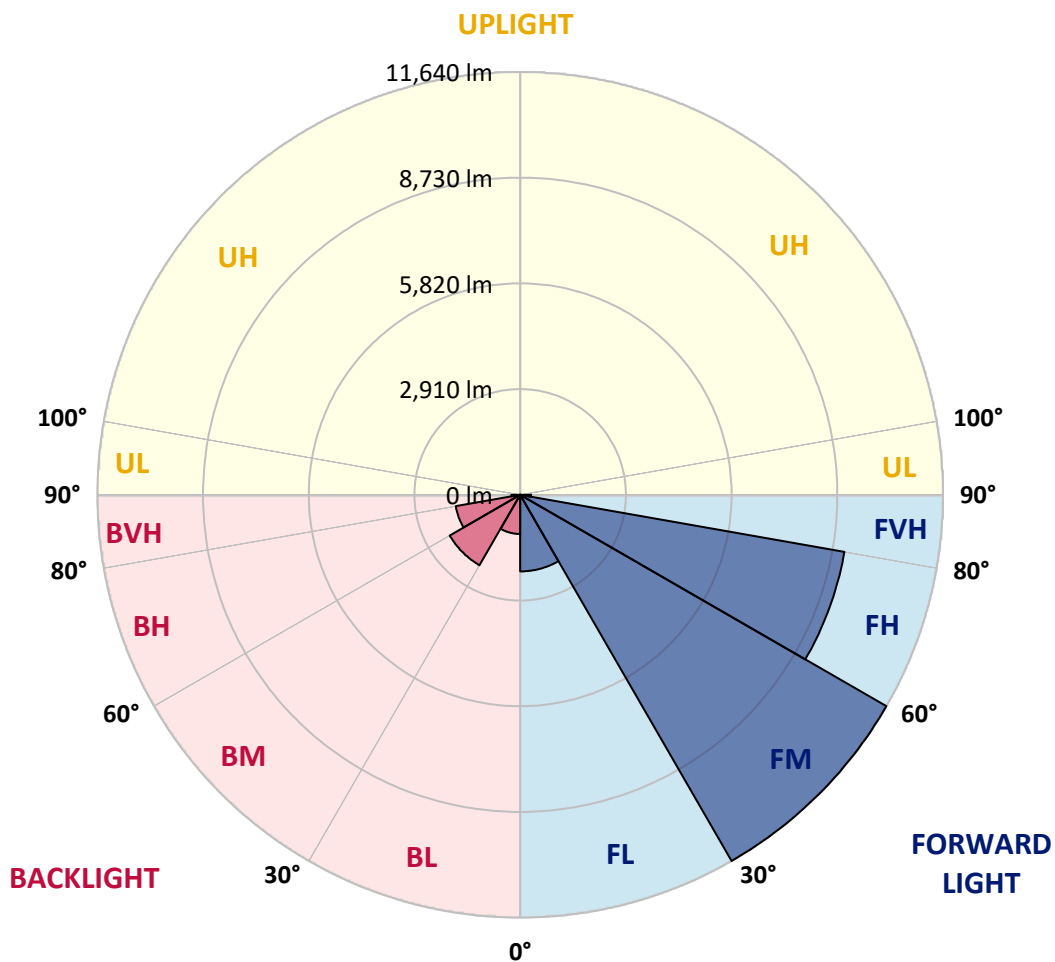
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2107.7	7.4			
FM (30°-60°)	11640.0	40.9			
FH (60°-80°)	9063.3	31.8			G4/12000
FVH (80°-90°)	300.4	1.1			G3/500
BL (0°-30°)	1078.8	3.8	B3/2500		
BM (30°-60°)	2238.5	7.9	B2/2500		
BH (60°-80°)	1800.5	6.3	B3/2500		G3/2500
BVH (80°-90°)	237.2	0.8			G3/500
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7
2.5°	4385.7	4376.5	4374.6	4346.8	4331.8	4300.1	4225.7	4149.3	4078.5	4041.3	4002.1
5°	4752.7	4734.1	4724.8	4678.3	4637.3	4566.5	4449.1	4328.1	4201.4	4136.2	4058.1
7.5°	4974.3	4976.2	4976.2	4938.9	4898.0	4812.4	4663.3	4497.5	4309.5	4223.9	4100.9
10°	4992.9	4994.8	5022.7	5032.1	5041.3	4996.7	4858.9	4650.3	4408.2	4296.4	4136.2
12.5°	4808.6	4821.6	4868.1	4935.2	5030.2	5078.6	5019.1	4814.2	4534.8	4398.9	4203.3
15°	4560.9	4573.9	4633.5	4736.0	4888.7	5050.7	5134.5	5002.2	4700.6	4540.4	4302.0
17.5°	4439.9	4454.7	4495.7	4577.6	4726.7	4944.5	5196.0	5203.4	4896.1	4711.7	4419.3
20°	4382.1	4393.4	4445.4	4512.5	4626.0	4834.6	5201.5	5415.7	5128.9	4914.7	4562.7
22.5°	4514.4	4518.1	4544.1	4581.3	4657.7	4817.9	5197.8	5635.5	5419.5	5169.9	4747.1
25°	4901.7	4877.5	4858.9	4812.4	4830.9	4944.5	5257.4	5870.2	5792.0	5505.1	4992.9
27.5°	5359.8	5356.1	5307.7	5199.6	5130.9	5203.4	5426.9	6132.7	6248.2	5931.5	5315.1
30°	5870.2	5872.0	5821.7	5689.4	5549.9	5557.3	5696.9	6436.3	6793.8	6445.6	5711.8
32.5°	6404.7	6438.1	6345.0	6212.8	6043.3	5989.3	6084.3	6803.1	7425.2	7052.6	6171.8
35°	7043.4	7049.0	6946.6	6752.9	6583.4	6497.7	6585.3	7261.3	8153.4	7766.0	6732.3
37.5°	7706.4	7710.1	7604.0	7356.3	7142.1	7086.2	7183.0	7818.1	8924.4	8578.0	7391.6
40°	8248.3	8287.5	8203.6	7970.9	7754.7	7721.3	7860.9	8484.8	9909.6	9539.0	8175.8
42.5°	8862.9	8907.6	8807.1	8565.0	8393.7	8382.5	8600.4	9244.7	10889.1	10650.8	9064.0
45°	9555.7	9619.0	9479.4	9207.5	9062.2	9308.1	9321.0	10086.5	12017.8	11894.8	10064.1
47.5°	10311.8	10364.0	10250.3	9958.0	9799.7	10155.4	10026.8	10997.2	13237.6	13228.2	11146.2
50°	10894.8	10952.4	10963.6	10835.1	10669.3	10714.1	10801.6	11954.4	14453.7	14598.9	12265.5
52.5°	10788.6	10844.4	11095.9	11433.0	11699.3	11583.7	11689.9	12971.3	15628.8	15936.1	13328.9
55°	9931.8	9961.7	10432.8	11233.7	12367.8	12919.2	12926.6	14077.5	16746.2	17176.4	14338.2
57.5°	8388.1	8391.7	9004.5	10185.1	11978.6	13785.1	14878.3	15466.8	17912.1	18547.1	15589.7
60°	5935.3	5950.2	6663.5	8207.3	10583.7	13680.8	16977.1	17953.1	19262.3	20087.4	17202.6
62.5°	3523.6	3557.1	4095.2	5333.8	7860.9	12340.0	18217.5	22376.1	21251.3	22346.4	19783.7
65°	2292.6	2320.4	2642.7	3264.6	4644.7	8978.4	17809.6	26659.5	25015.0	25899.7	23493.5
67.5°	1765.5	1787.8	2041.2	2417.4	2849.4	4853.3	14239.5	27557.2	29596.4	29872.0	26624.1
69°	1551.4	1569.9	1756.3	2117.5	2398.7	3212.5	10611.7	25927.7	30741.7	30892.6	26663.2
70°	1437.8	1452.6	1627.8	1940.6	2203.1	2564.5	8121.7	24035.5	30322.7	30708.3	25894.1
72.5°	1184.5	1197.5	1322.2	1562.5	1800.9	1827.0	3598.0	17550.8	25532.8	26765.7	21912.4
75°	988.9	996.3	1078.3	1253.3	1458.2	1454.5	1838.2	9941.2	15580.4	17049.8	13530.0
77.5°	825.0	830.6	884.6	992.6	1150.9	1145.4	1294.2	4290.8	6879.5	6637.4	4657.7
80°	728.2	731.9	759.8	787.8	888.4	882.7	959.1	1970.4	2799.1	2586.8	1761.8
82.5°	553.1	560.6	702.1	715.1	689.1	664.9	668.5	1147.2	1434.0	1305.5	946.0
85°	312.9	314.7	450.7	527.0	599.8	450.7	434.0	592.1	707.7	620.1	413.4
87.5°	139.7	145.4	216.0	249.5	324.1	264.4	247.7	251.4	305.4	253.3	163.9
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°	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7	3994.7
2.5°	3964.9	3933.4	3858.8	3782.4	3706.1	3657.7	3607.4	3560.8	3542.1	3540.3	3504.9
5°	3981.7	3907.2	3737.8	3551.5	3374.6	3236.8	3121.3	3046.8	2974.1	2961.2	2929.5
7.5°	3987.3	3866.2	3590.6	3292.6	3022.5	2832.6	2717.2	2666.9	2631.5	2622.2	2611.0
10°	3985.4	3814.1	3426.7	3018.9	2711.6	2568.1	2525.3	2536.6	2551.4	2558.9	2558.9
12.5°	4015.2	3789.8	3262.8	2761.8	2510.4	2441.5	2475.0	2532.7	2577.5	2596.1	2599.9
15°	4069.3	3775.0	3082.2	2538.4	2369.0	2385.6	2467.6	2551.4	2614.7	2642.7	2650.1
17.5°	4136.2	3754.4	2873.6	2354.0	2287.1	2344.7	2450.9	2557.0	2633.3	2668.7	2674.3
20°	4210.8	3724.6	2657.6	2216.3	2214.3	2287.1	2393.1	2512.3	2594.3	2633.3	2631.5
22.5°	4311.4	3696.8	2456.4	2115.6	2134.3	2201.2	2288.9	2396.8	2473.2	2508.6	2501.2
25°	4445.4	3670.7	2275.8	2026.2	2043.0	2087.7	2149.1	2231.1	2285.0	2303.7	2290.7
27.5°	4626.0	3650.3	2134.3	1944.3	1942.4	1963.0	2000.2	2044.9	2070.9	2065.3	2044.9
30°	4847.8	3629.7	2029.9	1871.6	1845.6	1843.7	1860.4	1886.6	1903.3	1869.8	1853.0
32.5°	5095.5	3594.3	1936.8	1808.4	1761.8	1745.0	1752.5	1787.8	1856.8	1823.2	1810.2
35°	5387.8	3553.3	1843.7	1739.4	1704.0	1672.4	1678.0	1754.3	1963.0	1938.7	1925.7
37.5°	5739.7	3516.1	1758.1	1664.9	1663.0	1623.9	1620.2	1711.5	1990.8	1938.7	1927.6
40°	6162.6	3508.7	1681.7	1582.9	1612.7	1597.9	1584.8	1640.7	1836.3	1730.1	1709.7
42.5°	6672.8	3542.1	1625.8	1504.8	1555.1	1590.5	1566.2	1579.3	1659.3	1564.4	1547.6
45°	7268.7	3633.4	1584.8	1435.8	1493.6	1584.8	1557.0	1545.8	1558.8	1506.6	1495.4
47.5°	7963.4	3795.4	1557.0	1378.1	1435.8	1569.9	1553.2	1530.8	1525.3	1495.4	1488.0
50°	8706.5	4013.3	1538.3	1326.0	1383.8	1543.9	1551.4	1519.7	1510.4	1497.3	1493.6
52.5°	9444.0	4249.8	1516.0	1281.3	1340.9	1512.2	1553.2	1508.6	1495.4	1488.0	1484.3
55°	10177.7	4495.7	1475.0	1242.2	1309.3	1475.0	1551.4	1493.6	1478.8	1478.8	1478.8
57.5°	11129.3	4870.0	1421.0	1210.5	1268.3	1426.6	1527.1	1476.8	1456.3	1458.2	1460.0
60°	12503.8	5497.6	1361.4	1175.2	1214.2	1370.6	1489.9	1447.0	1422.9	1430.3	1432.2
62.5°	14800.0	6594.6	1279.4	1124.9	1158.3	1311.1	1441.4	1406.0	1383.8	1396.8	1398.6
65°	17861.8	7922.4	1171.4	1061.6	1100.7	1244.0	1380.1	1357.6	1333.4	1365.0	1363.2
67.5°	19729.7	8311.7	1057.8	994.5	1044.7	1173.2	1303.7	1294.2	1277.6	1333.4	1329.6
69°	19117.0	7607.7	992.6	951.6	1005.6	1124.9	1255.2	1251.4	1238.5	1292.4	1288.7
70°	18165.3	6950.3	951.6	923.7	985.2	1095.1	1223.6	1223.6	1210.5	1257.1	1247.7
72.5°	14591.5	5155.0	856.7	853.0	914.4	1013.2	1137.9	1147.2	1139.8	1156.5	1147.2
75°	8566.8	3106.3	763.6	774.7	828.7	925.5	1042.9	1050.4	1042.9	1041.0	1042.9
77.5°	2970.4	1393.0	674.1	690.9	737.5	836.2	938.6	953.5	942.4	929.4	933.1
80°	1162.1	810.1	577.3	601.6	640.7	735.7	834.3	843.6	826.9	825.0	810.1
82.5°	698.3	493.6	448.8	488.0	536.4	638.8	720.7	717.0	703.9	780.3	683.5
85°	303.5	273.8	327.8	366.9	391.0	478.7	609.0	592.1	560.6	493.6	482.4
87.5°	122.9	141.5	180.6	217.9	234.7	309.2	417.2	402.3	407.9	335.2	333.3
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)