

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: P270619

Luminaire Tested: **NAV-AF-05-D-UNV-T2-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270619  
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-T2-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 20660.2 lumens  
Efficiency: N/A  
Efficacy: 98.4 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): 210  
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

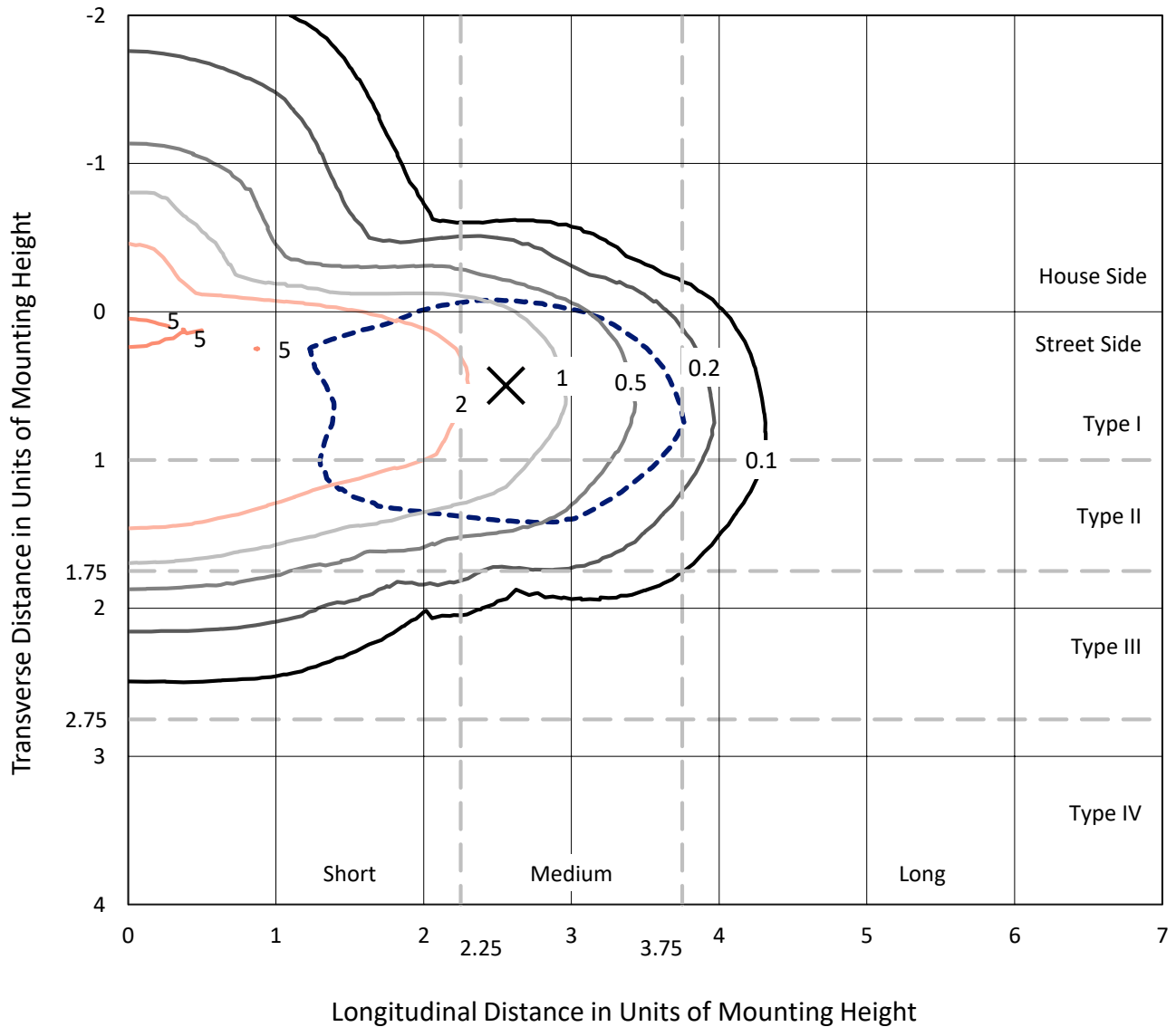


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### Iso-Footcandle Lines of Horizontal Illumination

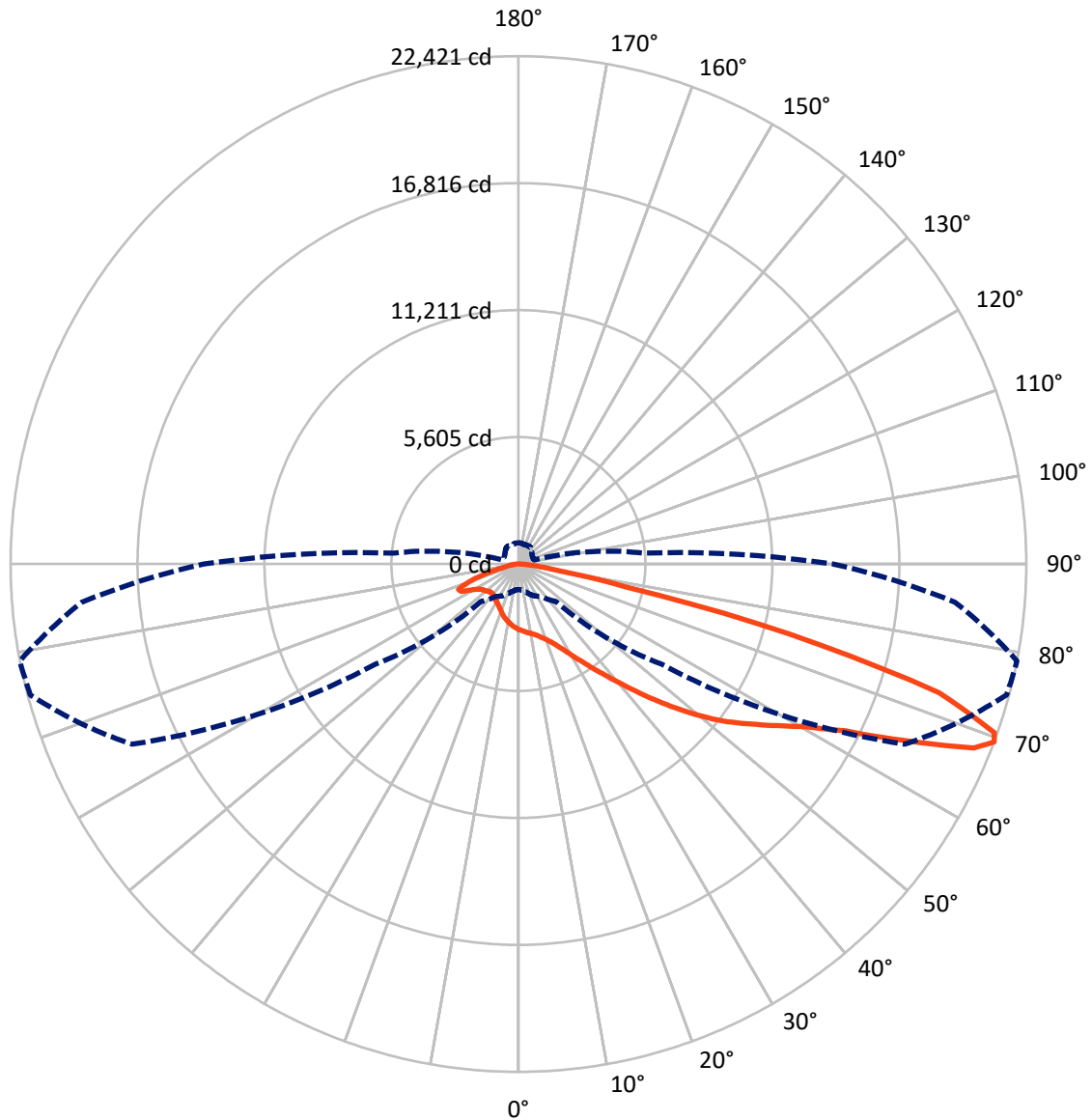
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.6 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	3886.6	0.0	3886.6
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	16773.6	0.0	16773.6
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	20660.2	0.0	20660.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	268.8	1.3
10°-20°	770.6	3.7
20°-30°	1273.3	6.2
30°-40°	2061.8	10.0
40°-50°	3293.8	15.9
50°-60°	4717.0	22.8
60°-70°	5255.5	25.4
70°-80°	2629.2	12.7
80°-90°	390.2	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°	20660.2	100.0
0°-180°	20660.2	100.0

**Coefficient of Utilization**



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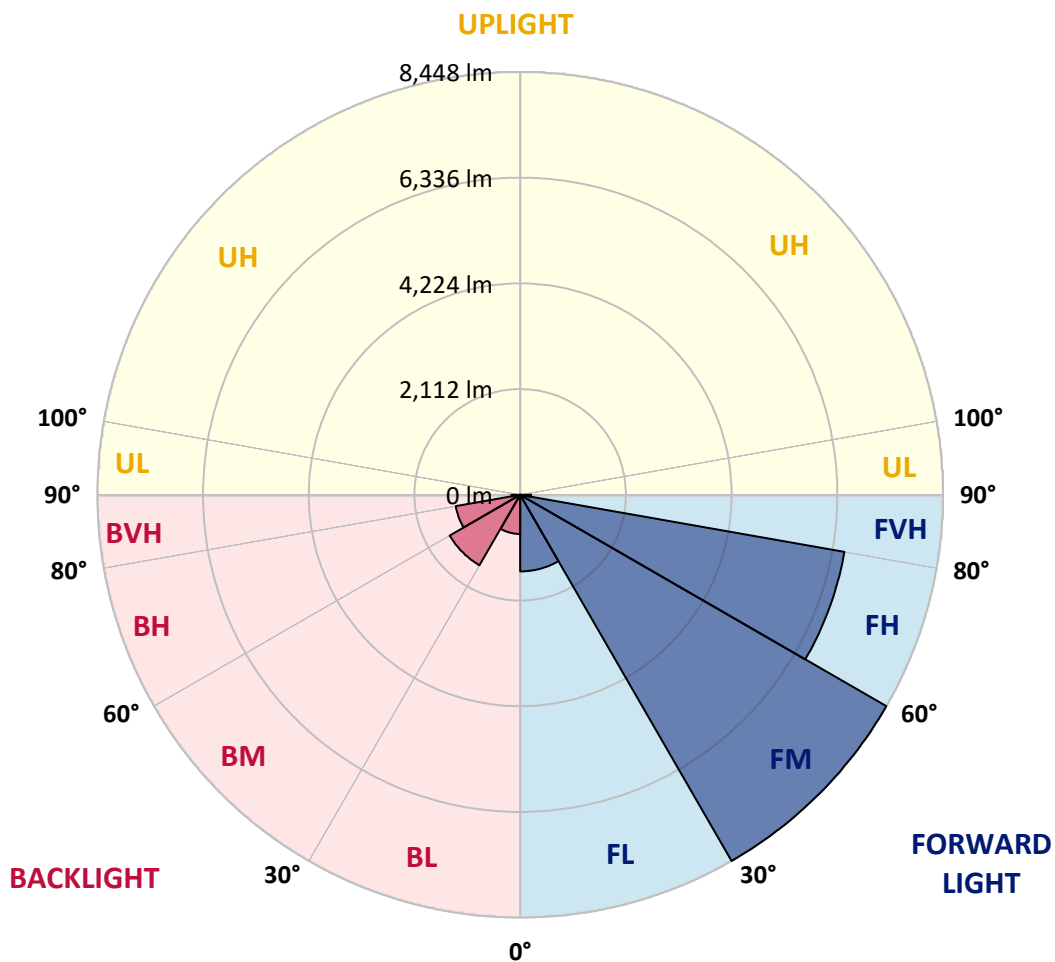
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1529.7	7.4			
FM	(30°-60°)	8448.0	40.9			
FH	(60°-80°)	6577.9	31.8			G3/7500
FVH	(80°-90°)	218.0	1.1			G2/225
BL	(0°-30°)	783.0	3.8	B2/1000		
BM	(30°-60°)	1624.6	7.9	B2/2500		
BH	(60°-80°)	1306.8	6.3	B3/2500		G3/2500
BVH	(80°-90°)	172.2	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°	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3
2.5°	3183.1	3176.3	3175.0	3154.8	3143.9	3120.9	3066.9	3011.5	2960.2	2933.1	2904.7
5°	3449.4	3435.8	3429.1	3395.4	3365.6	3314.2	3229.0	3141.3	3049.2	3002.0	2945.3
7.5°	3610.3	3611.5	3611.5	3584.5	3554.9	3492.6	3384.5	3264.3	3127.7	3065.6	2976.4
10°	3623.8	3625.1	3645.4	3652.1	3658.8	3626.5	3526.4	3375.0	3199.4	3118.2	3002.0
12.5°	3489.9	3499.3	3533.3	3581.8	3650.8	3685.9	3642.6	3494.0	3291.3	3192.5	3050.6
15°	3310.2	3319.6	3362.9	3437.3	3548.0	3665.7	3726.4	3630.5	3411.6	3295.3	3122.2
17.5°	3222.3	3233.1	3262.9	3322.3	3430.4	3588.5	3771.1	3776.5	3553.4	3419.7	3207.5
20°	3180.4	3188.5	3226.4	3275.0	3357.4	3508.9	3775.1	3930.5	3722.4	3567.0	3311.5
22.5°	3276.4	3279.2	3297.9	3325.0	3380.4	3496.7	3772.4	4090.1	3933.3	3752.2	3445.3
25°	3557.6	3540.0	3526.4	3492.6	3506.2	3588.5	3815.7	4260.4	4203.6	3995.4	3623.8
27.5°	3890.0	3887.3	3852.2	3773.8	3723.7	3776.5	3938.7	4450.9	4534.7	4304.9	3857.6
30°	4260.4	4261.6	4225.3	4129.2	4027.9	4033.3	4134.7	4671.2	4930.7	4678.1	4145.5
32.5°	4648.3	4672.7	4605.0	4509.1	4386.1	4346.9	4415.8	4937.5	5389.0	5118.7	4479.4
35°	5112.0	5115.9	5041.6	4901.1	4778.1	4715.9	4779.4	5270.0	5917.5	5636.3	4886.2
37.5°	5593.0	5595.8	5518.7	5338.9	5183.6	5142.9	5213.4	5674.2	6477.0	6225.7	5364.7
40°	5986.5	6014.8	5954.0	5785.1	5628.2	5603.9	5705.2	6158.2	7192.1	6923.1	5933.8
42.5°	6432.5	6464.9	6391.9	6216.2	6091.9	6083.7	6242.0	6709.6	7903.1	7730.0	6578.5
45°	6935.3	6981.3	6879.8	6682.5	6577.1	6755.6	6765.0	7320.5	8722.2	8632.9	7304.3
47.5°	7484.0	7521.9	7439.5	7227.3	7112.3	7370.6	7277.3	7981.5	9607.6	9600.7	8089.5
50°	7907.2	7949.0	7957.1	7863.9	7743.6	7776.0	7839.6	8676.2	10490.0	10595.6	8901.9
52.5°	7830.0	7870.6	8053.0	8297.7	8491.0	8407.2	8484.3	9414.1	11343.0	11565.9	9673.7
55°	7208.3	7230.0	7572.0	8153.1	8976.3	9376.4	9381.8	10217.1	12154.0	12466.1	10406.3
57.5°	6087.9	6090.5	6535.2	7392.2	8693.7	10004.9	10798.3	11225.4	13000.1	13461.0	11314.6
60°	4307.7	4318.5	4836.1	5956.8	7681.3	9929.1	12321.6	13029.8	13980.1	14578.9	12485.2
62.5°	2557.4	2581.6	2972.2	3871.1	5705.2	8956.0	13221.9	16240.0	15423.5	16218.4	14358.5
65°	1663.9	1684.1	1918.1	2369.4	3371.0	6516.2	12925.8	19348.9	18155.3	18797.4	17051.0
67.5°	1281.3	1297.6	1481.5	1754.4	2068.0	3522.3	10334.7	20000.3	21480.4	21680.4	19323.1
69°	1125.9	1139.4	1274.5	1536.8	1740.9	2331.6	7701.7	18817.5	22311.7	22421.1	19351.5
70°	1043.6	1054.3	1181.4	1408.5	1599.1	1861.2	5894.5	17444.4	22007.4	22287.3	18793.4
72.5°	859.7	869.1	959.7	1134.0	1307.0	1326.0	2611.4	12737.8	18531.0	19425.8	15903.5
75°	717.7	723.1	782.7	909.7	1058.4	1055.7	1334.1	7215.0	11307.9	12374.3	9819.7
77.5°	598.8	602.9	642.0	720.4	835.3	831.2	939.4	3114.2	4993.0	4817.3	3380.4
80°	528.6	531.2	551.5	571.7	644.8	640.8	696.0	1430.0	2031.5	1877.5	1278.6
82.5°	401.5	406.8	509.6	519.0	500.0	482.5	485.3	832.5	1040.7	947.5	686.7
85°	227.1	228.3	327.2	382.5	435.1	327.2	314.9	429.7	513.7	450.1	300.0
87.5°	101.4	105.5	156.8	181.1	235.1	192.0	179.8	182.4	221.7	183.9	118.9
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°	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3	2899.3
2.5°	2877.6	2854.6	2800.6	2745.2	2689.7	2654.6	2618.1	2584.3	2570.8	2569.5	2543.8
5°	2889.8	2835.8	2712.7	2577.5	2449.1	2349.2	2265.3	2211.3	2158.5	2149.1	2126.2
7.5°	2893.9	2806.0	2606.0	2389.8	2193.8	2055.9	1972.0	1935.6	1909.8	1903.1	1895.1
10°	2892.5	2768.1	2487.0	2191.1	1967.9	1864.0	1832.8	1840.9	1851.8	1857.2	1857.2
12.5°	2914.1	2750.6	2368.1	2004.5	1822.0	1771.9	1796.3	1838.2	1870.7	1884.1	1886.9
15°	2953.4	2739.8	2237.0	1842.3	1719.3	1731.5	1791.0	1851.8	1897.7	1918.1	1923.5
17.5°	3002.0	2724.9	2085.5	1708.4	1659.8	1701.7	1778.7	1855.8	1911.2	1936.9	1941.0
20°	3056.0	2703.3	1928.8	1608.4	1607.1	1659.8	1736.9	1823.4	1882.8	1911.2	1909.8
22.5°	3129.1	2683.0	1782.9	1535.5	1548.9	1597.6	1661.1	1739.6	1795.1	1820.7	1815.2
25°	3226.4	2664.2	1651.8	1470.5	1482.7	1515.3	1559.7	1619.3	1658.5	1671.9	1662.6
27.5°	3357.4	2649.2	1548.9	1411.1	1409.8	1424.6	1451.8	1484.1	1503.0	1499.0	1484.1
30°	3518.3	2634.4	1473.3	1358.3	1339.6	1338.1	1350.3	1369.1	1381.4	1357.1	1344.9
32.5°	3698.1	2608.7	1405.7	1312.5	1278.6	1266.5	1271.9	1297.6	1347.5	1323.3	1313.9
35°	3910.3	2578.9	1338.1	1262.5	1236.7	1213.8	1217.8	1273.3	1424.6	1407.0	1397.7
37.5°	4165.8	2551.9	1276.0	1208.4	1207.1	1178.7	1175.9	1242.1	1445.0	1407.0	1398.9
40°	4472.7	2546.4	1220.5	1148.9	1170.5	1159.7	1150.3	1190.9	1332.7	1255.7	1240.7
42.5°	4842.9	2570.8	1180.0	1092.1	1128.6	1154.3	1136.7	1146.1	1204.3	1135.4	1123.2
45°	5275.4	2637.1	1150.3	1042.2	1084.1	1150.3	1130.0	1121.9	1131.3	1093.4	1085.3
47.5°	5779.6	2754.7	1130.0	1000.3	1042.2	1139.4	1127.3	1111.1	1107.0	1085.3	1079.9
50°	6318.9	2912.8	1116.5	962.4	1004.2	1120.5	1125.9	1102.9	1096.2	1086.7	1084.1
52.5°	6854.2	3084.4	1100.2	929.9	973.1	1097.5	1127.3	1094.9	1085.3	1079.9	1077.2
55°	7386.8	3262.9	1070.5	901.5	950.1	1070.5	1125.9	1084.1	1073.3	1073.3	1073.3
57.5°	8077.4	3534.6	1031.3	878.5	920.5	1035.3	1108.4	1071.9	1056.9	1058.4	1059.7
60°	9074.9	3990.0	988.0	852.9	881.2	994.9	1081.3	1050.2	1032.6	1038.0	1039.3
62.5°	10741.6	4786.2	928.6	816.4	840.8	951.6	1046.2	1020.5	1004.2	1013.7	1015.1
65°	12963.6	5750.0	850.2	770.4	798.9	902.8	1001.6	985.4	967.7	990.7	989.5
67.5°	14319.3	6032.4	767.7	721.8	758.3	851.6	946.2	939.4	927.2	967.7	965.0
69°	13874.6	5521.4	720.4	690.6	730.0	816.4	911.1	908.2	898.8	938.0	935.3
70°	13184.0	5044.3	690.6	670.5	715.1	794.8	888.1	888.1	878.5	912.4	905.6
72.5°	10590.1	3741.4	621.7	619.0	663.7	735.4	825.8	832.5	827.2	839.3	832.5
75°	6217.6	2254.6	554.2	562.2	601.4	671.8	756.9	762.3	756.9	755.6	756.9
77.5°	2155.8	1011.0	489.2	501.4	535.3	606.9	681.3	692.1	683.9	674.4	677.2
80°	843.4	588.0	419.0	436.5	465.0	534.0	605.5	612.3	600.2	598.8	588.0
82.5°	506.9	358.2	325.7	354.1	389.2	463.6	523.2	520.4	511.0	566.3	496.0
85°	220.4	198.6	238.0	266.3	283.9	347.4	442.0	429.7	406.8	358.2	350.1
87.5°	89.2	102.8	131.2	158.1	170.3	224.3	302.8	291.9	296.0	243.4	242.0
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)