

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: P196992

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196992  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-06-D-UNV-AFL-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 33039 lumens  
Efficiency: N/A  
Efficacy: 86.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B3 - U0 - G3

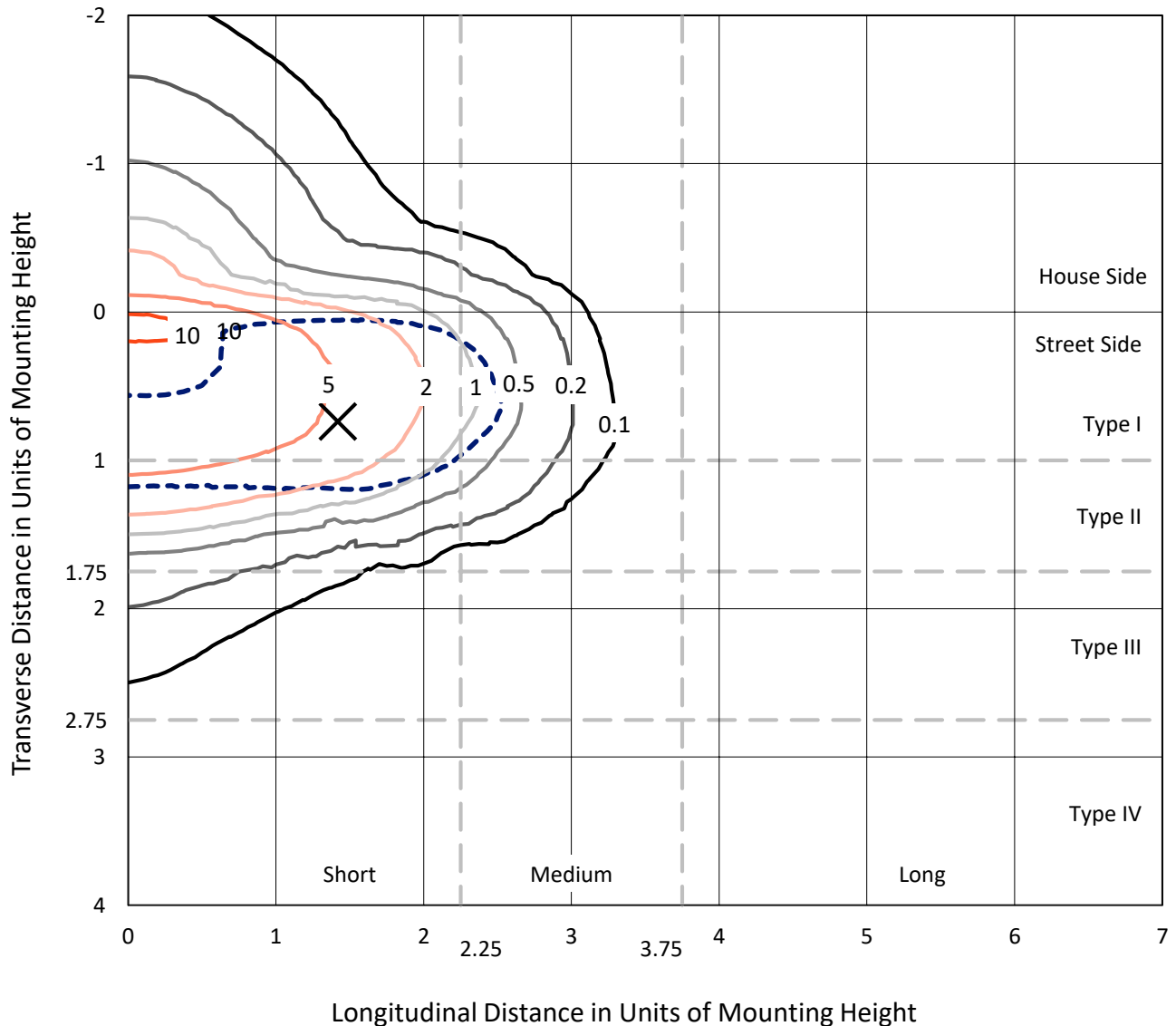
Input Watts (W): 382  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

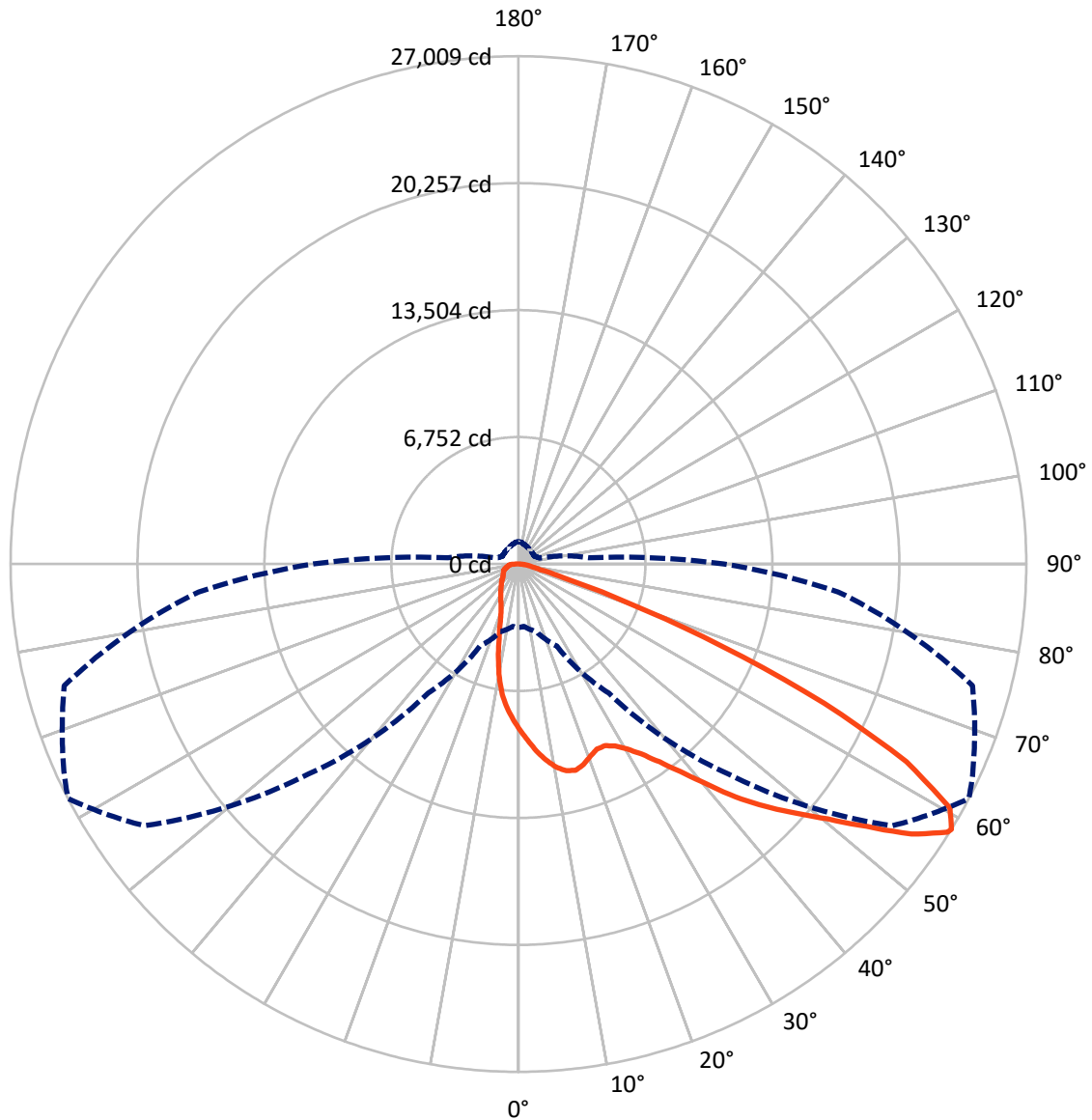
✕ Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 11.5 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5072.7	0.0	5072.7
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	27966.3	0.0	27966.3
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	33039.0	0.0	33039.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	788.5	2.4
10°-20°	1989.9	6.0
20°-30°	3224.9	9.8
30°-40°	5148.8	15.6
40°-50°	7489.1	22.7
50°-60°	7836.6	23.7
60°-70°	4777.5	14.5
70°-80°	1336.0	4.0
80°-90°	447.9	1.4
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°	33039.0	100.0
0°-180°	33039.0	100.0



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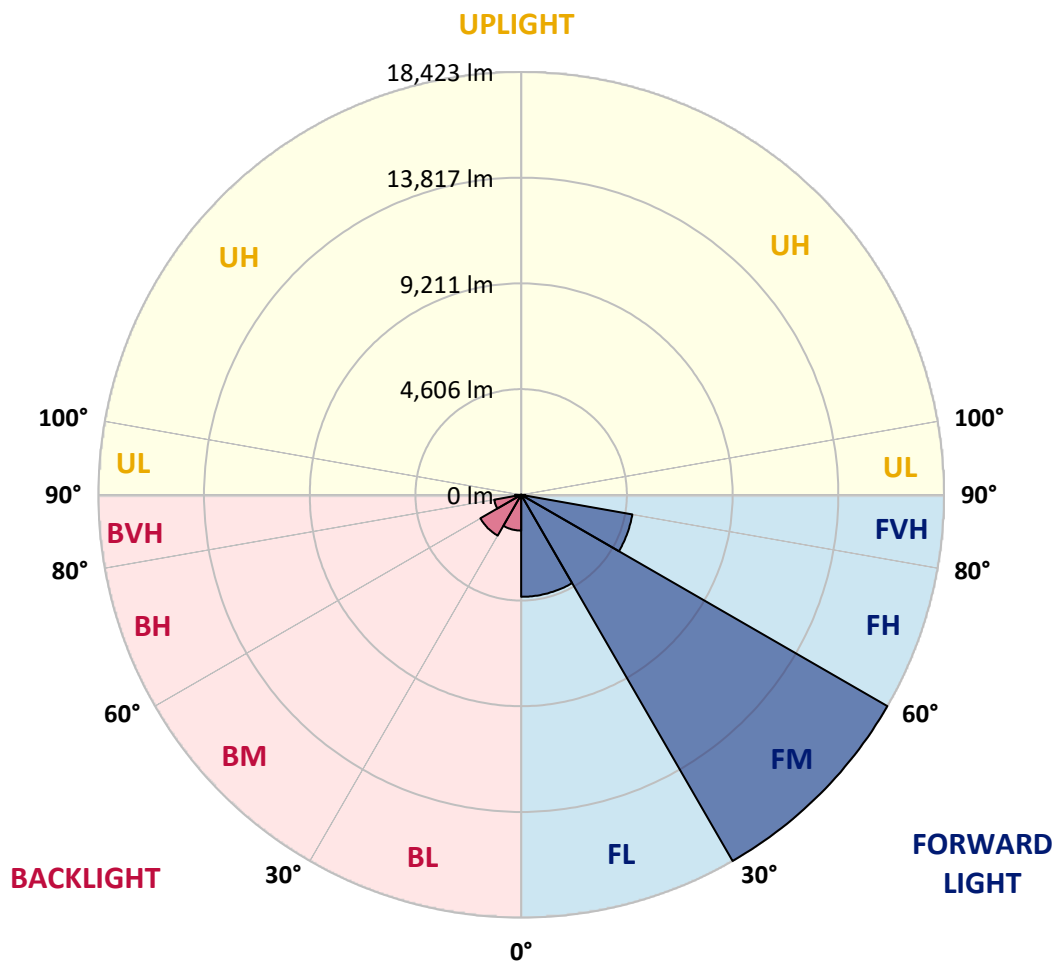
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	4443.9	13.5			
FM	(30°-60°)	18422.9	55.8			
FH	(60°-80°)	4919.3	14.9			G2/5000
FVH	(80°-90°)	180.2	0.5			G2/225
BL	(0°-30°)	1559.4	4.7	B3/2500		
BM	(30°-60°)	2051.5	6.2	B2/2500		
BH	(60°-80°)	1194.2	3.6	B3/2500		G3/2500
BVH	(80°-90°)	267.7	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-G3**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2
2.5°	10012.6	10006.4	9921.8	9866.0	9800.0	9647.2	9494.3	9380.8	9323.0	9102.0	8887.3
5°	10840.7	10815.9	10768.4	10708.5	10621.8	10429.7	10188.2	9979.6	9897.0	9504.7	9110.3
7.5°	10402.9	10442.1	10588.7	10753.9	10927.4	10939.8	10768.4	10520.6	10429.7	9905.3	9327.1
10°	9190.8	9174.3	9358.1	9680.2	10252.2	10817.9	11100.8	10979.0	10884.0	10285.2	9543.9
12.5°	8823.3	8819.1	8850.1	8932.7	9292.0	10068.4	11016.2	11280.5	11247.4	10687.9	9775.2
15°	8934.8	8938.9	8936.8	8947.2	9046.3	9415.9	10543.3	11381.7	11484.9	11086.4	10010.6
17.5°	9292.0	9277.5	9232.1	9182.6	9197.0	9329.2	10033.3	11208.2	11517.9	11441.5	10208.8
20°	9843.3	9843.3	9721.5	9583.1	9492.3	9521.2	9820.6	10910.9	11365.1	11743.0	10357.5
22.5°	10535.1	10545.4	10365.7	10113.8	9907.3	9828.9	9942.4	10689.9	11179.3	12021.8	10489.6
25°	11394.0	11392.0	11129.7	10768.4	10442.1	10254.2	10252.2	10700.2	11121.5	12348.0	10628.0
27.5°	12457.5	12360.4	12054.8	11540.7	11080.2	10793.2	10663.1	10960.4	11243.3	12748.6	10813.8
30°	13657.2	13558.0	13157.5	12496.7	11873.1	11453.9	11239.2	11410.6	11615.0	13258.6	11094.6
32.5°	14844.5	14867.2	14396.4	13651.0	12849.8	12259.2	11941.2	12046.5	12189.0	13882.2	11474.6
35°	16583.1	16581.0	15965.7	15034.4	14082.5	13264.8	12862.2	12917.9	13048.0	14761.9	12007.3
37.5°	17879.9	17859.2	17462.7	16638.9	15567.2	14586.4	14004.1	14012.3	14123.8	15866.6	12709.4
40°	18012.0	18007.9	18005.8	17888.1	17155.1	16230.0	15501.1	15350.4	15395.8	17039.4	13454.8
42.5°	17002.3	17153.0	17586.6	18251.5	18456.0	17970.7	17281.0	16944.5	16845.3	18385.8	14243.6
45°	15563.1	15639.5	16399.3	17894.3	19110.5	19606.1	19087.8	18377.5	18208.2	19694.9	14885.8
47.5°	14894.0	14861.0	15300.8	16930.0	19046.5	20907.0	20944.1	19779.6	19492.5	20824.4	15433.0
50°	13458.9	13415.6	13971.0	15511.4	18348.6	21553.3	22850.0	21307.6	20776.9	21898.1	15928.5
52.5°	10599.1	10557.8	11303.2	13287.5	16787.5	21311.7	24456.5	23182.5	22278.1	22932.6	16391.1
55°	6896.7	6900.9	7611.2	9657.5	13584.9	19903.4	25210.2	25348.5	24334.7	23967.1	16764.8
57.5°	3797.3	3762.2	4268.1	5525.6	9345.7	16704.9	24582.5	26909.6	26381.0	24855.0	17035.3
58°	3376.1	3334.8	3725.1	4809.1	8379.3	15802.6	24266.5	27008.7	26643.2	25001.6	17074.5
60°	2405.6	2335.4	2275.5	2711.2	4827.7	11394.0	22160.4	26366.5	26719.6	25294.9	17037.4
62.5°	2027.7	1947.2	1732.4	1715.9	2273.4	5573.1	17524.7	23155.6	24144.7	24619.6	16438.6
65°	1883.2	1802.6	1519.8	1418.6	1542.5	2405.6	10836.5	17879.9	19201.4	22271.9	14931.2
67.5°	1779.9	1684.9	1381.4	1249.3	1274.0	1439.2	4598.5	11693.5	13225.6	17367.8	11978.4
70°	1687.0	1581.7	1272.0	1119.2	1098.5	1094.4	1796.5	6105.9	7582.3	11365.1	8024.1
72.5°	1581.7	1478.5	1174.9	1011.8	966.4	887.9	1079.9	2523.3	3458.7	5571.1	3677.6
75°	1428.9	1344.2	1067.5	923.0	844.5	720.6	797.0	1210.0	1490.8	2133.0	1707.7
77.5°	1257.5	1189.4	958.1	848.7	743.4	588.5	609.1	819.8	920.9	1201.8	989.1
80°	890.0	914.7	836.3	747.5	654.6	474.9	468.7	600.9	660.8	807.4	664.9
82.5°	613.3	631.9	681.4	590.6	528.6	369.6	344.8	417.1	448.1	487.3	322.1
85°	437.8	425.4	472.9	423.3	388.2	235.4	220.9	264.3	282.9	297.3	154.9
87.5°	266.4	264.3	272.6	218.9	202.4	119.8	109.4	126.0	134.2	130.1	74.3
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°	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2	8821.2
2.5°	8806.7	8705.6	8484.6	8307.0	8115.0	7968.4	7821.8	7739.2	7648.3	7596.7	7590.5
5°	8903.8	8697.3	8226.5	7788.8	7338.6	6933.9	6537.4	6244.2	6004.7	5868.4	5860.1
7.5°	9011.2	8687.0	7960.1	7202.3	6401.1	5604.1	4900.0	4402.3	4082.3	3933.6	3923.3
10°	9093.8	8643.6	7636.0	6456.9	5187.0	4133.9	3493.8	3200.6	3103.5	3078.7	3074.6
12.5°	9192.9	8612.6	7227.1	5500.9	3964.6	3146.9	2952.8	2934.2	2954.9	2967.2	2969.3
15°	9285.8	8552.8	6675.8	4441.6	3103.5	2812.4	2816.5	2855.7	2897.0	2915.6	2917.7
17.5°	9329.2	8406.2	5951.0	3500.0	2715.3	2661.6	2709.1	2760.8	2797.9	2812.4	2812.4
20°	9329.2	8170.8	5110.6	2835.1	2513.0	2523.3	2581.1	2620.3	2628.6	2616.2	2610.0
22.5°	9289.9	7879.6	4292.9	2473.7	2347.8	2387.0	2432.4	2405.6	2308.5	2234.2	2219.8
25°	9254.8	7534.8	3506.2	2252.8	2203.2	2254.9	2236.3	2052.5	1903.8	1827.4	1815.0
27.5°	9197.0	7117.7	2849.5	2071.1	2062.8	2104.1	1920.3	1742.8	1668.4	1627.1	1618.9
30°	9182.6	6665.5	2384.9	1910.0	1924.5	1866.7	1656.0	1598.2	1581.7	1559.0	1548.7
32.5°	9230.0	6213.2	2093.8	1777.9	1792.3	1602.4	1521.8	1530.1	1528.0	1499.1	1488.8
35°	9360.1	5773.4	1908.0	1658.1	1616.8	1435.1	1445.4	1470.2	1470.2	1435.1	1422.7
37.5°	9587.3	5364.6	1790.3	1556.9	1414.4	1348.4	1375.2	1408.3	1408.3	1383.5	1373.1
40°	9828.9	4966.1	1701.5	1476.4	1286.4	1288.5	1315.3	1340.1	1350.4	1354.6	1346.3
42.5°	10047.7	4553.1	1606.5	1389.7	1228.6	1243.1	1255.5	1274.0	1317.4	1346.3	1342.2
45°	10175.8	4138.0	1503.2	1282.3	1189.4	1195.6	1191.4	1224.5	1276.1	1319.5	1319.5
47.5°	10293.5	3797.3	1418.6	1174.9	1150.1	1150.1	1137.8	1170.8	1218.3	1269.9	1274.0
50°	10405.0	3576.4	1358.7	1092.3	1100.6	1094.4	1090.3	1121.2	1185.2	1247.2	1257.5
52.5°	10518.5	3502.0	1305.0	1032.4	1049.0	1040.7	1044.8	1088.2	1160.5	1224.5	1234.8
55°	10677.5	3549.5	1249.3	991.1	999.4	997.3	1013.9	1063.4	1127.4	1191.4	1195.6
57.5°	10873.7	3723.0	1201.8	960.2	951.9	964.3	991.1	1038.6	1100.6	1177.0	1183.2
58°	10912.9	3764.3	1193.5	951.9	941.6	960.2	987.0	1032.4	1096.5	1177.0	1183.2
60°	10972.8	3910.9	1172.9	935.4	906.5	939.5	972.6	1018.0	1088.2	1187.3	1199.7
62.5°	10683.7	3939.8	1166.7	916.8	869.3	910.6	949.8	1001.5	1079.9	1222.4	1249.3
65°	9682.3	3642.5	1123.3	885.8	838.3	887.9	929.2	989.1	1104.7	1327.7	1340.1
67.5°	7772.2	3025.1	1018.0	838.3	803.2	861.1	912.7	989.1	1115.0	1344.2	1352.5
70°	5343.9	2273.4	885.8	786.7	761.9	828.0	906.5	1011.8	1079.9	1272.0	1247.2
72.5°	2791.7	1581.7	776.4	726.8	712.4	799.1	966.4	989.1	1038.6	1187.3	1162.5
75°	1406.2	1075.8	683.5	658.7	656.6	788.8	1082.0	951.9	995.3	1117.1	1170.8
77.5°	830.1	842.5	609.1	594.7	605.0	770.2	1084.1	914.7	945.7	1028.3	1086.1
80°	567.8	695.9	551.3	547.2	555.5	708.3	999.4	869.3	887.9	972.6	1034.5
82.5°	320.1	384.1	483.2	510.0	505.9	580.2	863.1	790.9	813.6	1150.1	1216.2
85°	154.9	231.3	404.7	477.0	431.6	386.1	702.1	702.1	708.3	823.9	834.2
87.5°	57.8	103.2	272.6	377.9	301.5	231.3	477.0	497.6	553.4	569.9	582.3
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)