

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: P270573

Luminaire Tested: **NAV-AF-05-D-UNV-AFL-7027**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270573  
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-05-D-UNV-AFL-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 26768 lumens  
Efficiency: N/A  
Efficacy: 95.9 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 - G2

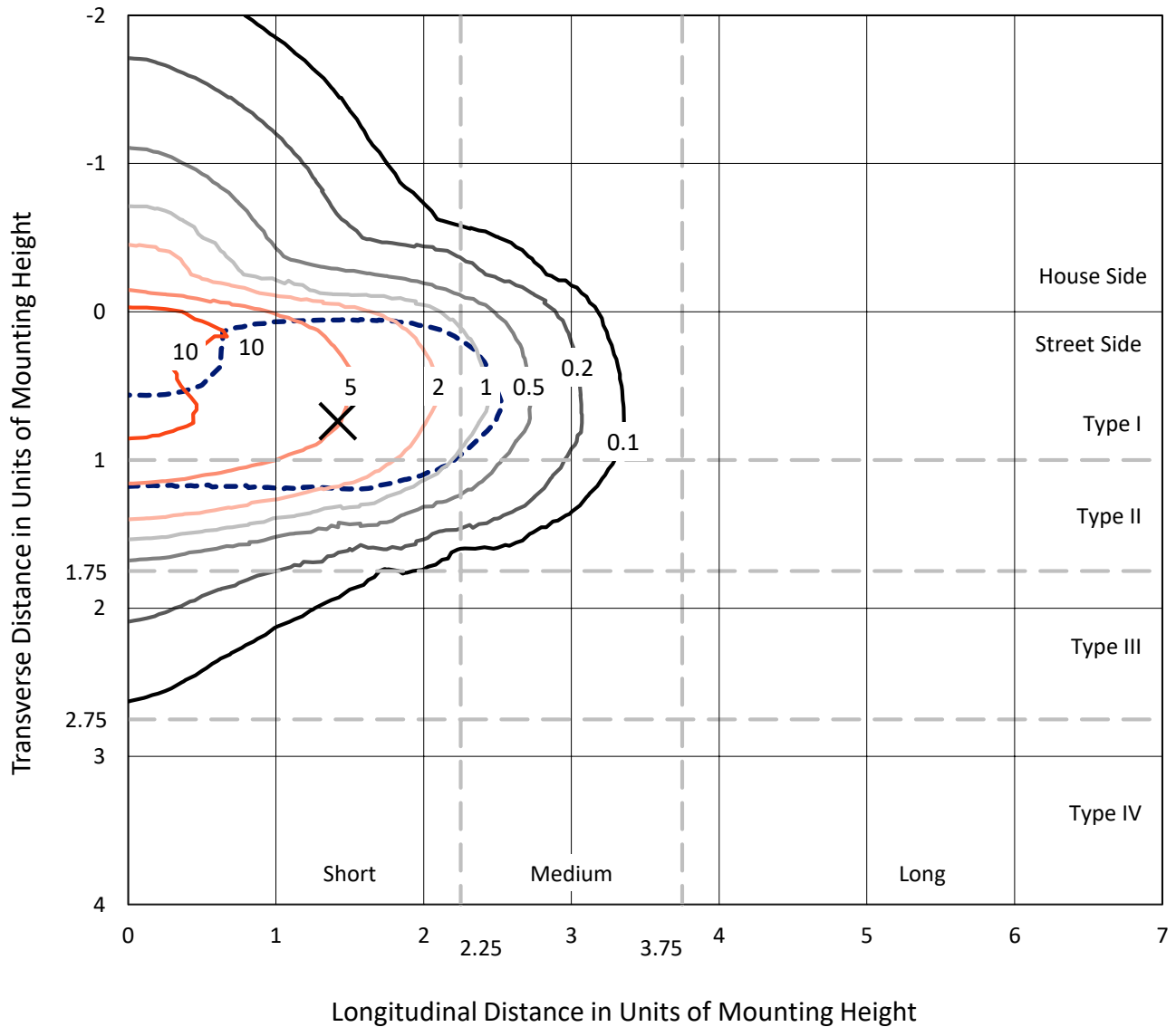
Input Watts (W): 279  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

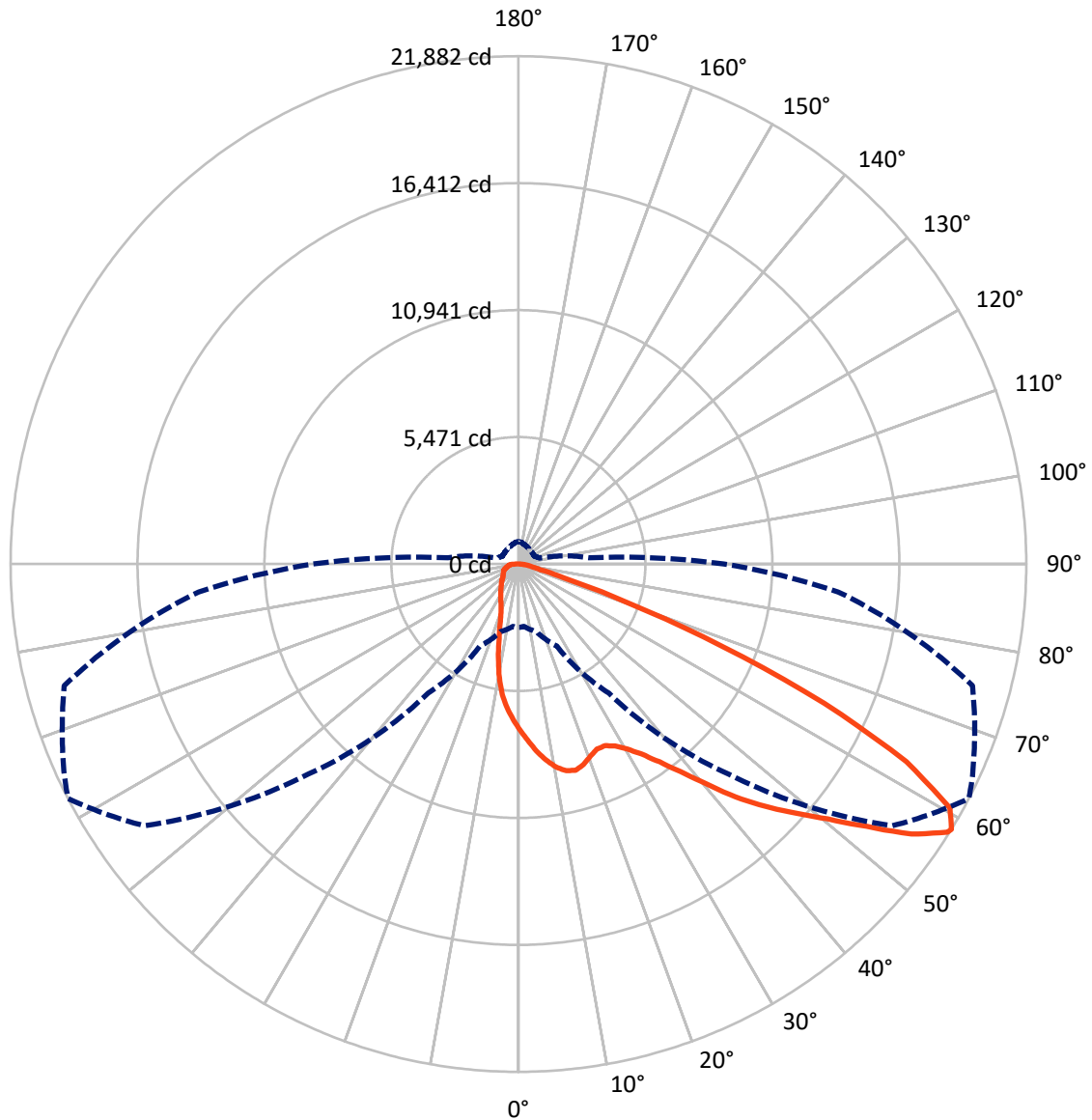
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 13.4 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	4109.9	0.0	4109.9
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	22658.1	0.0	22658.1
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	26768.0	0.0	26768.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	638.8	2.4
10°-20°	1612.2	6.0
20°-30°	2612.8	9.8
30°-40°	4171.5	15.6
40°-50°	6067.6	22.7
50°-60°	6349.2	23.7
60°-70°	3870.7	14.5
70°-80°	1082.4	4.0
80°-90°	362.8	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°	26768.0	100.0
0°-180°	26768.0	100.0



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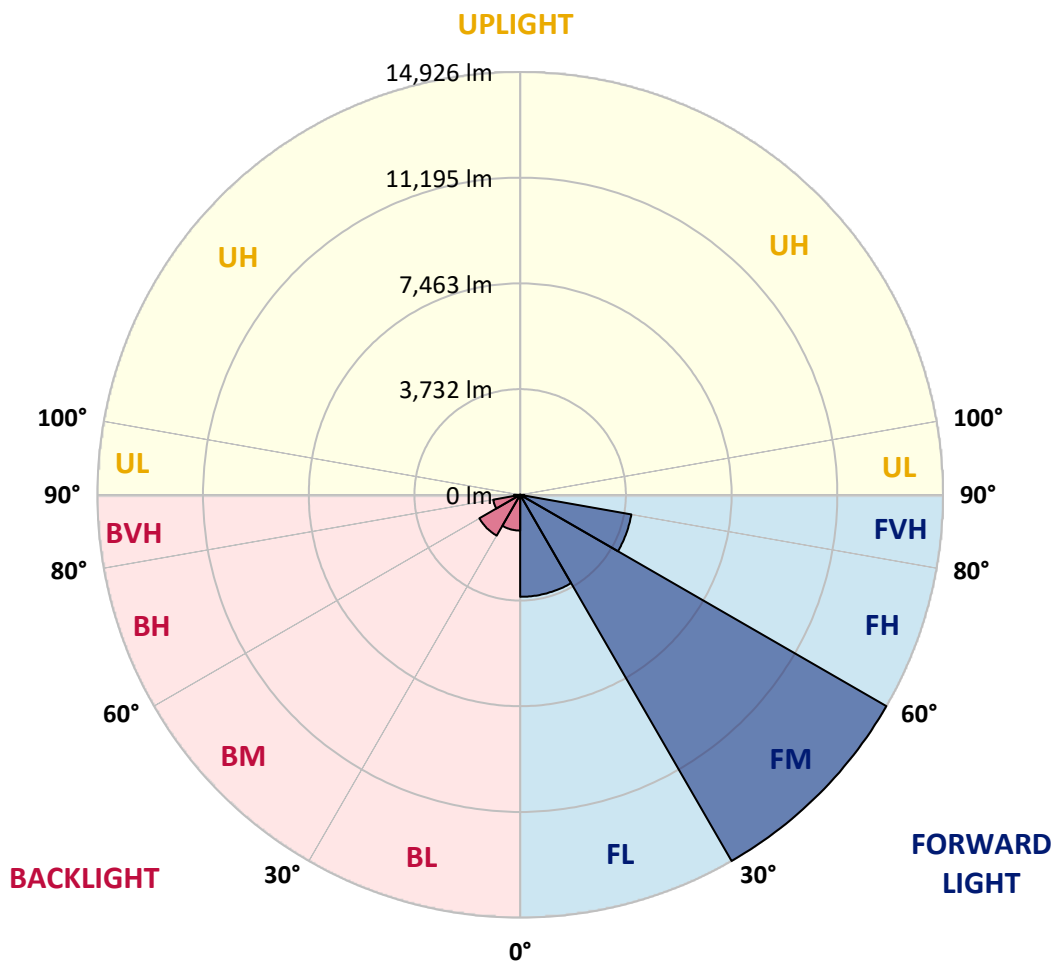
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3600.4	13.5			
FM	(30°-60°)	14926.1	55.8			
FH	(60°-80°)	3985.6	14.9			G2/5000
FVH	(80°-90°)	146.0	0.5			G2/225
BL	(0°-30°)	1263.4	4.7	B3/2500		
BM	(30°-60°)	1662.1	6.2	B2/2500		
BH	(60°-80°)	967.5	3.6	B2/1000		G2/1000
BVH	(80°-90°)	216.9	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-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8
2.5°	8112.1	8107.2	8038.6	7993.4	7939.8	7816.1	7692.2	7600.2	7553.4	7374.4	7200.5
5°	8783.0	8763.0	8724.5	8675.9	8605.8	8450.0	8254.3	8085.4	8018.5	7700.6	7381.1
7.5°	8428.3	8460.1	8579.0	8712.8	8853.2	8863.3	8724.5	8523.7	8450.0	8025.2	7556.7
10°	7446.3	7432.9	7581.9	7842.8	8306.2	8764.7	8993.8	8895.0	8818.1	8332.9	7732.4
12.5°	7148.5	7145.2	7170.4	7237.3	7528.2	8157.2	8925.2	9139.4	9112.5	8659.2	7919.7
15°	7238.9	7242.2	7240.6	7249.0	7329.2	7628.6	8542.2	9221.3	9305.0	8982.2	8110.4
17.5°	7528.2	7516.6	7479.7	7439.7	7451.4	7558.3	8128.9	9080.7	9331.8	9269.8	8271.1
20°	7975.0	7975.0	7876.2	7764.2	7690.6	7713.9	7956.6	8840.0	9207.9	9514.0	8391.5
22.5°	8535.4	8543.8	8398.3	8194.1	8026.9	7963.3	8055.3	8660.9	9057.4	9740.0	8498.7
25°	9231.3	9229.6	9017.2	8724.5	8460.1	8307.9	8306.2	8669.3	9010.4	10004.2	8610.8
27.5°	10092.9	10014.3	9766.7	9350.2	8977.1	8744.6	8639.1	8880.0	9109.3	10328.8	8761.3
30°	11065.0	10984.7	10660.0	10124.7	9619.5	9279.9	9105.8	9244.7	9410.4	10742.0	8988.8
32.5°	12026.9	12045.3	11663.9	11059.9	10410.7	9932.3	9674.7	9760.1	9875.4	11247.3	9296.6
35°	13435.5	13433.9	12935.4	12180.7	11409.6	10747.1	10420.9	10466.1	10571.4	11959.9	9728.3
37.5°	14486.1	14469.4	14148.1	13480.7	12612.5	11817.7	11346.0	11352.7	11443.0	12854.9	10297.0
40°	14593.1	14589.8	14588.1	14492.9	13898.9	13149.4	12558.8	12436.8	12473.5	13805.2	10901.0
42.5°	13775.1	13897.3	14248.6	14787.3	14952.8	14559.6	14001.0	13728.3	13647.9	14896.1	11540.0
45°	12609.1	12671.0	13286.7	14497.8	15483.1	15884.6	15464.9	14889.2	14752.1	15956.7	12060.4
47.5°	12067.0	12040.3	12396.6	13716.6	15431.4	16938.7	16968.9	16025.3	15792.7	16871.7	12503.7
50°	10904.3	10869.2	11319.3	12567.3	14866.0	17462.3	18512.9	17263.2	16833.2	17741.6	12905.2
52.5°	8587.3	8553.8	9157.7	10765.5	13601.1	17266.6	19814.5	18782.3	18049.6	18579.9	13280.0
55°	5587.6	5591.1	6166.5	7824.3	11006.4	16125.7	20425.1	20537.2	19715.8	19418.0	13582.7
57.5°	3076.5	3048.0	3457.9	4476.9	7571.9	13534.3	19916.5	21802.0	21373.7	20137.3	13801.9
58°	2735.2	2701.8	3018.0	3896.3	6788.9	12803.2	19660.6	21882.3	21586.1	20256.2	13833.7
60°	1949.1	1892.1	1843.6	2196.5	3911.4	9231.3	17954.2	21362.0	21648.1	20493.8	13803.5
62.5°	1642.8	1577.7	1403.6	1390.2	1842.0	4515.3	14198.4	18760.6	19561.9	19946.7	13318.5
65°	1525.7	1460.5	1231.2	1149.3	1249.7	1949.1	8779.7	14486.1	15556.8	18044.6	12097.1
67.5°	1442.0	1365.2	1119.2	1012.1	1032.2	1166.1	3725.7	9474.0	10715.3	14071.2	9704.7
70°	1366.9	1281.5	1030.5	906.7	890.0	886.6	1455.4	4947.0	6143.1	9207.9	6501.2
72.5°	1281.5	1197.8	951.9	819.8	783.0	719.4	874.9	2044.4	2802.3	4513.7	2979.6
75°	1157.6	1089.0	864.9	747.7	684.1	583.9	645.7	980.3	1208.0	1728.2	1383.5
77.5°	1018.9	963.6	776.2	687.7	602.3	476.8	493.4	664.1	746.1	973.7	801.4
80°	721.0	741.1	677.5	605.5	530.3	384.7	379.8	486.8	535.3	654.1	538.8
82.5°	496.9	511.9	552.1	478.4	428.3	299.4	279.5	337.9	363.1	394.9	261.0
85°	354.7	344.6	383.0	343.0	314.4	190.7	179.0	214.2	229.2	240.9	125.5
87.5°	215.9	214.2	220.9	177.3	163.9	97.0	88.7	102.0	108.8	105.5	60.2
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°	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8	7146.8
2.5°	7135.1	7053.2	6874.2	6730.3	6574.8	6455.8	6337.2	6270.2	6196.6	6154.7	6149.7
5°	7213.7	7046.5	6665.1	6310.5	5945.7	5617.8	5296.5	5059.1	4865.0	4754.5	4747.8
7.5°	7300.7	7038.1	6449.2	5835.3	5186.2	4540.5	3969.9	3566.7	3307.4	3186.9	3178.7
10°	7367.7	7002.9	6186.5	5231.3	4202.5	3349.3	2830.6	2593.0	2514.4	2494.4	2491.0
12.5°	7447.9	6977.9	5855.3	4456.8	3212.1	2549.6	2392.4	2377.3	2394.1	2404.0	2405.8
15°	7523.2	6929.3	5408.6	3598.5	2514.4	2278.6	2282.0	2313.8	2347.1	2362.3	2363.9
17.5°	7558.3	6810.6	4821.5	2835.7	2199.9	2156.4	2194.9	2236.7	2266.9	2278.6	2278.6
20°	7558.3	6619.9	4140.6	2297.0	2036.0	2044.4	2091.3	2123.0	2129.7	2119.6	2114.6
22.5°	7526.5	6384.1	3478.1	2004.2	1902.2	1934.0	1970.7	1949.1	1870.5	1810.2	1798.4
25°	7498.2	6104.6	2840.7	1825.1	1785.0	1826.9	1811.8	1662.9	1542.5	1480.5	1470.5
27.5°	7451.4	5766.7	2308.6	1677.9	1671.2	1704.8	1555.9	1412.0	1351.8	1318.4	1311.5
30°	7439.7	5400.3	1932.3	1547.5	1559.2	1512.3	1341.7	1294.8	1281.5	1263.0	1254.8
32.5°	7478.1	5033.9	1696.4	1440.4	1452.1	1298.2	1233.0	1239.7	1238.0	1214.6	1206.2
35°	7583.5	4677.6	1545.9	1343.3	1309.9	1162.6	1171.1	1191.2	1191.2	1162.6	1152.6
37.5°	7767.6	4346.3	1450.5	1261.4	1146.0	1092.5	1114.2	1140.9	1140.9	1120.8	1112.6
40°	7963.3	4023.5	1378.4	1196.2	1042.3	1043.9	1065.7	1085.7	1094.1	1097.5	1090.7
42.5°	8140.6	3688.9	1301.6	1125.8	995.4	1007.1	1017.2	1032.2	1067.4	1090.7	1087.4
45°	8244.4	3352.7	1217.9	1038.9	963.6	968.6	965.3	992.1	1033.9	1069.1	1069.1
47.5°	8339.7	3076.5	1149.3	951.9	931.8	931.8	921.8	948.6	987.1	1028.9	1032.2
50°	8430.1	2897.6	1100.9	885.0	891.7	886.6	883.4	908.5	960.3	1010.5	1018.9
52.5°	8522.0	2837.3	1057.3	836.5	849.8	843.1	846.6	881.6	940.2	992.1	1000.4
55°	8650.9	2875.8	1012.1	803.1	809.7	808.0	821.4	861.6	913.4	965.3	968.6
57.5°	8809.8	3016.4	973.7	777.9	771.3	781.3	803.1	841.5	891.7	953.6	958.6
58°	8841.6	3049.7	966.9	771.3	762.9	777.9	799.8	836.5	888.3	953.6	958.6
60°	8890.0	3168.6	950.2	757.8	734.5	761.3	788.0	824.7	881.6	961.9	972.0
62.5°	8655.9	3191.9	945.2	742.8	704.4	737.8	769.6	811.3	874.9	990.4	1012.1
65°	7844.4	2951.1	910.2	717.7	679.2	719.4	752.8	801.4	895.0	1075.7	1085.7
67.5°	6296.9	2450.8	824.7	679.2	650.8	697.7	739.5	801.4	903.3	1089.0	1095.8
70°	4329.7	1842.0	717.7	637.3	617.3	670.9	734.5	819.8	874.9	1030.5	1010.5
72.5°	2261.8	1281.5	629.1	588.8	577.3	647.4	783.0	801.4	841.5	961.9	941.9
75°	1139.3	871.6	553.7	533.7	531.9	639.1	876.7	771.3	806.4	905.0	948.6
77.5°	672.6	682.5	493.4	481.9	490.1	624.1	878.4	741.1	766.3	833.2	880.0
80°	460.0	563.7	446.6	443.4	450.1	573.8	809.7	704.4	719.4	788.0	838.2
82.5°	259.3	311.2	391.5	413.2	409.8	470.2	699.3	640.8	659.1	931.8	985.4
85°	125.5	187.3	327.9	386.5	349.6	312.8	568.7	568.7	573.8	667.5	675.9
87.5°	46.8	83.6	220.9	306.1	244.2	187.3	386.5	403.2	448.3	461.6	471.8
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)