

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: P196980

Luminaire Tested: **NAV-AF-06-D-UNV-AFL-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196980  
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-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 24333 lumens  
Efficiency: N/A  
Efficacy: 97.7 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

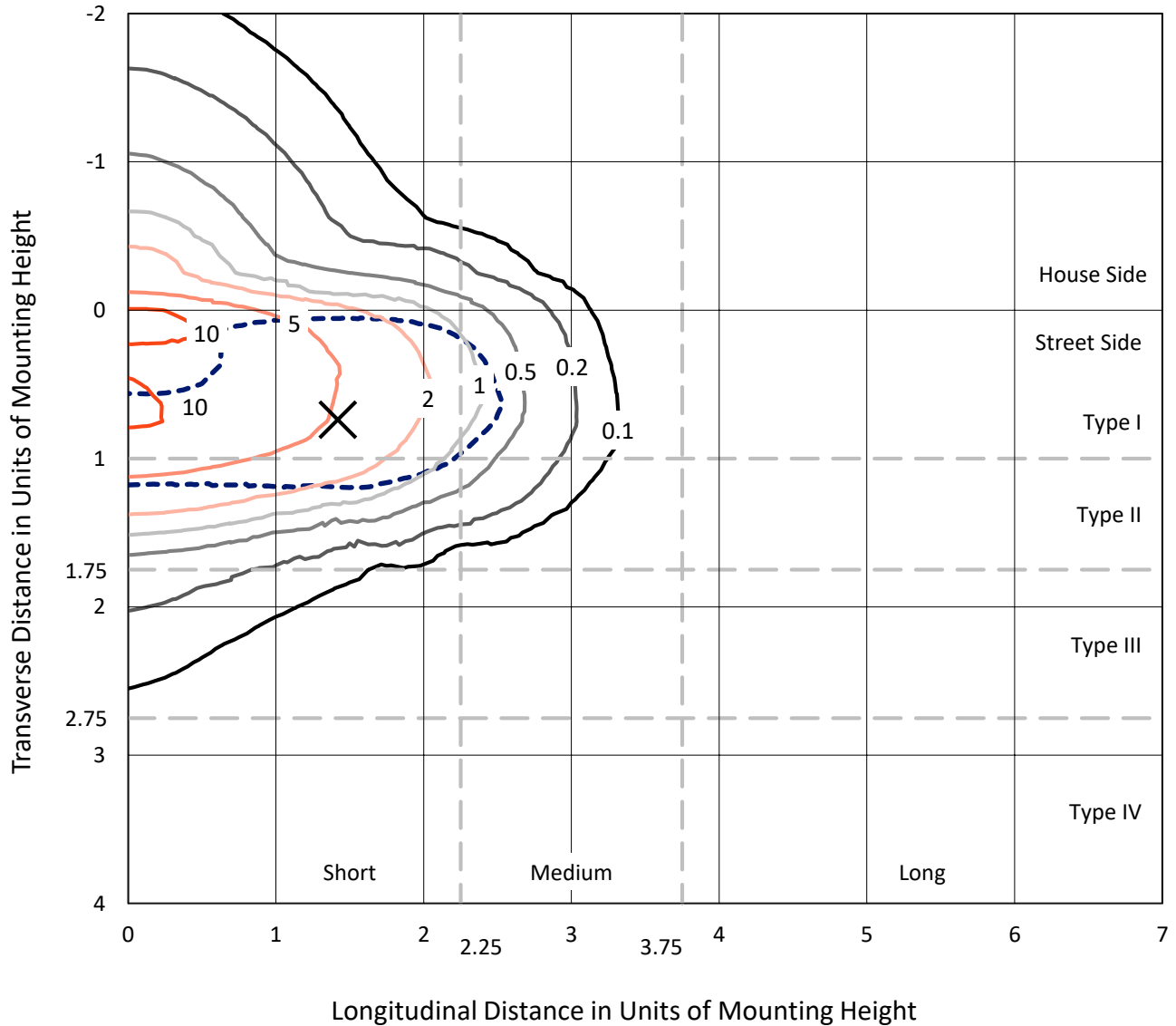
Input Watts (W): 249  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

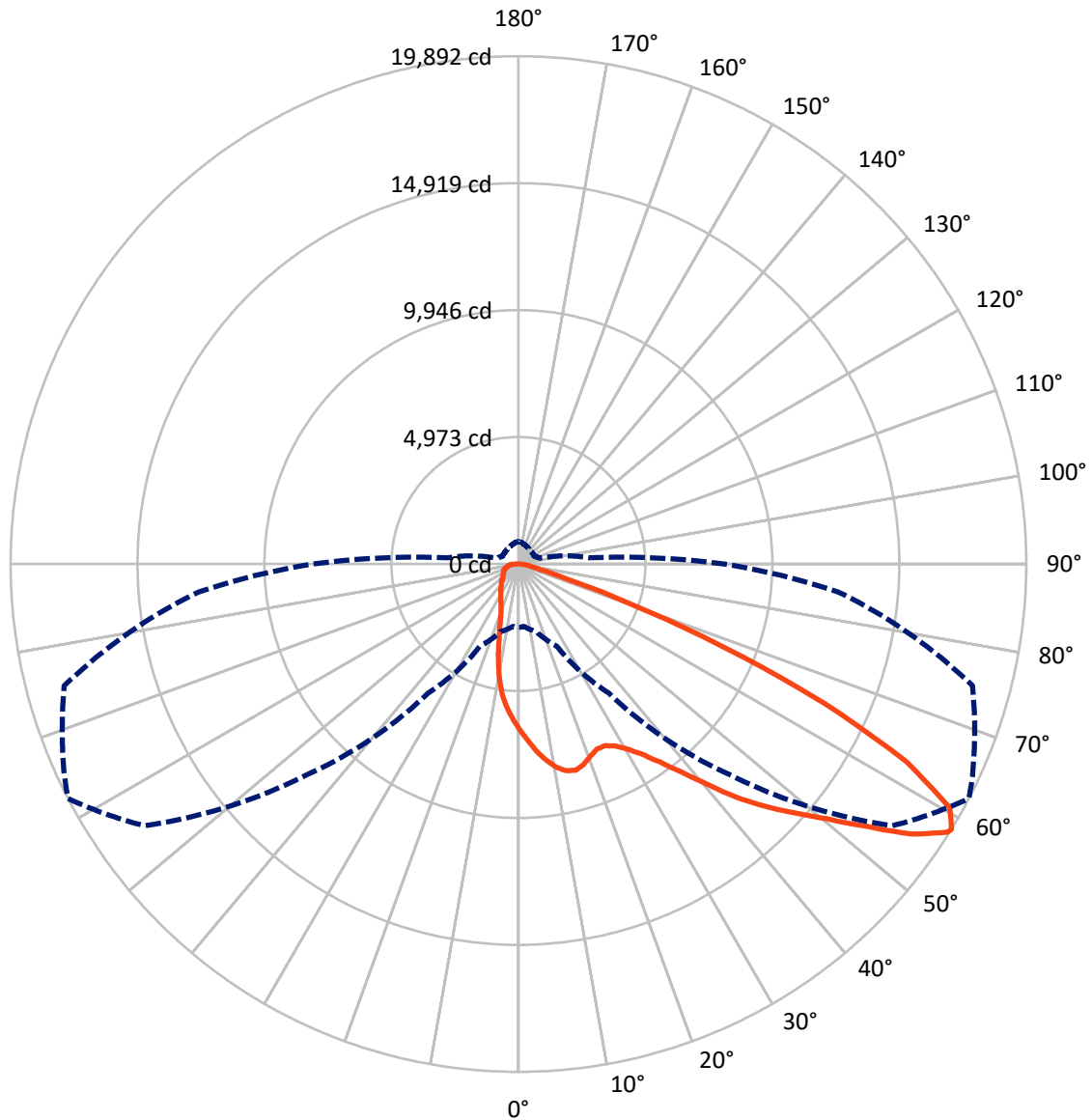
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 12.2 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	3736.0	0.0	3736.0
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	20597.0	0.0	20597.0
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	24333.0	0.0	24333.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	580.7	2.4
10°-20°	1465.5	6.0
20°-30°	2375.1	9.8
30°-40°	3792.0	15.6
40°-50°	5515.6	22.7
50°-60°	5771.6	23.7
60°-70°	3518.6	14.5
70°-80°	984.0	4.0
80°-90°	329.8	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°	24333.0	100.0
0°-180°	24333.0	100.0



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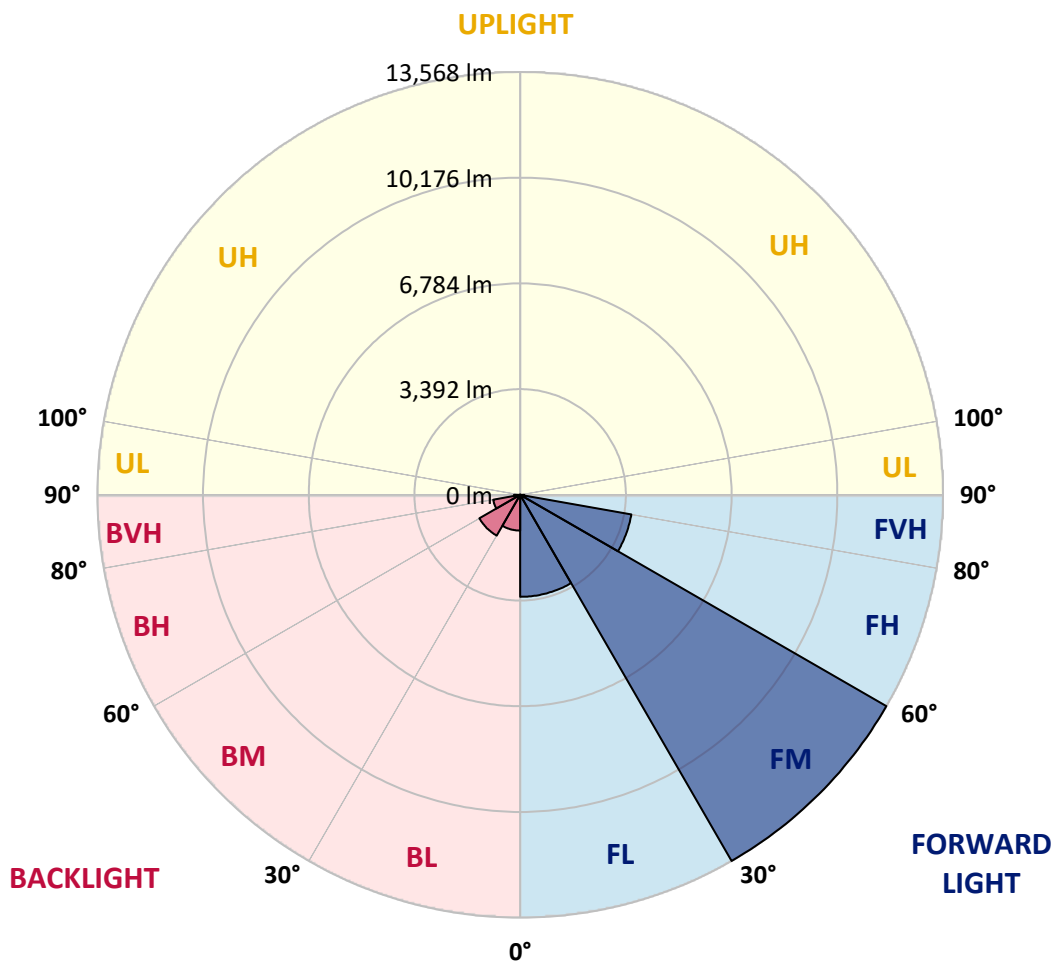
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3272.9	13.5			
FM	(30°-60°)	13568.4	55.8			
FH	(60°-80°)	3623.0	14.9			G2/5000
FVH	(80°-90°)	132.7	0.5			G2/225
BL	(0°-30°)	1148.5	4.7	B3/2500		
BM	(30°-60°)	1510.9	6.2	B2/2500		
BH	(60°-80°)	879.5	3.6	B2/1000		G2/1000
BVH	(80°-90°)	197.2	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-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8
2.5°	7374.2	7369.7	7307.3	7266.3	7217.6	7105.1	6992.5	6908.9	6866.3	6703.6	6545.4
5°	7984.1	7965.8	7930.8	7886.7	7822.9	7681.4	7503.5	7349.9	7289.1	7000.1	6709.7
7.5°	7661.7	7690.6	7798.5	7920.2	8047.9	8057.1	7930.8	7748.3	7681.4	7295.2	6869.3
10°	6769.0	6756.8	6892.2	7129.4	7550.6	7967.3	8175.7	8086.0	8016.0	7575.0	7029.0
12.5°	6498.3	6495.2	6518.0	6578.9	6843.5	7415.3	8113.3	8308.0	8283.7	7871.5	7199.3
15°	6580.4	6583.4	6581.9	6589.5	6662.5	6934.7	7765.1	8382.5	8458.6	8165.0	7372.7
17.5°	6843.5	6832.8	6799.4	6762.9	6773.5	6870.9	7389.4	8254.8	8482.9	8426.6	7518.7
20°	7249.5	7249.5	7159.8	7057.9	6991.0	7012.3	7232.8	8035.8	8370.3	8648.6	7628.2
22.5°	7759.0	7766.6	7634.3	7448.8	7296.7	7238.9	7322.5	7873.1	8233.5	8854.0	7725.5
25°	8391.6	8390.1	8197.0	7930.8	7690.6	7552.2	7550.6	7880.7	8190.9	9094.2	7827.4
27.5°	9174.8	9103.4	8878.3	8499.6	8160.5	7949.1	7853.3	8072.3	8280.6	9389.3	7964.3
30°	10058.4	9985.4	9690.4	9203.7	8744.5	8435.7	8277.6	8403.8	8554.4	9764.9	8171.1
32.5°	10932.9	10949.6	10602.8	10053.8	9463.8	9028.8	8794.6	8872.2	8977.1	10224.2	8450.9
35°	12213.3	12211.8	11758.6	11072.8	10371.7	9769.5	9472.9	9514.0	9609.8	10872.0	8843.3
37.5°	13168.4	13153.2	12861.2	12254.4	11465.1	10742.8	10313.9	10320.0	10402.1	11685.6	9360.4
40°	13265.7	13262.7	13261.2	13174.5	12634.6	11953.3	11416.5	11305.4	11338.9	12549.4	9909.4
42.5°	12522.1	12633.1	12952.4	13442.1	13592.7	13235.3	12727.4	12479.5	12406.5	13541.0	10490.3
45°	11462.1	11518.4	12078.0	13179.0	14074.8	14439.8	14058.0	13534.9	13410.2	14505.2	10963.3
47.5°	10969.4	10945.0	11268.9	12468.8	14027.6	15397.8	15425.2	14567.5	14356.1	15337.0	11366.3
50°	9912.4	9880.5	10289.6	11424.1	13513.6	15873.9	16828.9	15692.9	15302.0	16127.8	11731.3
52.5°	7806.1	7775.7	8324.7	9786.2	12363.9	15695.9	18012.1	17073.7	16407.6	16889.7	12071.9
55°	5079.4	5082.4	5605.6	7112.7	10005.2	14658.8	18567.1	18669.0	17922.3	17651.6	12347.2
57.5°	2796.7	2770.9	3143.4	4069.6	6883.0	12303.1	18104.8	19818.7	19429.4	18305.6	12546.4
58°	2486.5	2456.1	2743.5	3541.9	6171.3	11638.5	17872.1	19891.7	19622.6	18413.5	12575.3
60°	1771.7	1720.0	1675.9	1996.8	3555.6	8391.6	16321.0	19418.8	19678.8	18629.5	12547.9
62.5°	1493.4	1434.1	1275.9	1263.8	1674.4	4104.6	12906.8	17054.0	17782.4	18132.2	12106.9
65°	1386.9	1327.6	1119.3	1044.8	1136.0	1771.7	7981.0	13168.4	14141.7	16403.1	10996.7
67.5°	1310.9	1241.0	1017.4	920.1	938.3	1060.0	3386.8	8612.1	9740.6	12791.2	8822.0
70°	1242.5	1164.9	936.8	824.3	809.1	806.0	1323.1	4496.9	5584.3	8370.3	5909.7
72.5°	1164.9	1088.9	865.3	745.2	711.7	653.9	795.4	1858.4	2547.3	4103.1	2708.5
75°	1052.4	990.0	786.2	679.8	622.0	530.8	587.0	891.2	1098.0	1571.0	1257.7
77.5°	926.2	876.0	705.6	625.0	547.5	433.4	448.6	603.7	678.3	885.1	728.5
80°	655.5	673.7	615.9	550.5	482.1	349.8	345.2	442.5	486.6	594.6	489.7
82.5°	451.7	465.4	501.9	434.9	389.3	272.2	254.0	307.2	330.0	358.9	237.2
85°	322.4	313.3	348.3	311.8	285.9	173.4	162.7	194.7	208.3	219.0	114.1
87.5°	196.2	194.7	200.7	161.2	149.0	88.2	80.6	92.8	98.9	95.8	54.7
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°	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8	6496.8
2.5°	6486.1	6411.6	6248.9	6118.1	5976.6	5868.7	5760.7	5699.9	5633.0	5594.9	5590.4
5°	6557.6	6405.5	6058.8	5736.4	5404.8	5106.8	4814.8	4598.8	4422.4	4322.0	4316.0
7.5°	6636.7	6397.9	5862.6	5304.5	4714.4	4127.4	3608.8	3242.3	3006.6	2897.1	2889.5
10°	6697.5	6366.0	5623.8	4755.5	3820.2	3044.6	2573.2	2357.2	2285.7	2267.5	2264.4
12.5°	6770.5	6343.2	5322.7	4051.3	2919.9	2317.7	2174.7	2161.0	2176.2	2185.4	2186.9
15°	6838.9	6299.1	4916.7	3271.2	2285.7	2071.3	2074.3	2103.2	2133.6	2147.3	2148.9
17.5°	6870.9	6191.1	4382.9	2577.7	1999.8	1960.3	1995.3	2033.3	2060.7	2071.3	2071.3
20°	6870.9	6017.7	3763.9	2088.0	1850.8	1858.4	1901.0	1929.9	1935.9	1926.8	1922.3
22.5°	6842.0	5803.3	3161.7	1821.9	1729.1	1758.0	1791.5	1771.7	1700.2	1645.5	1634.8
25°	6816.1	5549.3	2582.3	1659.2	1622.7	1660.7	1647.0	1511.7	1402.2	1345.9	1336.8
27.5°	6773.5	5242.1	2098.7	1525.3	1519.3	1549.7	1414.3	1283.5	1228.8	1198.4	1192.3
30°	6762.9	4909.1	1756.5	1406.7	1417.4	1374.8	1219.7	1177.1	1164.9	1148.2	1140.6
32.5°	6797.9	4576.0	1542.1	1309.4	1320.0	1180.1	1120.8	1126.9	1125.4	1104.1	1096.5
35°	6893.7	4252.1	1405.2	1221.2	1190.8	1056.9	1064.5	1082.8	1082.8	1056.9	1047.8
37.5°	7061.0	3951.0	1318.5	1146.7	1041.7	993.1	1012.8	1037.2	1037.2	1018.9	1011.3
40°	7238.9	3657.5	1253.1	1087.4	947.4	949.0	968.7	987.0	994.6	997.6	991.5
42.5°	7400.1	3353.3	1183.2	1023.5	904.9	915.5	924.6	938.3	970.3	991.5	988.5
45°	7494.4	3047.6	1107.1	944.4	876.0	880.5	877.5	901.8	939.8	971.8	971.8
47.5°	7581.1	2796.7	1044.8	865.3	847.1	847.1	837.9	862.3	897.3	935.3	938.3
50°	7663.2	2634.0	1000.7	804.5	810.6	806.0	803.0	825.8	872.9	918.5	926.2
52.5°	7746.8	2579.2	961.1	760.4	772.6	766.5	769.5	801.4	854.7	901.8	909.4
55°	7863.9	2614.2	920.1	730.0	736.1	734.5	746.7	783.2	830.3	877.5	880.5
57.5°	8008.4	2742.0	885.1	707.2	701.1	710.2	730.0	764.9	810.6	866.8	871.4
58°	8037.3	2772.4	879.0	701.1	693.5	707.2	726.9	760.4	807.5	866.8	871.4
60°	8081.4	2880.3	863.8	688.9	667.6	692.0	716.3	749.7	801.4	874.4	883.6
62.5°	7868.5	2901.6	859.2	675.2	640.2	670.7	699.6	737.6	795.4	900.3	920.1
65°	7130.9	2682.6	827.3	652.4	617.4	653.9	684.3	728.5	813.6	977.9	987.0
67.5°	5724.2	2227.9	749.7	617.4	591.6	634.2	672.2	728.5	821.2	990.0	996.1
70°	3935.8	1674.4	652.4	579.4	561.2	609.8	667.6	745.2	795.4	936.8	918.5
72.5°	2056.1	1164.9	571.8	535.3	524.7	588.5	711.7	728.5	764.9	874.4	856.2
75°	1035.6	792.3	503.4	485.1	483.6	580.9	796.9	701.1	733.0	822.7	862.3
77.5°	611.4	620.5	448.6	438.0	445.6	567.2	798.4	673.7	696.5	757.3	799.9
80°	418.2	512.5	406.0	403.0	409.1	521.6	736.1	640.2	653.9	716.3	761.9
82.5°	235.7	282.9	355.9	375.6	372.6	427.3	635.7	582.5	599.2	847.1	895.7
85°	114.1	170.3	298.1	351.3	317.8	284.4	517.1	517.1	521.6	606.8	614.4
87.5°	42.6	76.0	200.7	278.3	222.0	170.3	351.3	366.5	407.6	419.7	428.9
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)