

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: P270323

Luminaire Tested: **NAV-AF-02-D-UNV-5MQ-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270323
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-5MQ-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9106.2 lumens
Efficiency: N/A
Efficacy: 107.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

Input Watts (W): 85
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

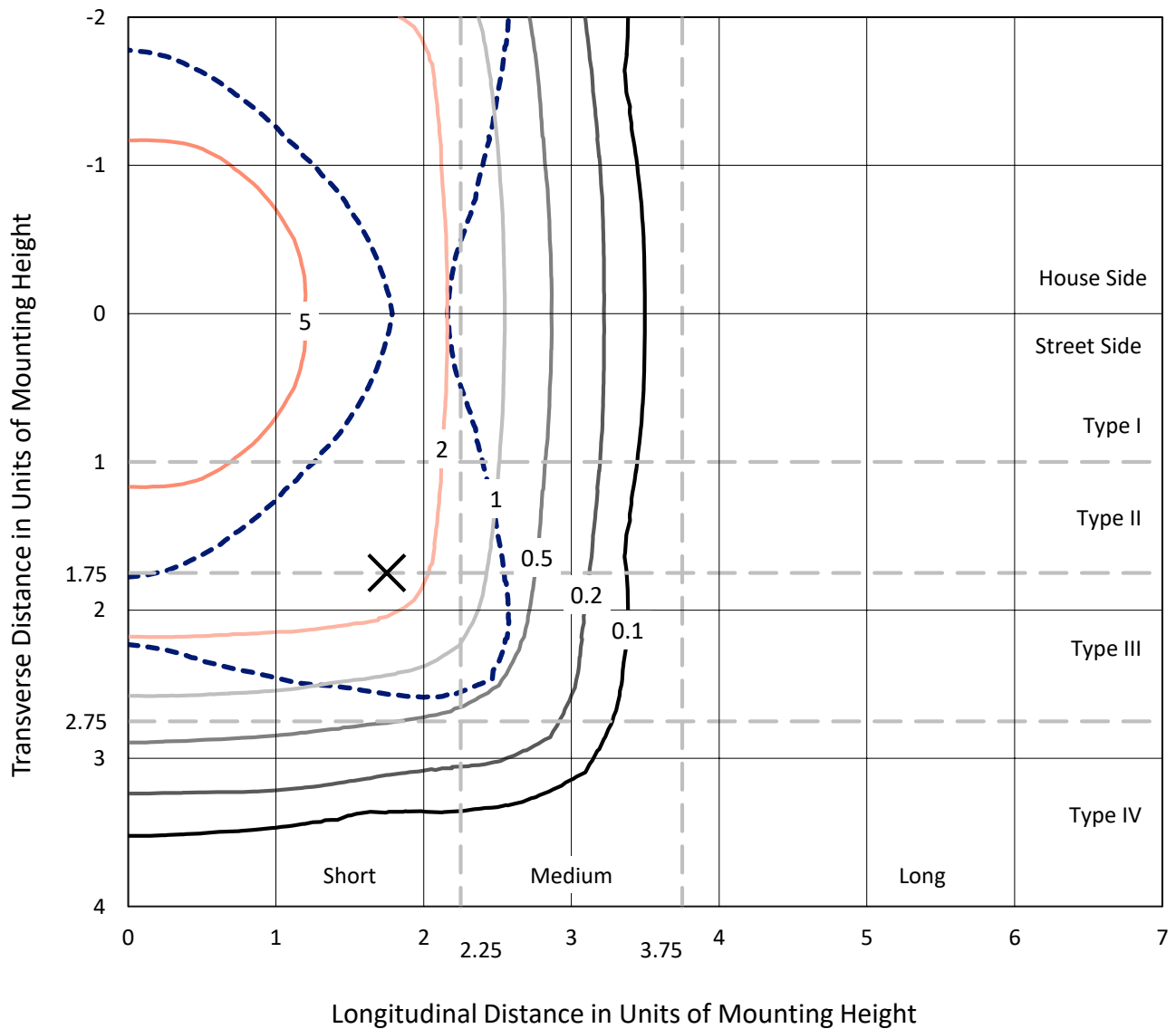


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Iso-Footcandle Lines of Horizontal Illumination

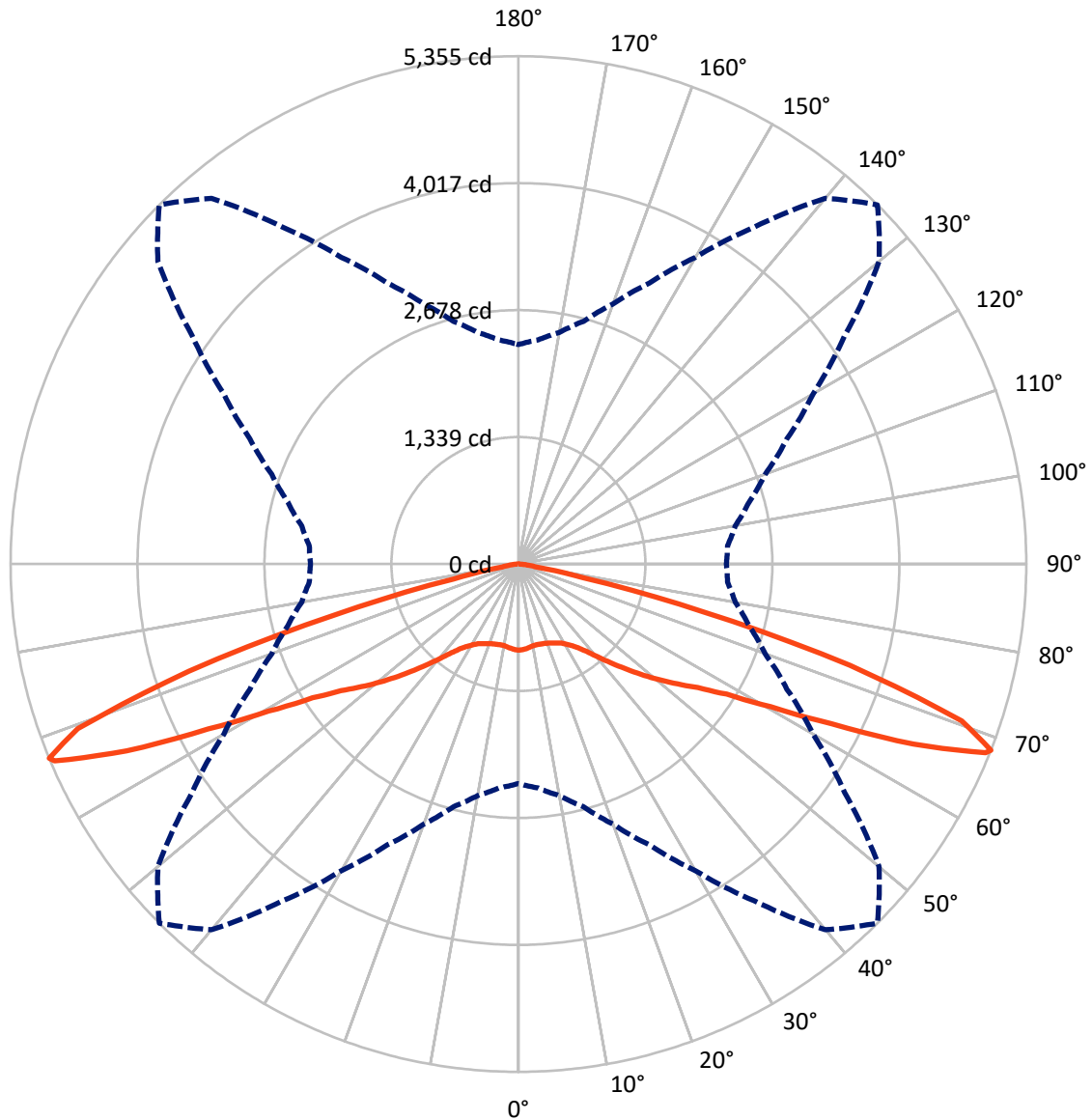
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 9.1 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4553.1	0.0	4553.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4553.1	0.0	4553.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	9106.2	0.0	9106.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.0	0.9
10°-20°	246.5	2.7
20°-30°	419.1	4.6
30°-40°	685.8	7.5
40°-50°	1225.7	13.5
50°-60°	2070.0	22.7
60°-70°	3209.8	35.2
70°-80°	1103.6	12.1
80°-90°	60.7	0.7
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°	9106.2	100.0
0°-180°	9106.2	100.0



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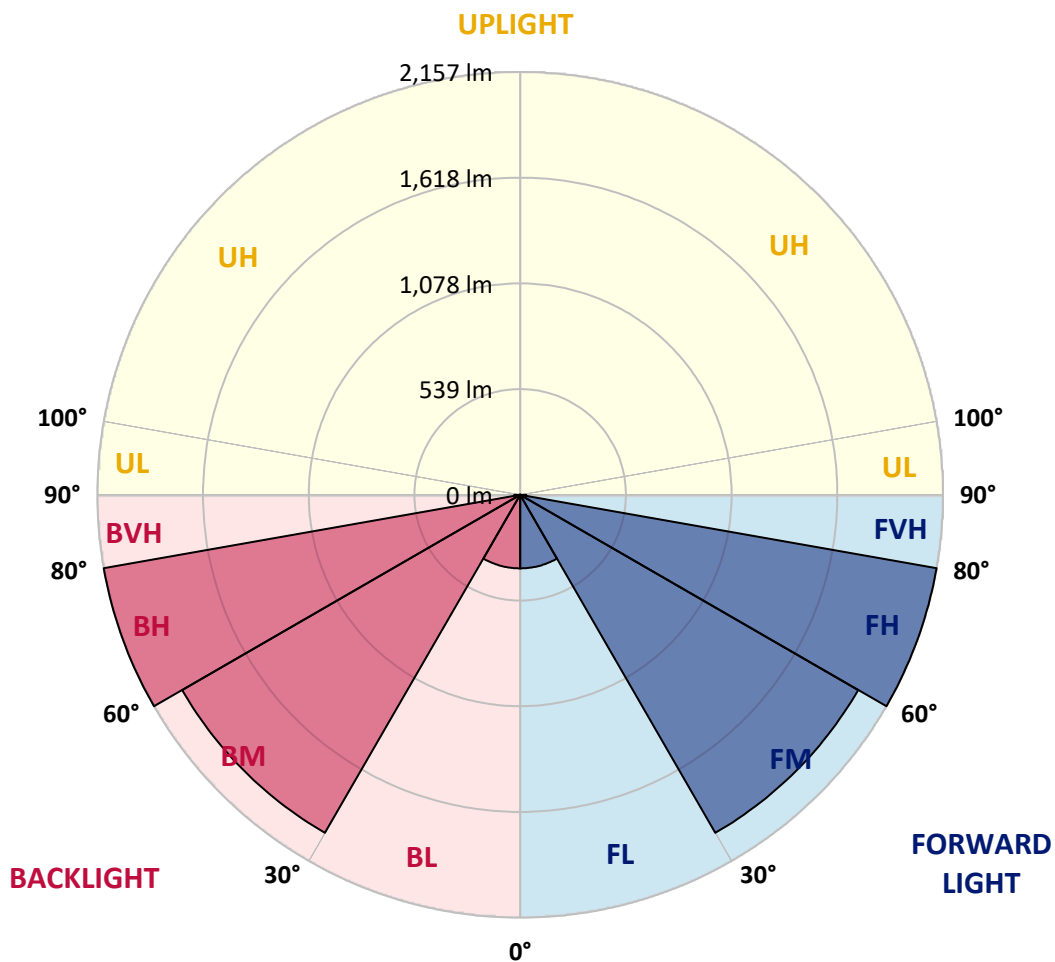
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	375.3	4.1			
FM	(30°-60°)	1990.8	21.9			
FH	(60°-80°)	2156.7	23.7			G2/5000
FVH	(80°-90°)	30.3	0.3			G1/100
BL	(0°-30°)	375.3	4.1	B1/500		
BM	(30°-60°)	1990.8	21.9	B2/2500		
BH	(60°-80°)	2156.7	23.7	B3/2500		G2/5000
BVH	(80°-90°)	30.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	908.4	908.4	908.4	908.4	908.4	908.4	908.4	908.4	908.4	908.4	908.4
2.5°	912.3	912.3	913.3	912.9	911.2	909.4	907.7	906.1	905.0	904.0	902.7
5°	902.7	902.7	904.5	903.3	902.3	900.6	899.5	897.8	896.7	895.5	896.1
7.5°	890.5	891.7	892.7	892.1	890.0	889.4	887.7	887.2	886.1	884.4	884.9
10°	879.9	880.5	881.5	881.1	880.5	878.8	878.3	877.7	877.1	874.9	874.4
12.5°	869.3	870.5	871.5	872.2	871.5	872.2	872.7	873.2	872.7	871.5	871.5
15°	860.9	862.2	863.8	865.4	866.0	869.3	871.5	873.8	875.5	876.0	874.4
17.5°	856.5	858.2	860.3	863.8	866.5	870.5	874.4	877.7	880.5	881.1	879.4
20°	855.9	857.6	860.9	864.9	869.9	874.9	881.1	886.1	888.9	890.5	888.9
22.5°	859.9	862.2	866.5	871.5	877.7	884.4	892.1	897.8	903.3	905.6	904.0
25°	870.9	873.2	878.3	884.4	891.1	899.5	907.3	914.6	920.0	922.9	920.7
27.5°	894.4	895.0	900.6	907.3	915.1	922.3	932.4	935.7	940.2	943.0	940.2
30°	927.3	928.5	933.5	944.1	951.3	960.7	966.3	969.7	974.8	977.5	974.1
32.5°	977.5	978.7	983.0	993.2	999.9	1007.1	1013.7	1016.1	1021.1	1024.3	1020.5
35°	1048.3	1050.6	1054.5	1061.2	1066.7	1072.2	1077.3	1075.7	1079.0	1083.4	1079.6
37.5°	1145.3	1144.8	1145.9	1151.0	1156.5	1159.8	1167.6	1163.8	1167.1	1171.0	1168.8
40°	1258.5	1258.5	1257.9	1266.9	1269.1	1272.4	1280.9	1275.9	1280.4	1284.8	1280.9
42.5°	1387.3	1389.6	1392.5	1399.6	1405.8	1406.8	1410.8	1408.5	1414.1	1418.1	1414.1
45°	1535.7	1539.1	1542.4	1559.1	1562.0	1564.0	1567.0	1559.6	1565.8	1569.2	1568.0
47.5°	1689.6	1695.7	1702.9	1720.3	1731.5	1736.5	1738.7	1730.3	1730.9	1735.9	1736.5
50°	1863.5	1870.4	1877.5	1897.0	1907.6	1916.5	1919.4	1909.8	1911.0	1914.8	1915.9
52.5°	2024.2	2032.0	2047.5	2073.7	2088.9	2104.5	2105.5	2093.9	2098.9	2101.7	2099.5
55°	2175.2	2185.3	2206.0	2241.1	2268.4	2299.1	2313.0	2300.2	2300.2	2298.0	2296.8
57.5°	2351.6	2362.6	2383.8	2424.5	2462.4	2506.5	2544.4	2557.3	2580.7	2588.5	2576.2
60°	2616.9	2628.6	2650.4	2703.9	2751.9	2815.9	2878.4	2929.3	3011.7	3056.4	3016.1
62.5°	2859.5	2877.4	2928.7	3022.3	3126.0	3244.8	3382.6	3480.8	3630.7	3705.4	3604.4
65°	2804.2	2840.5	2941.0	3088.2	3302.3	3559.9	3840.3	4109.7	4419.8	4578.7	4373.5
67.5°	2449.7	2480.3	2588.5	2759.7	3026.7	3381.9	3818.1	4375.6	5015.2	5313.0	4950.0
68°	2314.2	2371.5	2479.2	2649.3	2918.7	3267.7	3733.3	4335.5	5033.7	5355.4	4963.4
70°	1774.3	1795.1	1898.2	2050.9	2341.4	2683.9	3153.9	3840.3	4629.3	4960.6	4557.5
72.5°	843.1	855.4	922.3	1072.8	1257.4	1536.2	1951.1	2598.5	3309.4	3654.1	3252.0
75°	308.9	311.7	327.3	363.1	432.2	536.9	736.2	1138.7	1685.7	2010.2	1692.3
77.5°	166.7	167.3	173.5	182.4	194.7	208.5	238.7	320.1	516.3	702.7	545.4
80°	104.8	104.3	110.4	117.7	126.0	132.7	135.6	144.9	163.4	191.2	175.7
82.5°	53.4	58.6	72.6	80.3	92.5	94.9	91.9	91.4	97.0	104.8	108.2
85°	29.6	26.2	38.4	51.4	55.8	57.4	58.0	54.6	53.4	52.5	55.2
87.5°	15.0	14.0	16.7	25.6	27.3	22.3	22.8	19.6	13.4	13.4	14.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	908.4	908.4	908.4	908.4	908.4	908.4	908.4	908.4
2.5°	901.7	902.3	901.1	901.1	901.1	901.7	901.1	900.6
5°	894.4	895.5	895.5	896.1	896.7	896.7	896.7	896.7
7.5°	883.8	884.4	885.5	885.5	885.5	885.5	885.5	885.5
10°	873.8	872.7	872.2	870.9	870.9	869.3	869.9	870.5
12.5°	868.8	866.5	865.4	863.8	862.6	860.9	860.9	861.6
15°	870.9	867.7	864.3	863.2	862.2	860.9	859.9	860.3
17.5°	875.5	871.5	867.7	865.4	863.2	861.6	860.9	861.6
20°	884.9	879.4	873.2	869.3	864.9	863.8	862.2	863.8
22.5°	897.8	891.1	883.3	876.0	870.9	868.8	866.5	868.2
25°	913.3	906.1	898.3	890.0	884.4	882.8	879.9	879.9
27.5°	935.1	928.9	922.3	914.6	908.9	907.3	902.7	902.7
30°	969.7	963.6	957.5	950.8	945.1	943.5	937.9	937.9
32.5°	1015.4	1008.7	1004.8	999.3	994.9	992.0	985.4	984.7
35°	1076.8	1070.6	1070.2	1066.2	1061.6	1062.2	1055.6	1054.5
37.5°	1164.9	1159.8	1161.5	1158.2	1154.3	1157.6	1153.8	1153.8
40°	1277.5	1275.9	1277.5	1275.2	1275.9	1276.4	1273.1	1274.2
42.5°	1413.6	1409.1	1419.1	1418.1	1416.4	1420.8	1413.0	1407.5
45°	1570.2	1568.6	1578.6	1580.3	1577.0	1579.8	1565.8	1565.2
47.5°	1740.3	1740.3	1749.3	1748.1	1744.8	1745.3	1728.6	1718.1
50°	1917.7	1916.5	1925.4	1923.2	1918.8	1918.2	1901.0	1890.4
52.5°	2102.3	2102.3	2115.1	2109.0	2098.4	2093.3	2072.1	2058.1
55°	2306.3	2303.6	2307.4	2287.4	2266.8	2251.7	2225.6	2215.0
57.5°	2564.5	2532.1	2504.3	2478.7	2449.7	2431.8	2401.1	2390.0
60°	2930.9	2844.5	2807.1	2755.8	2707.9	2683.9	2643.2	2621.3
62.5°	3438.4	3295.1	3193.6	3080.3	2971.1	2894.1	2832.1	2804.9
65°	4024.9	3712.7	3454.5	3211.9	3006.2	2842.7	2751.9	2723.4
67.5°	4247.9	3674.7	3229.1	2881.3	2631.4	2436.8	2328.0	2305.2
68°	4200.6	3587.7	3124.9	2768.5	2517.7	2321.4	2213.2	2192.6
70°	3705.4	3026.7	2538.3	2183.7	1949.4	1762.7	1686.3	1653.3
72.5°	2526.0	1943.9	1491.0	1192.8	1017.7	899.5	829.1	805.2
75°	1162.6	785.7	524.7	392.0	332.9	304.4	282.6	277.1
77.5°	339.0	246.4	211.9	196.3	184.6	174.5	167.3	166.7
80°	161.2	151.2	146.7	136.6	126.0	116.5	109.9	111.0
82.5°	108.2	105.5	105.5	95.4	78.6	67.5	55.8	50.1
85°	57.4	59.6	63.1	59.6	51.8	38.4	25.2	27.3
87.5°	19.6	22.3	23.4	22.8	20.7	15.6	11.7	11.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)