

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: P270327

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270327
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8790.2 lumens
Efficiency: N/A
Efficacy: 103.4 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 - G1

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

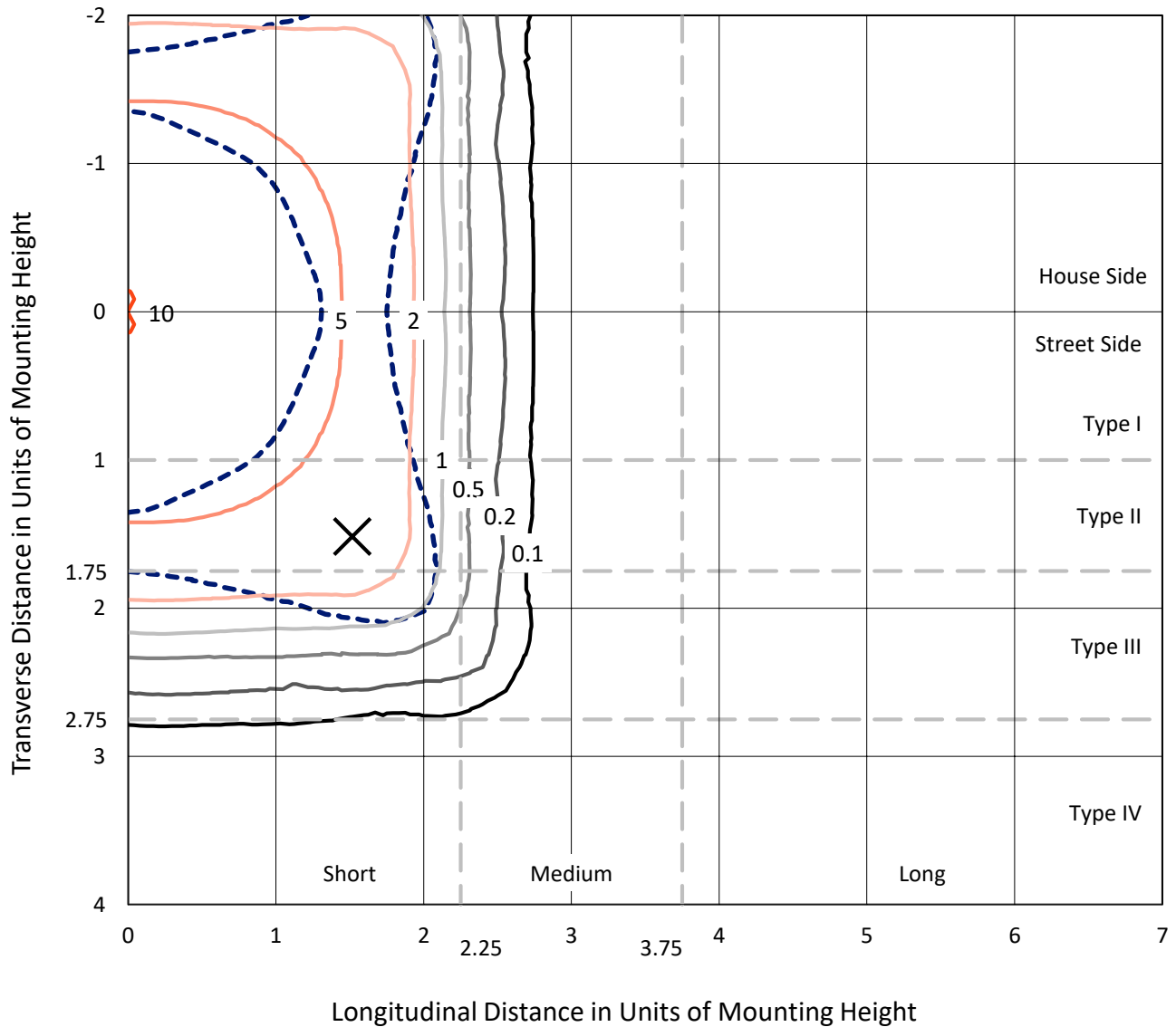


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Iso-Footcandle Lines of Horizontal Illumination

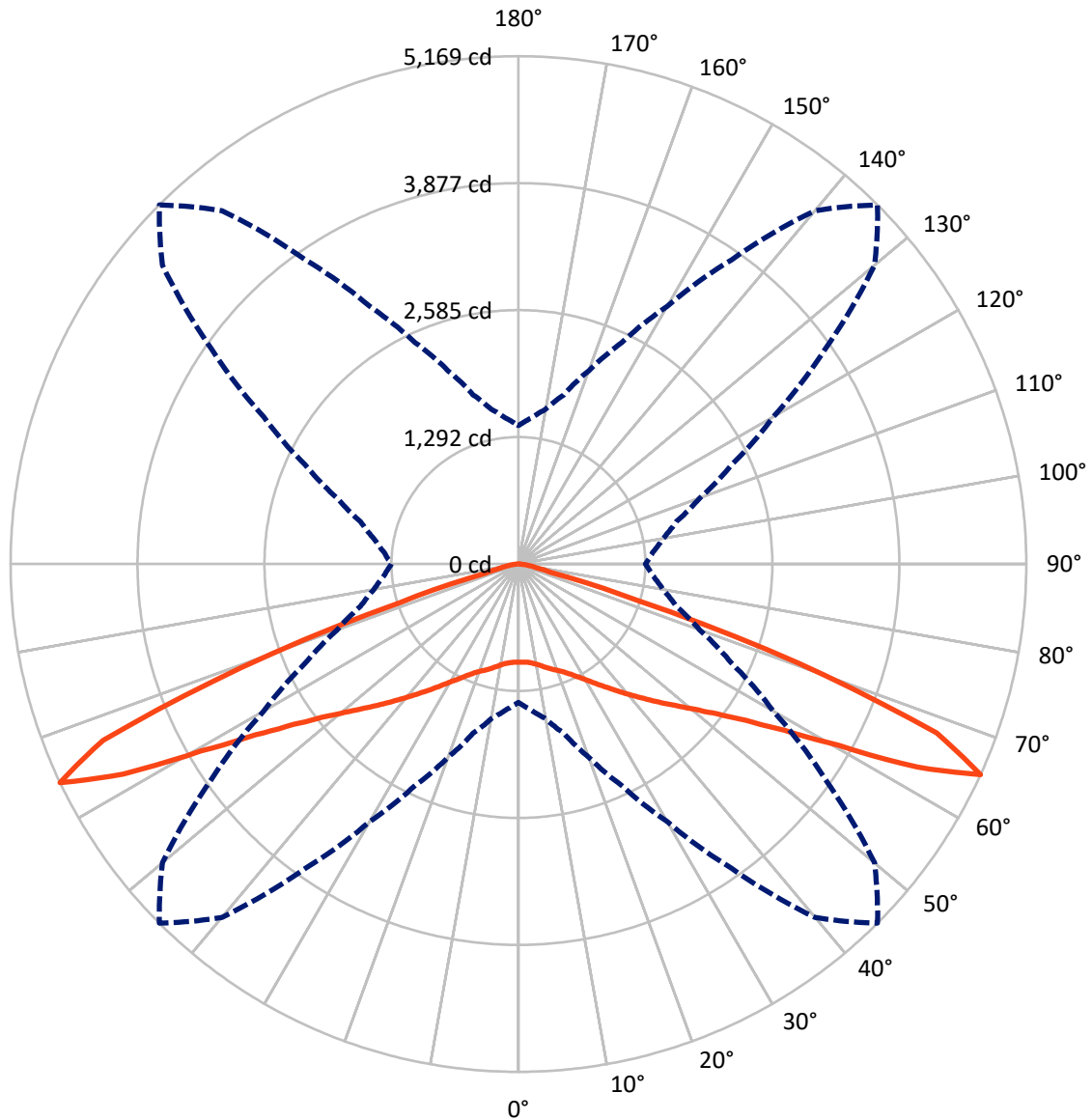
× Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4395.1	0.0	4395.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4395.1	0.0	4395.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	8790.2	0.0	8790.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.4	1.1
10°-20°	312.1	3.6
20°-30°	582.2	6.6
30°-40°	981.6	11.2
40°-50°	1594.4	18.1
50°-60°	2498.2	28.4
60°-70°	2358.2	26.8
70°-80°	317.8	3.6
80°-90°	48.4	0.6
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°	8790.2	100.0
0°-180°	8790.2	100.0



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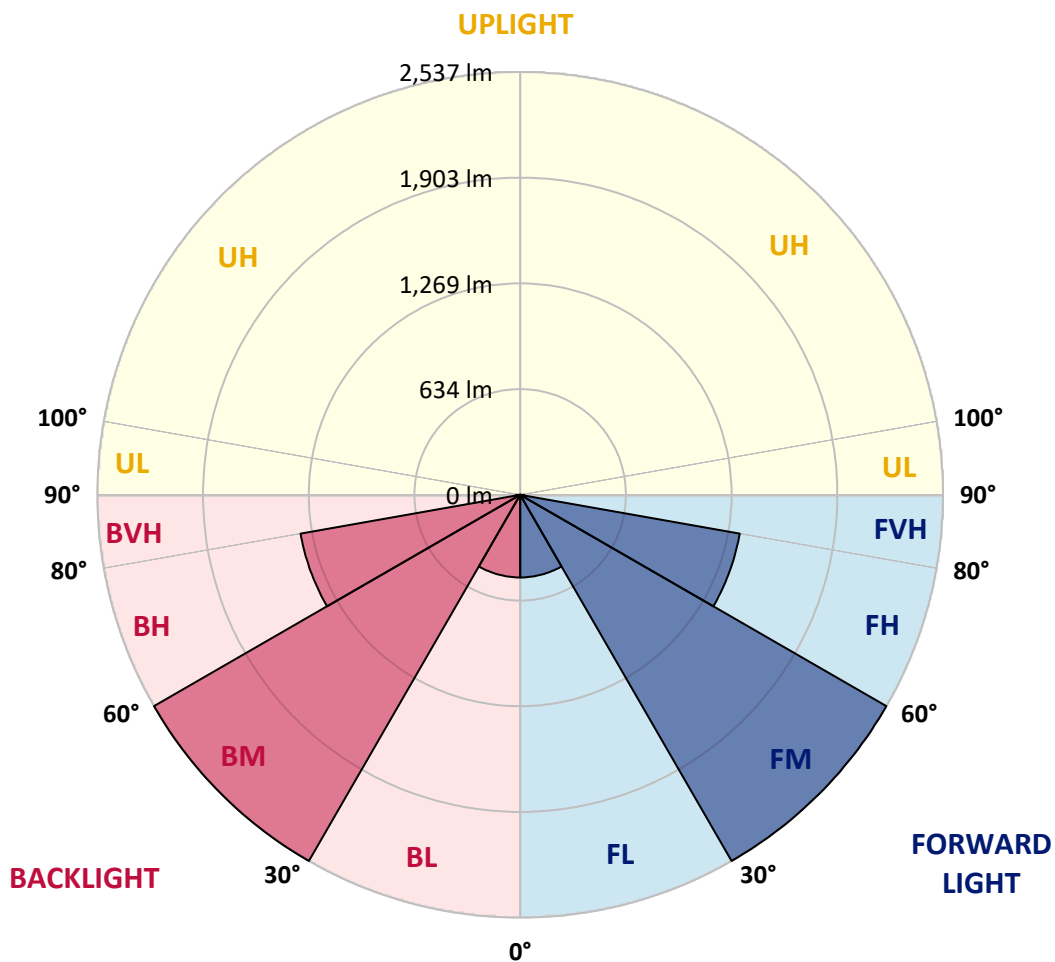
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	495.8	5.6			
FM	(30°-60°)	2537.1	28.9			
FH	(60°-80°)	1338.0	15.2			G1/1800
FVH	(80°-90°)	24.2	0.3			G1/100
BL	(0°-30°)	495.8	5.6	B1/500		
BM	(30°-60°)	2537.1	28.9	B3/5000		
BH	(60°-80°)	1338.0	15.2	B3/2500		G1/1800
BVH	(80°-90°)	24.2	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-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
2.5°	1008.1	1008.1	1009.8	1009.2	1007.0	1005.4	1003.6	1001.5	1000.4	999.4	998.7
5°	1013.6	1013.6	1015.3	1014.6	1013.0	1010.9	1009.8	1008.1	1006.5	1005.4	1005.9
7.5°	1027.2	1027.8	1028.3	1027.8	1026.1	1024.4	1022.4	1021.8	1019.5	1017.9	1019.0
10°	1048.1	1048.1	1048.6	1049.1	1048.1	1044.2	1044.2	1043.1	1041.0	1038.7	1039.2
12.5°	1071.0	1071.0	1071.6	1071.6	1071.6	1069.4	1069.9	1069.4	1066.6	1065.6	1066.6
15°	1093.4	1094.0	1094.0	1095.2	1095.2	1095.8	1097.9	1097.9	1096.8	1096.2	1096.2
17.5°	1119.7	1120.8	1121.4	1123.2	1123.6	1124.7	1127.0	1127.5	1128.0	1126.4	1127.0
20°	1154.9	1155.4	1157.0	1157.6	1159.7	1159.7	1160.9	1160.3	1159.3	1157.0	1157.0
22.5°	1194.2	1195.4	1198.7	1198.7	1201.4	1199.7	1200.2	1198.7	1196.0	1194.7	1193.7
25°	1245.7	1247.3	1250.1	1249.1	1250.1	1247.3	1247.3	1247.3	1245.7	1244.2	1243.6
27.5°	1310.8	1308.1	1310.8	1308.7	1308.1	1306.0	1306.6	1305.3	1303.8	1303.3	1301.0
30°	1378.8	1375.6	1377.1	1377.7	1376.7	1376.1	1373.9	1372.3	1369.5	1370.0	1368.4
32.5°	1456.5	1453.3	1455.0	1455.4	1454.4	1455.4	1455.0	1451.0	1447.8	1450.0	1450.0
35°	1549.0	1546.9	1551.3	1552.9	1549.7	1548.0	1545.9	1541.4	1536.6	1539.8	1540.4
37.5°	1660.2	1657.6	1660.7	1665.2	1659.2	1655.8	1647.1	1640.6	1637.3	1638.9	1641.1
40°	1775.8	1776.3	1785.7	1786.6	1780.1	1776.3	1767.5	1757.8	1748.5	1748.5	1751.2
42.5°	1897.3	1898.9	1909.9	1913.7	1911.6	1904.4	1892.4	1880.3	1868.4	1870.5	1873.9
45°	2034.8	2032.5	2044.2	2053.3	2051.8	2049.6	2038.1	2016.2	2005.1	2004.7	2010.1
47.5°	2179.4	2183.7	2195.7	2211.6	2211.1	2205.6	2190.8	2170.6	2150.4	2152.0	2158.5
50°	2348.0	2354.0	2374.3	2390.2	2392.4	2390.7	2373.2	2349.6	2321.2	2322.7	2331.6
52.5°	2499.2	2507.9	2531.5	2564.3	2584.6	2593.9	2582.4	2560.4	2531.5	2533.1	2542.5
55°	2636.0	2649.7	2684.8	2729.7	2770.2	2807.9	2824.9	2824.5	2803.0	2807.9	2820.0
57.5°	2722.0	2741.2	2794.3	2866.5	2947.0	3023.2	3088.8	3150.7	3164.4	3190.2	3190.2
60°	2606.4	2651.3	2722.0	2845.7	3004.0	3174.8	3359.9	3540.1	3656.1	3747.5	3698.3
62.5°	2176.7	2242.9	2342.1	2505.2	2751.6	3056.6	3428.3	3847.3	4284.1	4551.4	4355.4
65°	1408.4	1491.5	1599.4	1782.9	2093.4	2486.0	3027.6	3780.4	4694.9	5169.0	4731.1
67.5°	557.9	614.4	680.0	810.5	1079.9	1465.3	2073.1	3001.7	4145.7	4593.0	4101.9
70°	266.6	276.0	288.5	316.6	383.8	518.1	832.9	1479.0	2542.5	3013.9	2481.6
72.5°	192.7	194.5	200.4	209.8	229.4	256.8	312.2	452.2	876.7	1274.8	877.7
75°	146.2	148.4	151.6	156.7	167.1	180.2	201.0	240.9	300.0	346.0	299.6
77.5°	111.2	113.4	116.2	121.0	126.5	135.9	143.5	159.4	184.5	194.5	193.2
80°	81.0	84.9	89.2	93.7	97.5	101.9	102.3	110.0	124.2	133.6	130.9
82.5°	51.5	54.7	66.3	71.1	71.8	72.9	72.3	72.9	80.5	87.0	84.9
85°	32.9	35.0	41.1	46.5	45.5	47.6	47.6	46.5	43.3	37.2	44.3
87.5°	16.3	17.0	19.8	24.7	23.5	20.8	20.2	20.2	14.8	12.5	13.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	999.9	999.9	999.9	999.9	999.9	999.9	999.9	999.9
2.5°	997.1	998.2	996.6	996.6	996.0	997.1	995.5	995.5
5°	1004.8	1006.5	1005.9	1005.9	1007.0	1008.1	1007.4	1007.0
7.5°	1018.5	1019.5	1020.7	1021.3	1022.4	1021.8	1022.9	1022.4
10°	1039.2	1038.3	1039.9	1038.3	1038.7	1037.6	1038.3	1038.3
12.5°	1065.6	1064.0	1062.9	1061.7	1061.7	1059.6	1059.6	1060.1
15°	1095.8	1093.0	1090.7	1089.6	1088.6	1088.6	1086.9	1088.0
17.5°	1125.2	1122.5	1118.7	1118.7	1117.0	1116.0	1114.8	1117.6
20°	1156.5	1153.8	1151.5	1151.0	1147.8	1146.6	1147.1	1150.5
22.5°	1192.6	1191.0	1191.0	1189.8	1187.6	1186.0	1186.0	1189.8
25°	1241.4	1238.0	1238.7	1239.1	1238.0	1238.0	1237.0	1239.8
27.5°	1301.0	1298.3	1299.9	1301.0	1299.9	1301.6	1299.9	1302.2
30°	1371.2	1369.5	1371.2	1372.8	1370.0	1370.0	1368.9	1370.5
32.5°	1455.0	1452.6	1453.7	1453.7	1450.0	1446.7	1442.3	1445.6
35°	1546.9	1544.1	1546.3	1548.0	1543.6	1540.4	1533.8	1536.6
37.5°	1648.2	1649.3	1652.1	1659.2	1658.0	1652.6	1647.6	1649.8
40°	1761.5	1767.1	1779.1	1784.0	1782.9	1777.4	1770.9	1771.9
42.5°	1889.7	1896.9	1909.3	1917.6	1913.7	1906.2	1897.8	1901.2
45°	2029.4	2040.3	2056.7	2064.9	2060.0	2051.8	2040.3	2046.2
47.5°	2177.1	2199.1	2221.0	2231.8	2230.2	2218.8	2204.0	2205.6
50°	2354.0	2383.1	2411.1	2421.9	2413.7	2396.1	2375.4	2374.8
52.5°	2574.2	2605.4	2628.4	2625.7	2605.4	2578.0	2554.4	2553.3
55°	2849.1	2859.5	2856.2	2832.5	2797.1	2754.4	2724.2	2719.3
57.5°	3181.3	3146.4	3094.9	3023.8	2943.7	2862.7	2807.9	2787.7
60°	3587.7	3429.5	3245.4	3051.6	2874.8	2742.3	2658.4	2607.5
62.5°	3923.3	3465.0	3053.8	2717.1	2441.7	2277.9	2163.5	2092.8
65°	3808.4	2993.6	2397.8	1963.5	1663.0	1493.8	1372.8	1292.3
67.5°	2942.0	2000.3	1392.0	964.8	731.6	619.3	541.0	490.0
70°	1483.5	767.2	465.0	328.1	280.4	260.7	247.6	239.8
72.5°	435.3	290.7	241.5	213.5	196.5	184.5	176.8	173.1
75°	240.9	196.5	173.6	157.7	146.8	138.5	133.6	130.3
77.5°	165.8	142.9	131.4	121.0	112.3	106.2	102.3	99.2
80°	116.2	104.7	99.6	94.2	87.7	82.6	77.3	75.0
82.5°	77.3	72.3	71.1	66.8	63.1	57.5	47.6	44.3
85°	45.5	44.8	44.8	43.3	40.6	35.7	28.4	28.4
87.5°	15.9	16.3	17.0	18.1	17.5	14.8	12.0	11.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)