

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: P196394

Luminaire Tested: **NAV-AF-02-D-UNV-5MQ-7030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196394
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-7030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8266.6 lumens
Efficiency: N/A
Efficacy: 125.3 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

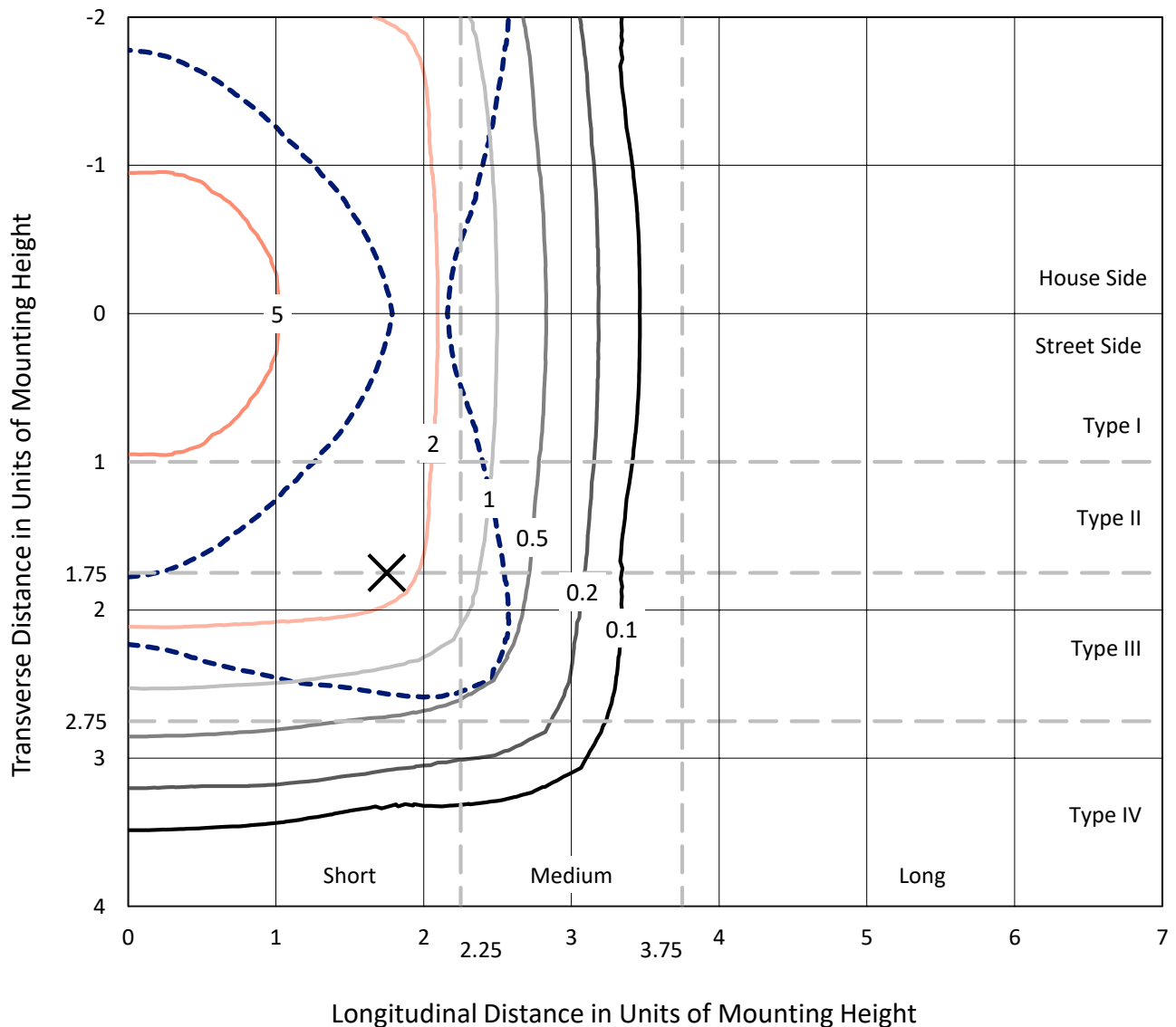
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

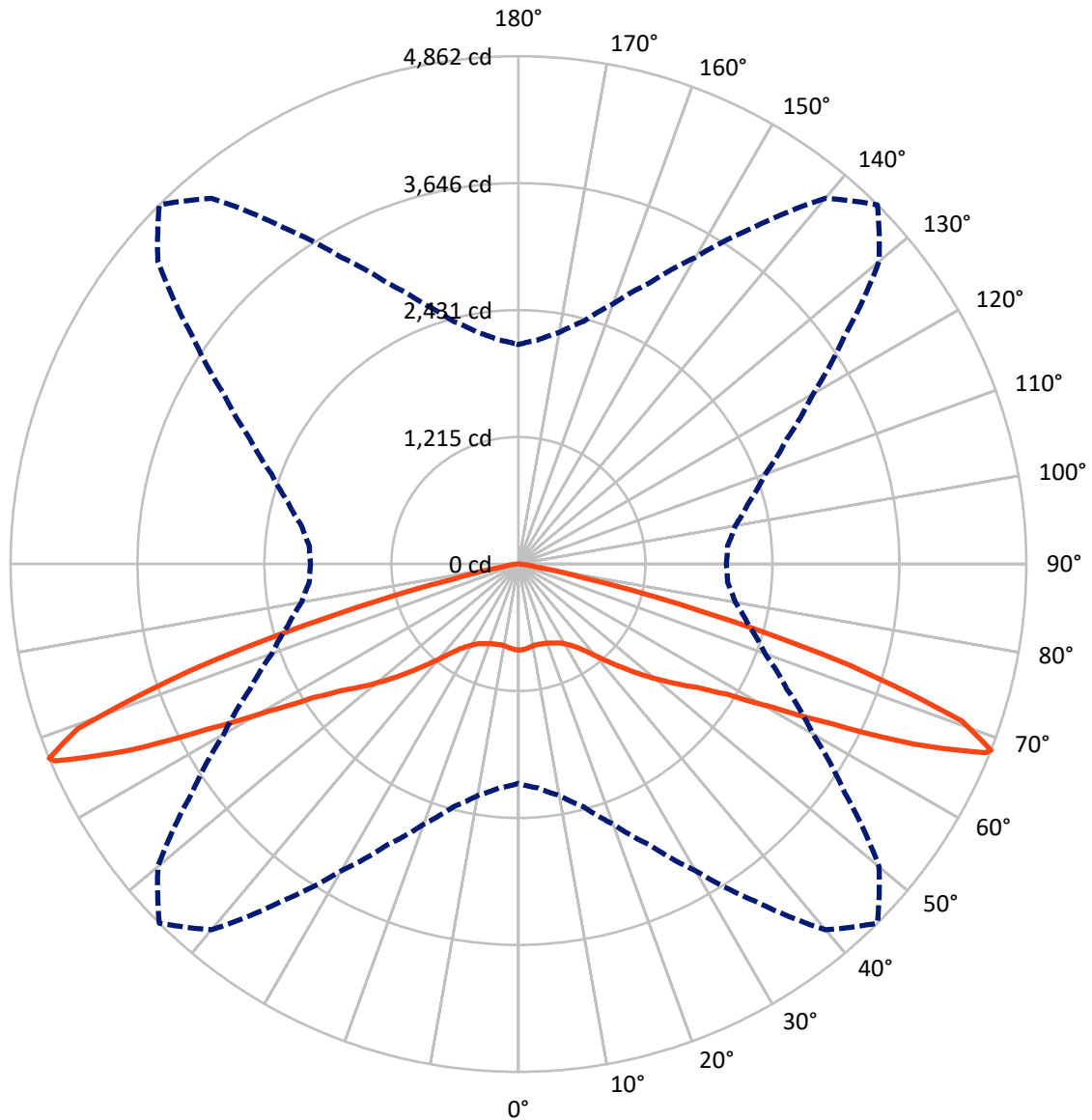
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 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	4133.3	0.0	4133.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4133.3	0.0	4133.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	8266.6	0.0	8266.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	0.9
10°-20°	223.8	2.7
20°-30°	380.5	4.6
30°-40°	622.6	7.5
40°-50°	1112.7	13.5
50°-60°	1879.1	22.7
60°-70°	2913.8	35.2
70°-80°	1001.8	12.1
80°-90°	55.1	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°	8266.6	100.0
0°-180°	8266.6	100.0

Coefficient of Utilization



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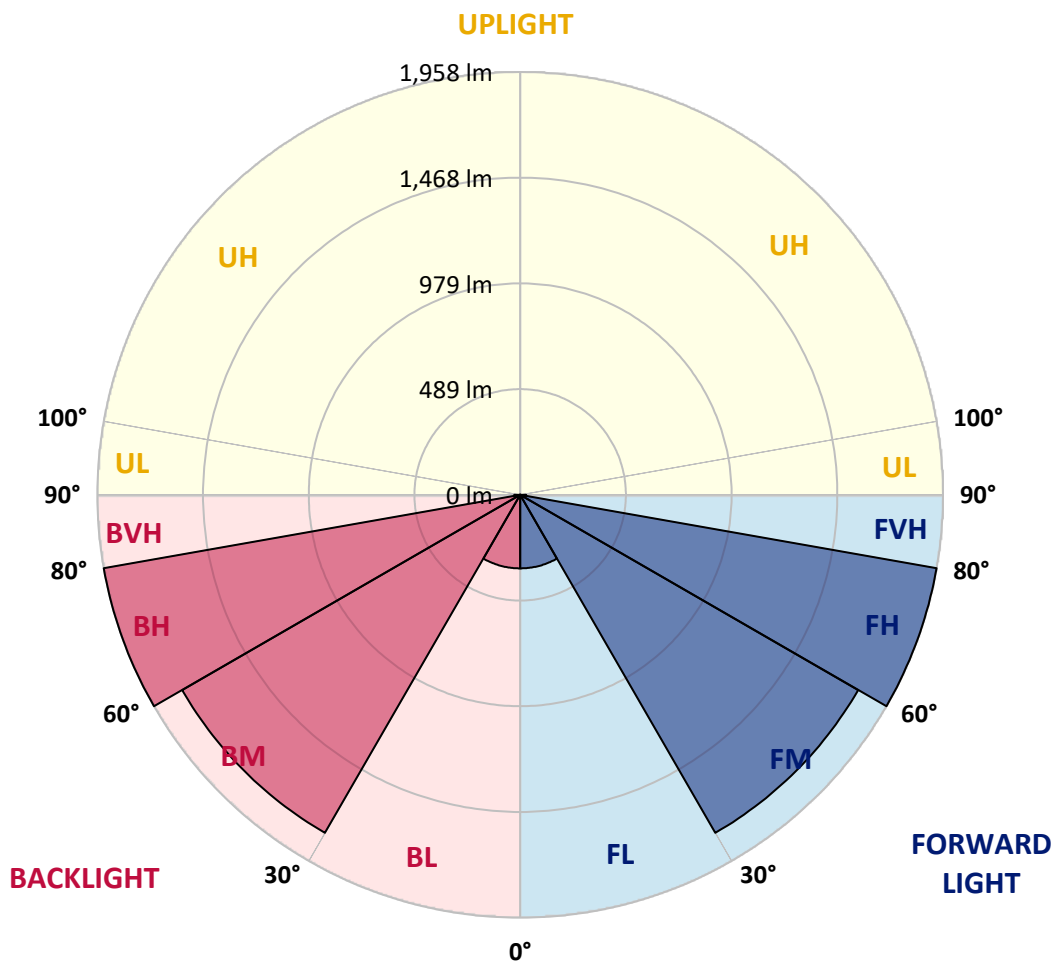
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	340.7	4.1			
FM	(30°-60°)	1807.2	21.9			
FH	(60°-80°)	1957.8	23.7			G2/5000
FVH	(80°-90°)	27.5	0.3			G1/100
BL	(0°-30°)	340.7	4.1	B1/500		
BM	(30°-60°)	1807.2	21.9	B2/2500		
BH	(60°-80°)	1957.8	23.7	B3/2500		G2/5000
BVH	(80°-90°)	27.5	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°	824.6	824.6	824.6	824.6	824.6	824.6	824.6	824.6	824.6	824.6	824.6
2.5°	828.1	828.1	829.2	828.6	827.1	825.7	824.2	822.6	821.6	820.5	819.6
5°	819.6	819.6	821.1	820.1	819.0	817.5	816.5	815.0	814.0	813.0	813.4
7.5°	808.4	809.4	810.4	809.9	807.9	807.4	805.9	805.4	804.3	802.8	803.4
10°	798.8	799.3	800.4	799.8	799.3	797.8	797.3	796.7	796.3	794.2	793.8
12.5°	789.2	790.2	791.2	791.7	791.2	791.7	792.2	792.6	792.2	791.2	791.2
15°	781.5	782.7	784.2	785.7	786.1	789.2	791.2	793.2	794.8	795.3	793.8
17.5°	777.5	779.0	781.1	784.2	786.6	790.2	793.8	796.7	799.3	799.8	798.2
20°	777.1	778.6	781.5	785.1	789.7	794.2	799.8	804.3	806.9	808.4	806.9
22.5°	780.5	782.7	786.6	791.2	796.7	802.8	809.9	815.0	820.1	822.0	820.5
25°	790.7	792.6	797.3	802.8	808.9	816.5	823.6	830.2	835.3	837.8	835.8
27.5°	811.9	812.5	817.5	823.6	830.7	837.3	846.4	849.4	853.5	856.0	853.5
30°	841.9	842.8	847.5	857.0	863.5	872.2	877.3	880.3	884.9	887.4	884.4
32.5°	887.4	888.4	892.4	901.6	907.6	914.2	920.3	922.2	926.8	929.9	926.4
35°	951.6	953.8	957.2	963.3	968.4	973.4	978.0	976.4	979.5	983.6	980.0
37.5°	1039.7	1039.3	1040.2	1044.8	1049.9	1052.9	1060.1	1056.4	1059.5	1063.0	1061.0
40°	1142.6	1142.6	1142.0	1150.1	1152.1	1155.2	1162.7	1158.2	1162.3	1166.4	1162.7
42.5°	1259.4	1261.5	1264.0	1270.5	1276.1	1277.1	1280.7	1278.7	1283.8	1287.3	1283.8
45°	1394.1	1397.1	1400.1	1415.4	1417.8	1420.0	1422.4	1415.9	1421.5	1424.5	1423.4
47.5°	1533.8	1539.4	1545.9	1561.7	1571.8	1576.3	1578.4	1570.7	1571.2	1575.8	1576.3
50°	1691.8	1697.8	1704.5	1722.2	1731.8	1739.9	1742.3	1733.7	1734.8	1738.4	1739.3
52.5°	1837.5	1844.7	1858.8	1882.5	1896.3	1910.4	1911.5	1900.8	1905.4	1907.8	1905.9
55°	1974.8	1983.8	2002.6	2034.4	2059.2	2087.1	2099.8	2088.2	2088.2	2086.1	2085.1
57.5°	2134.7	2144.8	2164.0	2201.0	2235.5	2275.5	2309.8	2321.4	2342.7	2349.8	2338.7
60°	2375.7	2386.2	2406.0	2454.6	2498.1	2556.3	2613.1	2659.2	2734.0	2774.5	2738.0
62.5°	2595.9	2612.1	2658.6	2743.6	2837.8	2945.6	3070.6	3159.8	3296.0	3363.8	3272.1
65°	2545.7	2578.6	2669.8	2803.4	2997.7	3231.7	3486.3	3730.7	4012.2	4156.4	3970.2
67.5°	2223.8	2251.7	2349.8	2505.2	2747.7	3070.1	3466.0	3972.2	4552.9	4823.1	4493.7
68°	2100.7	2153.0	2250.6	2405.1	2649.5	2966.4	3389.1	3935.7	4569.6	4861.6	4505.8
70°	1610.8	1629.5	1723.1	1861.9	2125.5	2436.4	2863.1	3486.3	4202.5	4503.2	4137.2
72.5°	765.4	776.5	837.3	973.9	1141.5	1394.5	1771.2	2358.9	3004.3	3317.2	2952.1
75°	280.5	283.0	297.1	329.5	392.3	487.6	668.2	1033.7	1530.2	1824.8	1536.3
77.5°	151.4	151.9	157.5	165.5	176.7	189.3	216.7	290.5	468.7	637.8	495.1
80°	95.2	94.6	100.2	106.8	114.4	120.5	123.0	131.6	148.3	173.6	159.4
82.5°	48.6	53.1	65.8	72.8	84.0	86.1	83.5	83.0	88.1	95.2	98.3
85°	26.9	23.8	35.0	46.6	50.6	52.1	52.7	49.6	48.6	47.6	50.1
87.5°	13.6	12.7	15.2	23.3	24.8	20.2	20.8	17.7	12.1	12.1	12.7
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°	824.6	824.6	824.6	824.6	824.6	824.6	824.6	824.6
2.5°	818.6	819.0	818.1	818.1	818.1	818.6	818.1	817.5
5°	811.9	813.0	813.0	813.4	814.0	814.0	814.0	814.0
7.5°	802.3	802.8	803.8	803.8	803.8	803.8	803.8	803.8
10°	793.2	792.2	791.7	790.7	790.7	789.2	789.7	790.2
12.5°	788.7	786.6	785.7	784.2	783.1	781.5	781.5	782.1
15°	790.7	787.6	784.6	783.6	782.7	781.5	780.5	781.1
17.5°	794.8	791.2	787.6	785.7	783.6	782.1	781.5	782.1
20°	803.4	798.2	792.6	789.2	785.1	784.2	782.7	784.2
22.5°	815.0	808.9	801.9	795.3	790.7	788.7	786.6	788.2
25°	829.2	822.6	815.5	807.9	802.8	801.3	798.8	798.8
27.5°	849.0	843.4	837.3	830.2	825.1	823.6	819.6	819.6
30°	880.3	874.7	869.1	863.0	858.0	856.5	851.4	851.4
32.5°	921.8	915.7	912.2	907.2	903.0	900.6	894.5	894.0
35°	977.6	972.0	971.5	967.8	963.7	964.3	958.2	957.2
37.5°	1057.5	1052.9	1054.5	1051.4	1047.9	1050.8	1047.4	1047.4
40°	1159.7	1158.2	1159.7	1157.7	1158.2	1158.7	1155.6	1156.7
42.5°	1283.2	1279.2	1288.2	1287.3	1285.8	1289.8	1282.7	1277.7
45°	1425.5	1423.9	1433.1	1434.6	1431.6	1434.1	1421.5	1420.9
47.5°	1579.9	1579.9	1588.0	1587.0	1583.9	1584.5	1569.3	1559.6
50°	1740.8	1739.9	1747.9	1746.0	1741.8	1741.4	1725.6	1716.0
52.5°	1908.4	1908.4	1920.0	1914.4	1904.8	1900.3	1881.1	1868.5
55°	2093.6	2091.1	2094.7	2076.5	2057.8	2044.0	2020.3	2010.7
57.5°	2328.1	2298.7	2273.3	2250.0	2223.8	2207.6	2179.7	2169.6
60°	2660.7	2582.2	2548.3	2501.7	2458.2	2436.4	2399.5	2379.6
62.5°	3121.3	2991.2	2899.0	2796.3	2697.1	2627.2	2571.0	2546.2
65°	3653.8	3370.3	3136.0	2915.8	2729.0	2580.7	2498.1	2472.3
67.5°	3856.3	3335.9	2931.4	2615.5	2388.9	2212.2	2113.4	2092.7
68°	3813.2	3256.9	2836.8	2513.3	2285.4	2107.4	2009.2	1990.3
70°	3363.8	2747.7	2304.3	1982.3	1769.7	1600.1	1530.7	1500.9
72.5°	2293.2	1764.6	1353.6	1082.8	923.8	816.5	752.7	731.0
75°	1055.5	713.3	476.4	355.8	302.2	276.4	256.6	251.7
77.5°	307.8	223.8	192.4	178.2	167.6	158.4	151.9	151.4
80°	146.3	137.2	133.2	124.0	114.4	105.8	99.8	100.7
82.5°	98.3	95.7	95.7	86.6	71.3	61.3	50.6	45.6
85°	52.1	54.2	57.3	54.2	47.1	35.0	22.7	24.8
87.5°	17.7	20.2	21.3	20.8	18.7	14.2	10.6	10.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)