

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: P196880

Luminaire Tested: **NAV-AF-02-D-UNV-5MQ-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196880
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 3000K, 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: 8552 lumens
Efficiency: N/A
Efficacy: 100.6 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

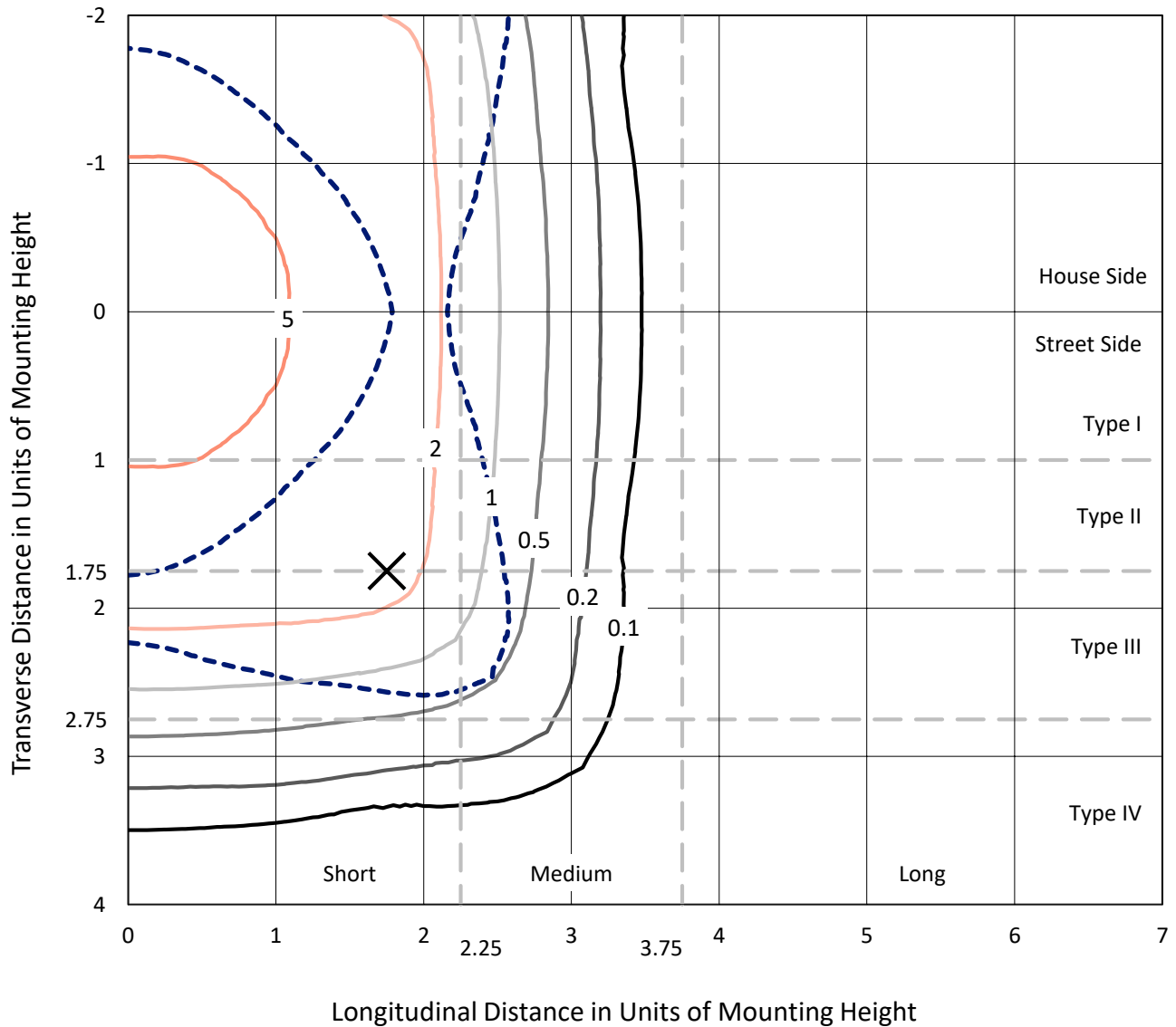
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

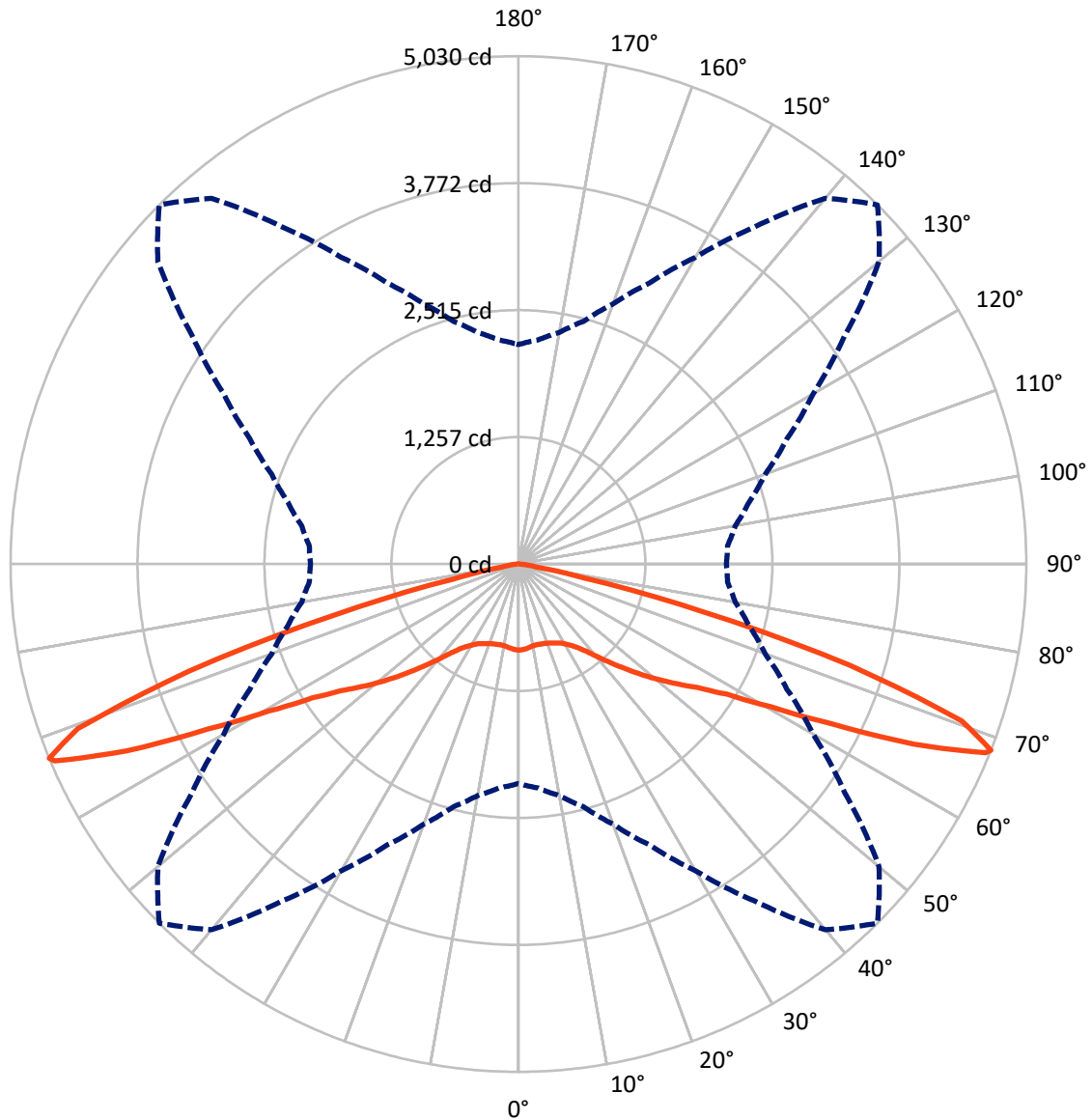
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 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	4276.0	0.0	4276.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	4276.0	0.0	4276.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	8552.0	0.0	8552.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.8	0.9
10°-20°	231.5	2.7
20°-30°	393.6	4.6
30°-40°	644.1	7.5
40°-50°	1151.1	13.5
50°-60°	1944.0	22.7
60°-70°	3014.5	35.2
70°-80°	1036.4	12.1
80°-90°	57.0	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°	8552.0	100.0
0°-180°	8552.0	100.0



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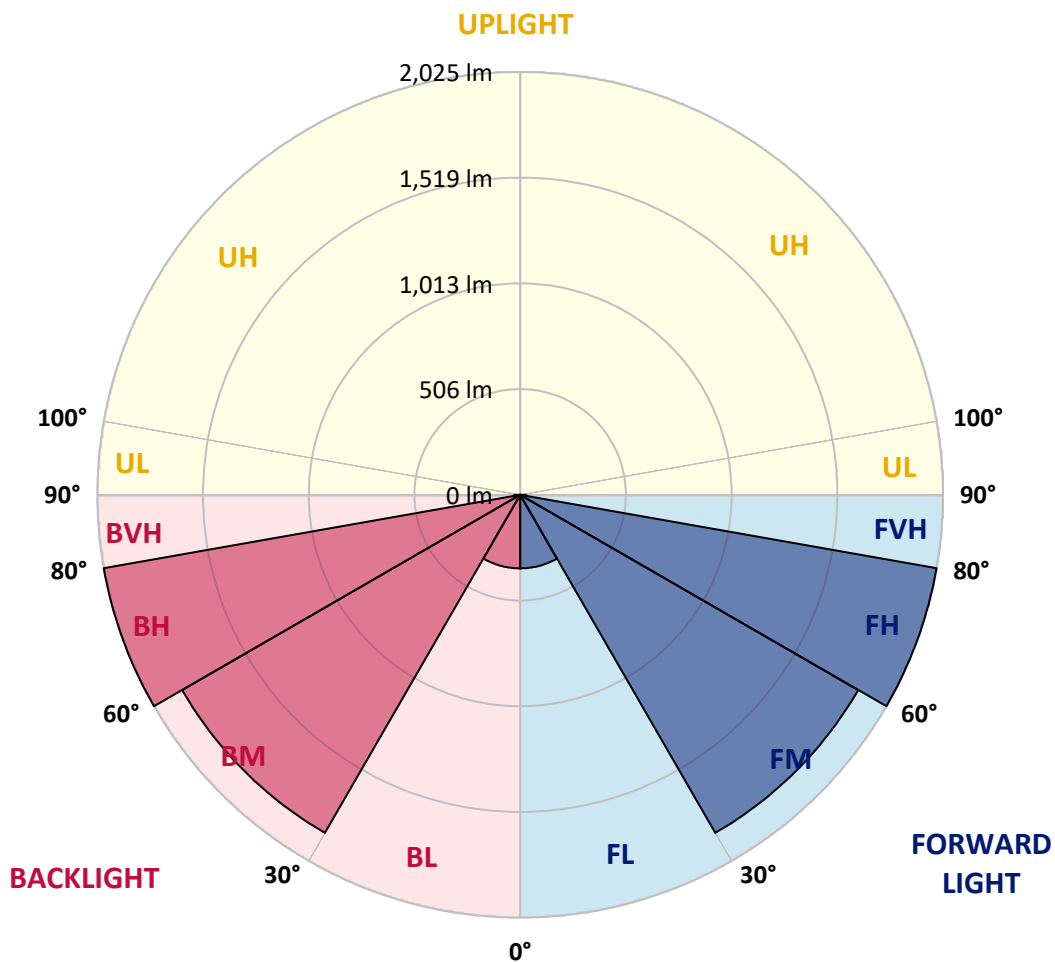
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	352.5	4.1			
FM	(30°-60°)	1869.6	21.9			
FH	(60°-80°)	2025.4	23.7			G2/5000
FVH	(80°-90°)	28.5	0.3			G1/100
BL	(0°-30°)	352.5	4.1	B1/500		
BM	(30°-60°)	1869.6	21.9	B2/2500		
BH	(60°-80°)	2025.4	23.7	B3/2500		G2/5000
BVH	(80°-90°)	28.5	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°	853.1	853.1	853.1	853.1	853.1	853.1	853.1	853.1	853.1	853.1	853.1
2.5°	856.8	856.8	857.8	857.3	855.7	854.1	852.6	851.0	849.9	848.9	847.9
5°	847.9	847.9	849.4	848.4	847.3	845.8	844.7	843.1	842.1	841.0	841.6
7.5°	836.3	837.4	838.4	837.9	835.8	835.3	833.7	833.2	832.1	830.6	831.1
10°	826.4	826.9	828.0	827.4	826.9	825.3	824.8	824.3	823.8	821.7	821.1
12.5°	816.4	817.5	818.5	819.0	818.5	819.0	819.6	820.1	819.6	818.5	818.5
15°	808.6	809.6	811.2	812.8	813.3	816.4	818.5	820.6	822.2	822.7	821.1
17.5°	804.4	806.0	808.1	811.2	813.8	817.5	821.1	824.3	826.9	827.4	825.9
20°	803.9	805.4	808.6	812.2	817.0	821.7	827.4	832.1	834.8	836.3	834.8
22.5°	807.5	809.6	813.8	818.5	824.3	830.6	837.9	843.1	848.4	850.5	848.9
25°	818.0	820.1	824.8	830.6	836.9	844.7	852.0	858.8	864.1	866.7	864.6
27.5°	840.0	840.5	845.8	852.0	859.4	866.2	875.6	878.7	882.9	885.6	882.9
30°	870.9	871.9	876.7	886.6	893.4	902.3	907.6	910.7	915.4	918.0	914.9
32.5°	918.0	919.1	923.3	932.7	939.0	945.8	952.1	954.2	958.9	962.0	958.3
35°	984.5	986.6	990.3	996.6	1001.8	1007.1	1011.8	1010.2	1013.3	1017.5	1013.9
37.5°	1075.7	1075.1	1076.2	1080.9	1086.1	1089.3	1096.6	1092.9	1096.1	1099.7	1097.6
40°	1182.0	1182.0	1181.4	1189.8	1191.9	1195.1	1202.9	1198.2	1202.4	1206.6	1202.9
42.5°	1302.9	1305.0	1307.6	1314.5	1320.2	1321.3	1324.9	1322.8	1328.1	1331.7	1328.1
45°	1442.2	1445.4	1448.5	1464.2	1466.8	1468.9	1471.6	1464.8	1470.5	1473.7	1472.6
47.5°	1586.8	1592.5	1599.3	1615.6	1626.1	1630.8	1632.9	1625.0	1625.5	1630.2	1630.8
50°	1750.2	1756.4	1763.3	1781.6	1791.5	1799.9	1802.5	1793.6	1794.7	1798.3	1799.4
52.5°	1901.0	1908.3	1923.0	1947.6	1961.7	1976.4	1977.4	1966.4	1971.2	1973.8	1971.7
55°	2042.9	2052.3	2071.7	2104.7	2130.4	2159.2	2172.3	2160.2	2160.2	2158.1	2157.1
57.5°	2208.4	2218.9	2238.8	2277.0	2312.6	2354.0	2389.6	2401.6	2423.6	2431.0	2419.4
60°	2457.7	2468.7	2489.1	2539.4	2584.4	2644.6	2703.3	2750.9	2828.4	2870.3	2832.6
62.5°	2685.5	2702.2	2750.4	2838.4	2935.8	3047.3	3176.7	3268.9	3409.7	3479.9	3385.1
65°	2633.6	2667.7	2761.9	2900.2	3101.3	3343.2	3606.6	3859.6	4150.7	4300.0	4107.3
67.5°	2300.6	2329.4	2431.0	2591.7	2842.6	3176.2	3585.7	4109.4	4710.0	4989.7	4648.8
68°	2173.3	2227.2	2328.3	2488.0	2741.0	3068.8	3506.1	4071.7	4727.3	5029.5	4661.3
70°	1666.4	1685.8	1782.6	1926.1	2199.0	2520.5	2962.0	3606.6	4347.7	4658.7	4280.1
72.5°	791.8	803.3	866.2	1007.6	1180.9	1442.8	1832.4	2440.4	3108.1	3431.7	3054.1
75°	290.1	292.7	307.4	340.9	405.9	504.3	691.3	1069.4	1583.1	1887.9	1589.4
77.5°	156.6	157.1	162.9	171.2	182.8	195.9	224.1	300.6	484.9	659.8	512.2
80°	98.5	97.9	103.7	110.5	118.4	124.6	127.3	136.2	153.4	179.6	165.0
82.5°	50.3	55.0	68.1	75.4	86.9	89.0	86.4	85.9	91.1	98.5	101.6
85°	27.8	24.6	36.1	48.2	52.4	53.9	54.5	51.3	50.3	49.2	51.8
87.5°	14.1	13.1	15.7	24.1	25.7	20.9	21.5	18.3	12.6	12.6	13.1
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°	853.1	853.1	853.1	853.1	853.1	853.1	853.1	853.1
2.5°	846.8	847.3	846.3	846.3	846.3	846.8	846.3	845.8
5°	840.0	841.0	841.0	841.6	842.1	842.1	842.1	842.1
7.5°	830.0	830.6	831.6	831.6	831.6	831.6	831.6	831.6
10°	820.6	819.6	819.0	818.0	818.0	816.4	817.0	817.5
12.5°	815.9	813.8	812.8	811.2	810.1	808.6	808.6	809.1
15°	818.0	814.9	811.7	810.7	809.6	808.6	807.5	808.1
17.5°	822.2	818.5	814.9	812.8	810.7	809.1	808.6	809.1
20°	831.1	825.9	820.1	816.4	812.2	811.2	809.6	811.2
22.5°	843.1	836.9	829.5	822.7	818.0	815.9	813.8	815.4
25°	857.8	851.0	843.7	835.8	830.6	829.0	826.4	826.4
27.5°	878.2	872.5	866.2	858.8	853.6	852.0	847.9	847.9
30°	910.7	904.9	899.2	892.9	887.7	886.1	880.8	880.8
32.5°	953.6	947.4	943.7	938.4	934.3	931.6	925.4	924.8
35°	1011.2	1005.5	1005.0	1001.3	997.1	997.6	991.3	990.3
37.5°	1094.0	1089.3	1090.8	1087.7	1084.0	1087.2	1083.5	1083.5
40°	1199.8	1198.2	1199.8	1197.7	1198.2	1198.7	1195.6	1196.6
42.5°	1327.5	1323.4	1332.8	1331.7	1330.2	1334.4	1327.0	1321.8
45°	1474.7	1473.1	1482.6	1484.1	1481.0	1483.6	1470.5	1470.0
47.5°	1634.4	1634.4	1642.8	1641.8	1638.6	1639.1	1623.4	1613.5
50°	1801.0	1799.9	1808.3	1806.2	1802.0	1801.5	1785.3	1775.3
52.5°	1974.3	1974.3	1986.3	1980.6	1970.6	1965.9	1946.0	1932.9
55°	2166.0	2163.4	2167.0	2148.2	2128.8	2114.7	2090.0	2080.1
57.5°	2408.4	2378.1	2351.9	2327.8	2300.6	2283.8	2255.0	2244.5
60°	2752.5	2671.3	2636.2	2588.1	2543.0	2520.5	2482.3	2461.9
62.5°	3229.1	3094.5	2999.2	2892.9	2790.2	2717.9	2659.8	2634.1
65°	3780.0	3486.7	3244.2	3016.4	2823.2	2669.8	2584.4	2557.7
67.5°	3989.5	3451.1	3032.7	2705.9	2471.3	2288.5	2186.4	2164.9
68°	3944.9	3369.4	2934.7	2600.1	2364.5	2180.1	2078.5	2059.1
70°	3479.9	2842.6	2383.8	2050.8	1830.8	1655.4	1583.6	1552.7
72.5°	2372.3	1825.6	1400.3	1120.2	955.7	844.7	778.7	756.2
75°	1091.9	737.9	492.8	368.2	312.6	285.9	265.5	260.3
77.5°	318.4	231.5	199.0	184.3	173.3	163.9	157.1	156.6
80°	151.3	141.9	137.7	128.3	118.4	109.5	103.2	104.2
82.5°	101.6	99.0	99.0	89.6	73.8	63.4	52.4	47.1
85°	53.9	56.0	59.2	56.0	48.7	36.1	23.6	25.7
87.5°	18.3	20.9	22.0	21.5	19.4	14.7	11.0	11.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)