

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: P196460

Luminaire Tested: **NAV-AF-02-D-UNV-5WQ-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196460
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13444.3 lumens
Efficiency: N/A
Efficacy: 104.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 129
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

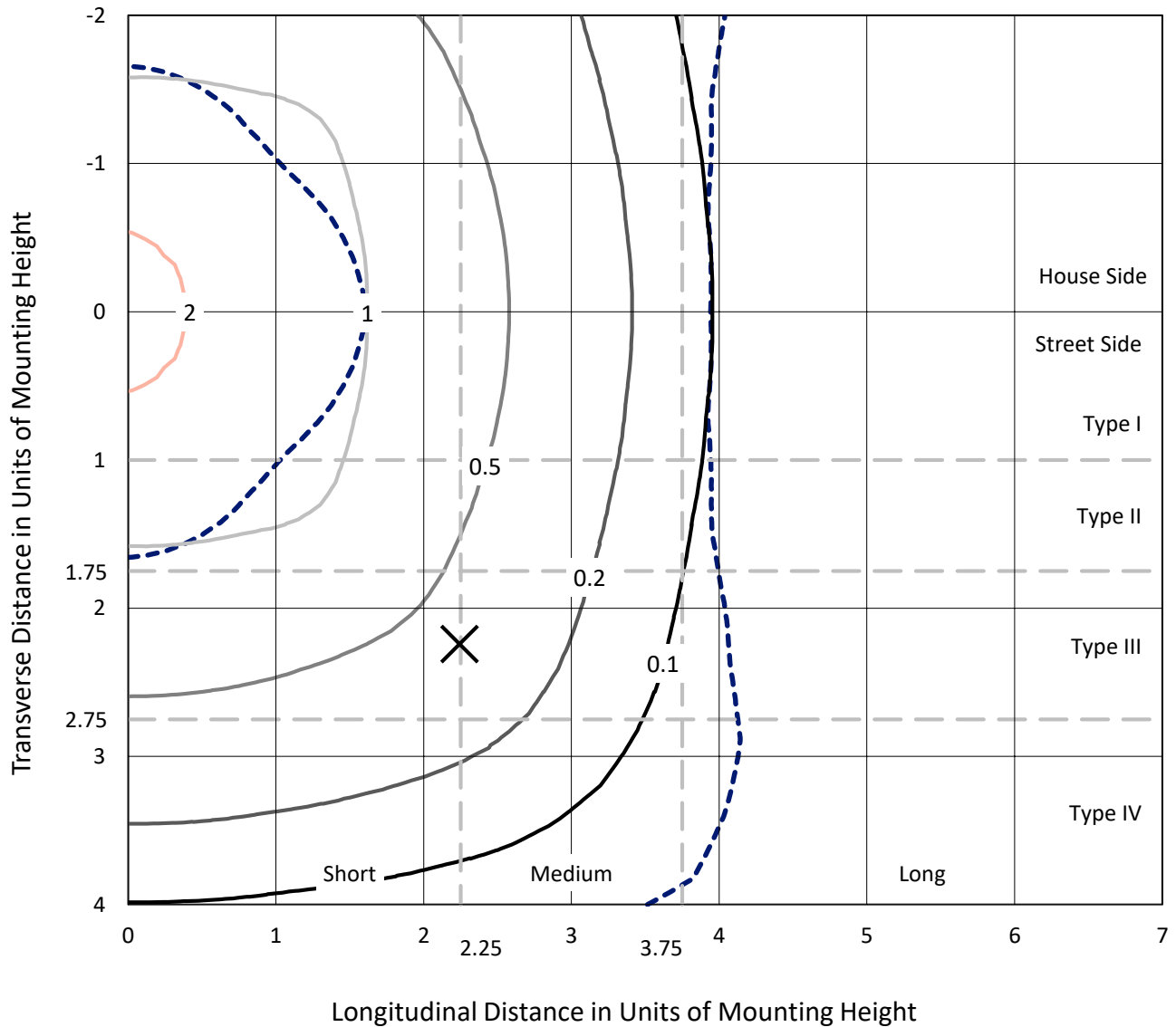


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Iso-Footcandle Lines of Horizontal Illumination

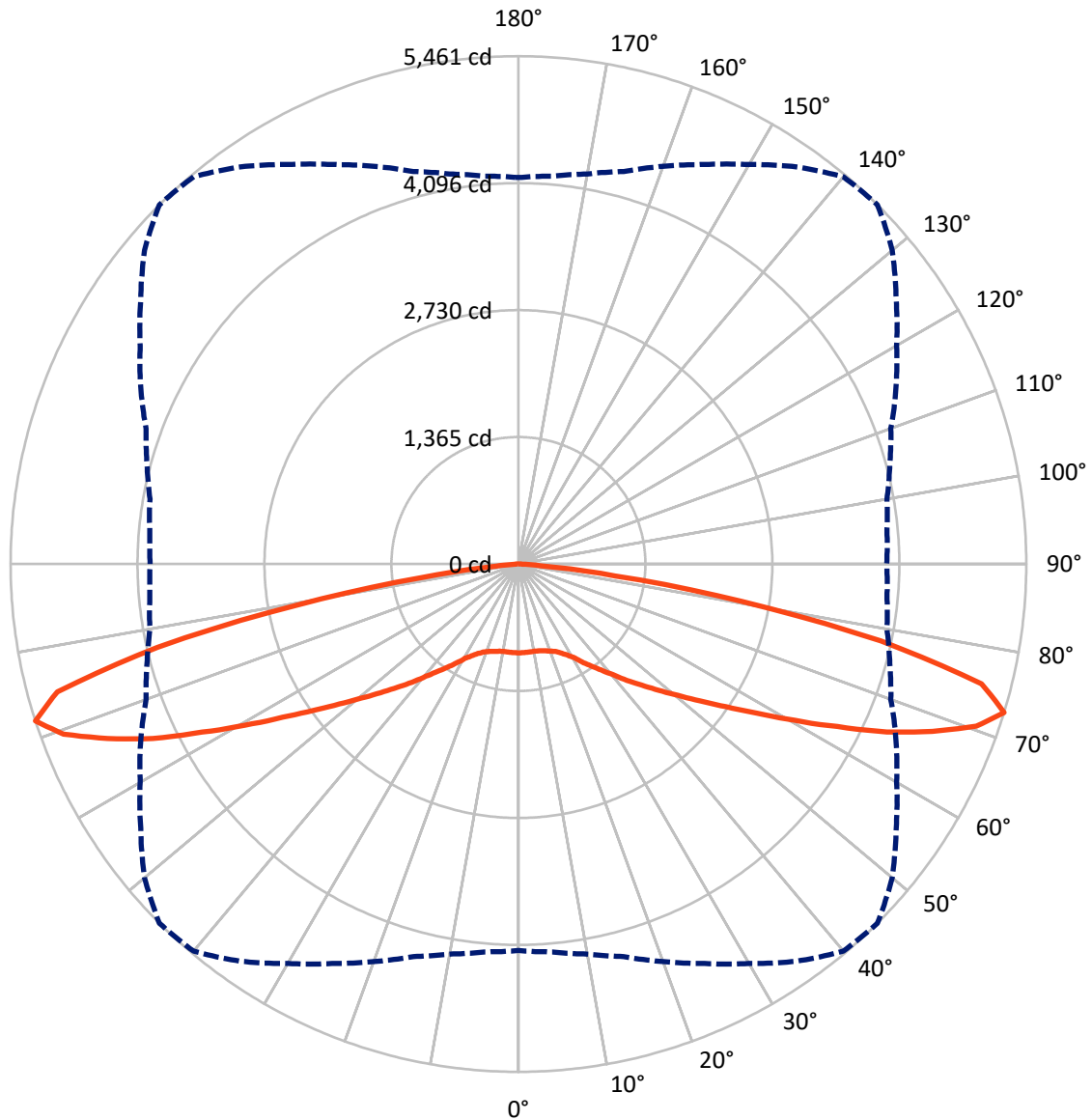
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.4 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6722.2	0.0	6722.2
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6722.2	0.0	6722.2
	% Fixture	50.0	0.0	50.0
Total	Lumens	13444.3	0.0	13444.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.2	0.7
10°-20°	276.1	2.1
20°-30°	498.4	3.7
30°-40°	850.2	6.3
40°-50°	1447.5	10.8
50°-60°	2329.5	17.3
60°-70°	3874.0	28.8
70°-80°	3747.6	27.9
80°-90°	329.8	2.5
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°	13444.3	100.0
0°-180°	13444.3	100.0



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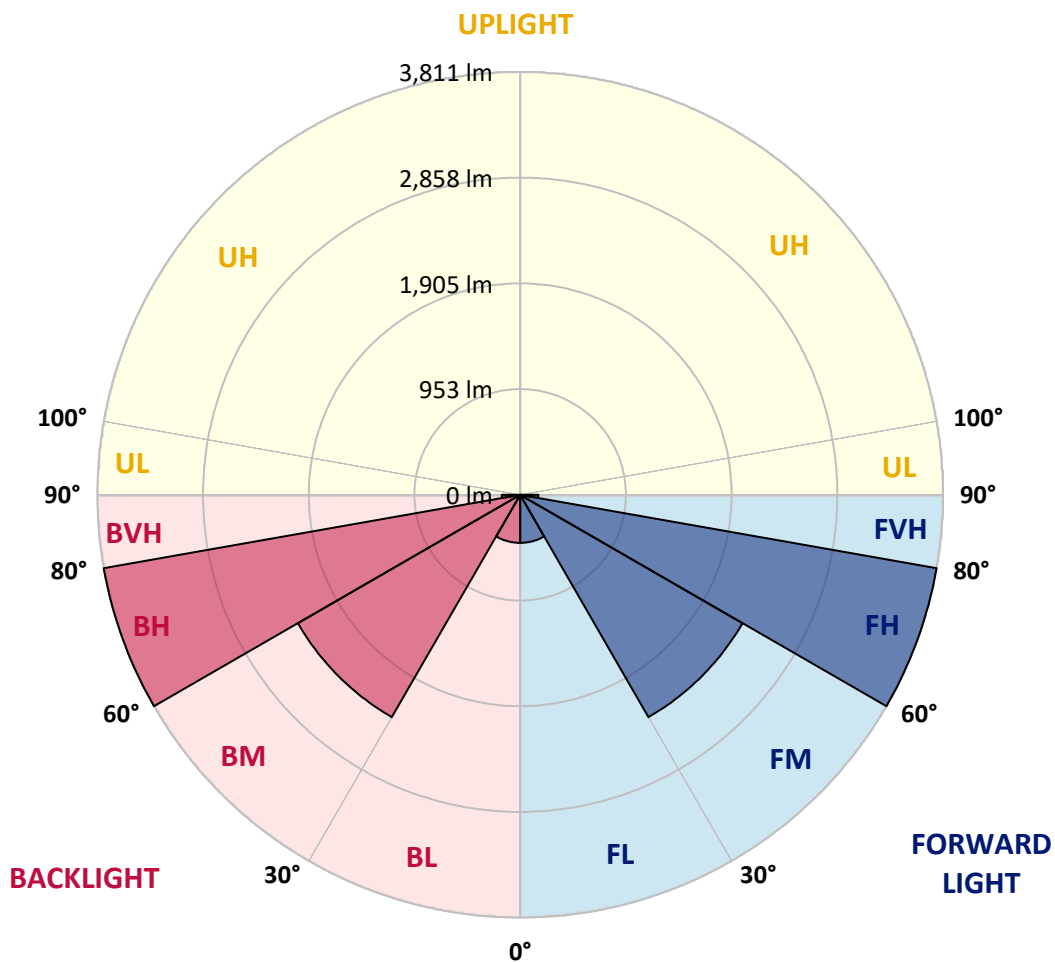
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	432.9	3.2			
FM (30°-60°)	2313.6	17.2			
FH (60°-80°)	3810.8	28.3			G2/5000
FVH (80°-90°)	164.9	1.2			G2/225
BL (0°-30°)	432.9	3.2	B1/500		
BM (30°-60°)	2313.6	17.2	B2/2500		
BH (60°-80°)	3810.8	28.3	B4/5000		G2/5000
BVH (80°-90°)	164.9	1.2			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	955.8	955.8	955.8	955.8	955.8	955.8	955.8	955.8	955.8	955.8	955.8
2.5°	963.2	963.2	964.1	963.2	961.6	960.7	958.3	956.7	954.9	954.2	952.5
5°	964.1	964.1	964.9	964.1	962.5	960.7	959.1	956.7	954.9	953.3	952.5
7.5°	967.4	968.2	969.0	968.2	964.9	963.2	960.7	958.3	954.9	953.3	951.6
10°	974.0	974.0	974.0	973.2	970.7	967.4	964.1	961.6	957.4	953.3	950.8
12.5°	979.0	979.8	979.8	978.1	974.8	970.7	967.4	964.9	961.6	958.3	955.8
15°	986.4	986.4	985.6	982.2	977.4	974.0	972.3	971.6	970.7	969.0	966.5
17.5°	1001.3	1000.5	998.0	993.0	987.2	984.8	983.2	983.2	983.2	982.2	980.6
20°	1022.7	1022.7	1019.5	1011.2	1006.3	1003.8	1001.3	1001.3	1001.3	998.8	996.3
22.5°	1057.6	1058.4	1053.5	1043.5	1036.9	1032.0	1028.5	1026.2	1023.6	1022.0	1017.9
25°	1104.7	1103.9	1098.2	1085.7	1080.8	1075.7	1069.2	1065.1	1061.7	1059.3	1054.3
27.5°	1154.5	1153.6	1147.0	1136.2	1132.9	1125.5	1120.5	1114.7	1110.5	1106.4	1101.5
30°	1218.1	1214.0	1209.1	1200.8	1199.1	1193.3	1186.7	1178.4	1171.8	1165.1	1159.4
32.5°	1275.2	1275.2	1267.7	1263.6	1267.0	1264.4	1265.3	1260.3	1256.2	1253.8	1248.0
35°	1354.7	1354.7	1351.3	1346.4	1347.1	1341.3	1340.6	1341.3	1344.8	1344.8	1338.1
37.5°	1460.6	1462.2	1451.5	1449.9	1445.7	1437.5	1433.3	1434.9	1442.3	1446.5	1437.5
40°	1592.1	1595.5	1592.1	1581.4	1576.4	1562.4	1554.1	1554.1	1559.9	1564.0	1560.8
42.5°	1722.0	1727.8	1722.0	1713.8	1709.7	1698.9	1694.7	1698.1	1705.5	1710.5	1705.5
45°	1866.9	1871.1	1863.6	1853.7	1848.6	1842.8	1840.5	1842.8	1851.2	1856.1	1854.4
47.5°	2009.3	2015.1	2005.9	2001.7	2001.7	1995.9	2002.6	2009.3	2016.7	2028.3	2023.3
50°	2148.2	2155.6	2149.9	2150.8	2157.4	2168.1	2180.5	2193.8	2207.0	2219.4	2221.1
52.5°	2272.4	2283.9	2284.8	2299.7	2320.3	2336.9	2371.7	2400.7	2432.1	2442.8	2437.9
55°	2403.1	2418.9	2439.5	2462.7	2495.8	2529.8	2588.5	2640.7	2682.0	2707.7	2703.5
57.5°	2590.2	2605.9	2627.3	2665.5	2715.1	2761.4	2841.8	2922.8	2985.7	3024.7	3005.6
60°	2832.6	2849.2	2877.4	2917.9	2982.4	3045.3	3155.4	3272.0	3369.7	3414.4	3379.6
62.5°	3153.7	3169.4	3187.6	3241.4	3313.4	3394.4	3532.7	3682.5	3806.6	3849.6	3800.8
65°	3611.3	3630.3	3636.1	3680.0	3750.4	3825.6	3974.7	4143.4	4284.9	4355.3	4257.7
67.5°	4126.8	4134.4	4157.6	4208.7	4280.8	4348.6	4466.2	4625.8	4761.6	4800.6	4696.2
70°	4429.0	4443.8	4484.3	4555.6	4641.6	4748.3	4876.6	5048.8	5202.7	5220.9	5088.4
72.5°	4155.7	4186.5	4258.5	4369.4	4549.8	4739.2	4960.2	5214.3	5435.2	5460.9	5248.2
75°	3333.3	3368.0	3454.1	3575.7	3789.2	4070.6	4390.0	4771.5	5102.5	5144.7	4863.3
77.5°	1776.7	1819.7	1944.7	2108.4	2413.1	2785.4	3170.2	3605.5	3886.9	3982.1	3779.3
80°	447.8	470.9	531.2	627.2	833.3	1133.7	1465.5	1933.9	2283.2	2431.2	2283.2
82.5°	173.8	191.2	207.7	219.3	239.2	280.6	387.4	631.4	850.7	1047.7	907.0
85°	66.9	71.1	102.6	116.7	116.7	128.3	147.3	173.8	215.1	235.0	197.0
87.5°	26.4	29.0	35.6	54.6	56.3	49.6	53.0	59.5	45.6	38.0	43.0
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°	955.8	955.8	955.8	955.8	955.8	955.8	955.8	955.8
2.5°	951.6	950.8	949.1	950.0	949.1	949.1	949.1	949.1
5°	950.8	950.8	949.1	949.1	949.1	950.0	949.1	949.1
7.5°	950.0	949.1	947.5	946.7	946.7	945.8	945.8	945.8
10°	948.4	946.7	945.0	944.2	944.2	942.6	942.6	942.6
12.5°	952.5	950.0	948.4	947.5	947.5	947.5	948.4	948.4
15°	964.1	959.1	956.7	955.8	956.7	958.3	959.1	960.0
17.5°	976.4	971.6	967.4	965.8	966.5	969.0	971.6	973.2
20°	992.2	988.0	983.2	981.4	981.4	984.8	986.4	988.9
22.5°	1014.6	1011.2	1007.2	1004.6	1003.0	1007.2	1009.5	1011.2
25°	1050.1	1046.8	1043.5	1041.0	1040.1	1044.3	1045.9	1046.8
27.5°	1097.3	1094.0	1092.4	1091.5	1089.0	1090.6	1093.1	1092.4
30°	1158.5	1161.0	1158.5	1158.5	1154.5	1156.1	1154.5	1152.8
32.5°	1240.4	1238.0	1230.5	1225.6	1219.8	1219.8	1217.2	1214.9
35°	1322.4	1314.1	1310.0	1312.4	1310.0	1311.6	1307.5	1303.4
37.5°	1419.2	1414.3	1413.4	1420.9	1419.2	1420.9	1420.9	1415.0
40°	1547.4	1544.2	1550.0	1562.4	1567.4	1566.6	1568.2	1560.8
42.5°	1694.7	1688.9	1691.5	1702.3	1708.0	1709.7	1708.9	1702.3
45°	1842.1	1843.7	1843.7	1855.3	1861.1	1864.4	1858.6	1856.1
47.5°	2008.4	2010.9	2005.1	2012.5	2014.2	2019.9	2015.1	2010.9
50°	2200.4	2191.3	2178.1	2180.5	2180.5	2178.8	2173.0	2168.1
52.5°	2414.7	2394.0	2369.2	2361.0	2351.8	2342.7	2331.1	2322.1
55°	2658.9	2623.2	2578.5	2557.9	2540.5	2519.8	2493.3	2484.2
57.5°	2941.8	2880.6	2821.1	2783.8	2739.1	2711.9	2677.8	2676.2
60°	3277.8	3195.1	3090.0	3034.5	2989.9	2957.5	2932.0	2922.0
62.5°	3665.9	3523.6	3410.2	3350.7	3298.5	3278.7	3246.4	3250.6
65°	4064.0	3919.1	3809.1	3761.1	3712.3	3699.1	3669.3	3680.0
67.5°	4495.2	4376.0	4255.1	4210.5	4165.7	4152.5	4122.0	4131.0
70°	4881.6	4730.2	4592.8	4505.1	4429.0	4367.6	4328.8	4313.1
72.5°	4958.5	4696.2	4480.1	4260.9	4134.4	4023.5	3977.9	3960.5
75°	4455.4	4048.3	3740.4	3483.0	3340.7	3179.3	3162.0	3137.9
77.5°	3465.7	3002.2	2629.9	2298.9	2107.7	1910.7	1842.8	1791.7
80°	2067.1	1588.8	1231.4	863.1	704.1	566.8	532.9	497.3
82.5°	739.8	474.1	319.5	249.1	222.6	205.2	192.0	174.6
85°	178.7	150.6	142.4	129.2	127.4	108.3	76.9	68.8
87.5°	57.2	52.1	53.0	50.5	53.0	39.8	32.2	29.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)