

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: P196924

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196924
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-04-D-UNV-5WQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13646 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

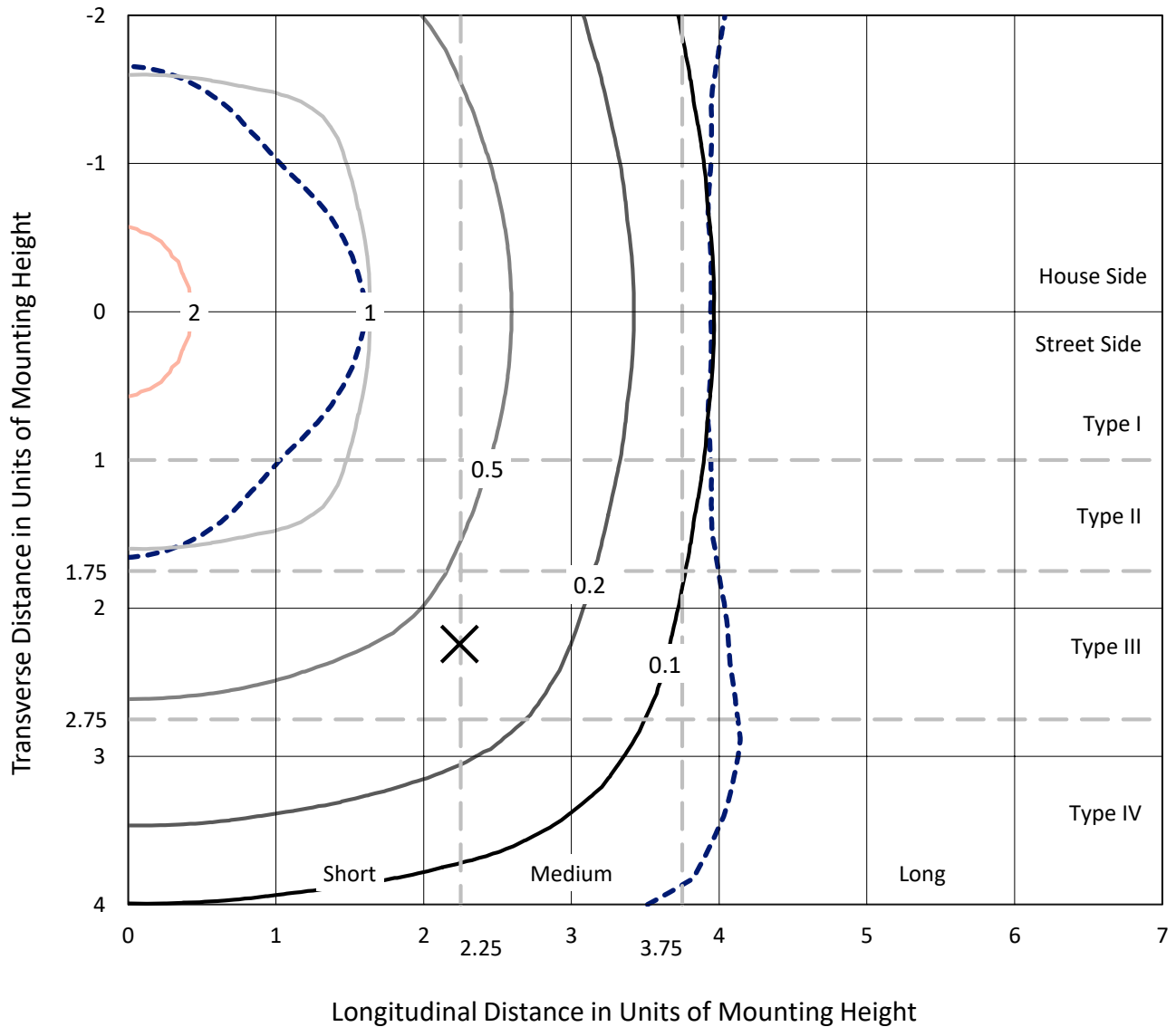
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

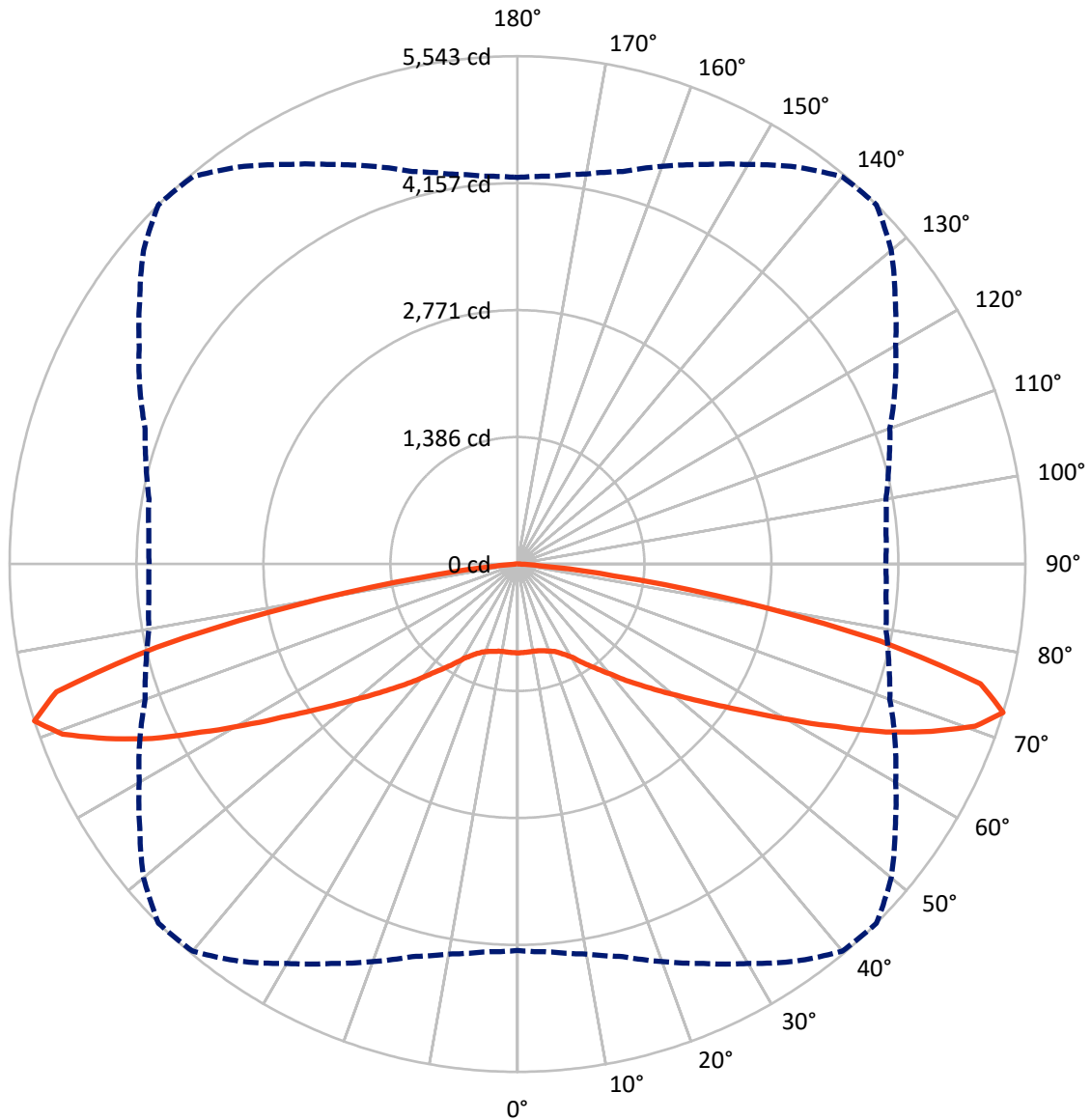
× Max cd
 - - - 1/2 Max cd



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	6823.0	0.0	6823.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6823.0	0.0	6823.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	13646.0	0.0	13646.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.6	0.7
10°-20°	280.2	2.1
20°-30°	505.9	3.7
30°-40°	862.9	6.3
40°-50°	1469.2	10.8
50°-60°	2364.4	17.3
60°-70°	3932.1	28.8
70°-80°	3803.8	27.9
80°-90°	334.8	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°	13646.0	100.0
0°-180°	13646.0	100.0



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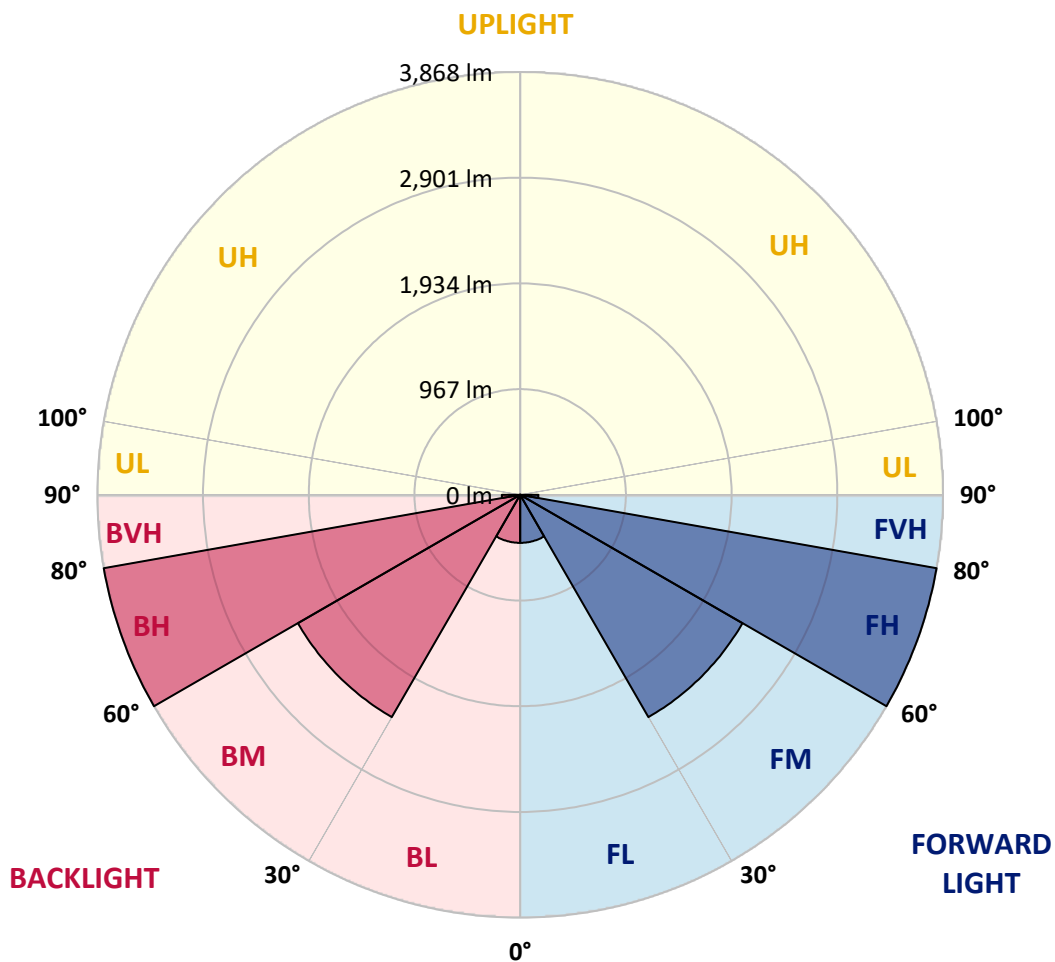
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	439.4	3.2			
FM (30°-60°)	2348.3	17.2			
FH (60°-80°)	3868.0	28.3			G2/5000
FVH (80°-90°)	167.4	1.2			G2/225
BL (0°-30°)	439.4	3.2	B1/500		
BM (30°-60°)	2348.3	17.2	B2/2500		
BH (60°-80°)	3868.0	28.3	B4/5000		G2/5000
BVH (80°-90°)	167.4	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°	970.1	970.1	970.1	970.1	970.1	970.1	970.1	970.1	970.1	970.1	970.1
2.5°	977.7	977.7	978.5	977.7	976.0	975.2	972.6	971.0	969.3	968.4	966.8
5°	978.5	978.5	979.4	978.5	976.8	975.2	973.5	971.0	969.3	967.6	966.8
7.5°	981.9	982.7	983.6	982.7	979.4	977.7	975.2	972.6	969.3	967.6	965.9
10°	988.6	988.6	988.6	987.8	985.2	981.9	978.5	976.0	971.8	967.6	965.1
12.5°	993.6	994.5	994.5	992.8	989.4	985.2	981.9	979.4	976.0	972.6	970.1
15°	1001.2	1001.2	1000.4	997.0	992.0	988.6	986.9	986.1	985.2	983.6	981.0
17.5°	1016.3	1015.5	1013.0	1007.9	1002.0	999.5	997.8	997.8	997.8	997.0	995.3
20°	1038.2	1038.2	1034.8	1026.4	1021.4	1018.8	1016.3	1016.3	1016.3	1013.8	1011.3
22.5°	1073.4	1074.3	1069.2	1059.2	1052.4	1047.4	1044.0	1041.5	1039.0	1037.3	1033.1
25°	1121.3	1120.5	1114.6	1102.0	1097.0	1091.9	1085.2	1081.0	1077.6	1075.1	1070.1
27.5°	1171.7	1170.9	1164.2	1153.2	1149.9	1142.3	1137.3	1131.4	1127.2	1123.0	1118.0
30°	1236.4	1232.2	1227.1	1218.7	1217.1	1211.2	1204.5	1196.1	1189.4	1182.6	1176.8
32.5°	1294.3	1294.3	1286.8	1282.6	1285.9	1283.4	1284.3	1279.2	1275.0	1272.5	1266.6
35°	1375.0	1375.0	1371.6	1366.6	1367.4	1361.5	1360.7	1361.5	1364.9	1364.9	1358.2
37.5°	1482.5	1484.2	1473.3	1471.6	1467.4	1459.0	1454.8	1456.5	1464.0	1468.2	1459.0
40°	1616.0	1619.4	1616.0	1605.1	1600.1	1585.8	1577.4	1577.4	1583.3	1587.5	1584.1
42.5°	1747.9	1753.8	1747.9	1739.5	1735.3	1724.4	1720.2	1723.6	1731.1	1736.2	1731.1
45°	1894.9	1899.1	1891.5	1881.5	1876.4	1870.5	1868.0	1870.5	1878.9	1884.0	1882.3
47.5°	2039.4	2045.2	2036.0	2031.8	2031.8	2025.9	2032.6	2039.4	2046.9	2058.7	2053.6
50°	2180.5	2188.0	2182.2	2183.0	2189.7	2200.6	2213.2	2226.7	2240.1	2252.7	2254.4
52.5°	2306.5	2318.2	2319.1	2334.2	2355.2	2372.0	2407.3	2436.7	2468.6	2479.5	2474.5
55°	2439.2	2455.1	2476.1	2499.7	2533.3	2567.7	2627.3	2680.2	2722.2	2748.3	2744.1
57.5°	2629.0	2645.0	2666.8	2705.4	2755.8	2802.9	2884.3	2966.7	3030.5	3070.0	3050.7
60°	2875.1	2891.9	2920.5	2961.6	3027.1	3091.0	3202.7	3321.1	3420.2	3465.6	3430.3
62.5°	3201.0	3217.0	3235.4	3290.0	3363.1	3445.4	3585.7	3737.7	3863.7	3907.4	3857.8
65°	3665.5	3684.8	3690.7	3735.2	3806.6	3883.0	4034.2	4205.6	4349.2	4420.6	4321.5
67.5°	4188.8	4196.3	4219.8	4271.9	4345.0	4413.9	4533.1	4695.3	4833.0	4872.5	4766.6
70°	4495.3	4510.5	4551.6	4623.9	4711.2	4819.6	4949.8	5124.5	5280.7	5299.2	5164.8
72.5°	4218.2	4249.2	4322.3	4434.9	4618.0	4810.3	5034.6	5292.4	5516.7	5542.7	5326.9
75°	3383.3	3418.5	3505.9	3629.4	3846.1	4131.7	4455.9	4843.1	5179.1	5221.9	4936.3
77.5°	1803.3	1847.0	1973.9	2140.2	2449.3	2827.2	3217.8	3659.6	3945.2	4041.8	3836.0
80°	454.4	477.9	539.2	636.7	845.8	1150.7	1487.5	1962.9	2317.4	2467.7	2317.4
82.5°	176.4	194.0	210.8	222.6	242.7	284.7	393.1	640.9	863.5	1063.4	920.6
85°	68.0	72.2	104.2	118.4	118.4	130.2	149.5	176.4	218.4	238.5	199.9
87.5°	26.9	29.4	36.1	55.4	57.1	50.4	53.8	60.5	46.2	38.6	43.7
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°	970.1	970.1	970.1	970.1	970.1	970.1	970.1	970.1
2.5°	965.9	965.1	963.4	964.2	963.4	963.4	963.4	963.4
5°	965.1	965.1	963.4	963.4	963.4	964.2	963.4	963.4
7.5°	964.2	963.4	961.7	960.9	960.9	960.0	960.0	960.0
10°	962.6	960.9	959.2	958.4	958.4	956.7	956.7	956.7
12.5°	966.8	964.2	962.6	961.7	961.7	961.7	962.6	962.6
15°	978.5	973.5	971.0	970.1	971.0	972.6	973.5	974.3
17.5°	991.1	986.1	981.9	980.2	981.0	983.6	986.1	987.8
20°	1007.1	1002.9	997.8	996.2	996.2	999.5	1001.2	1003.7
22.5°	1029.8	1026.4	1022.2	1019.7	1018.0	1022.2	1024.7	1026.4
25°	1065.9	1062.5	1059.2	1056.6	1055.8	1060.0	1061.7	1062.5
27.5°	1113.8	1110.4	1108.7	1107.9	1105.4	1107.0	1109.6	1108.7
30°	1175.9	1178.4	1175.9	1175.9	1171.7	1173.4	1171.7	1170.0
32.5°	1259.1	1256.5	1249.0	1243.9	1238.1	1238.1	1235.5	1233.0
35°	1342.2	1333.8	1329.6	1332.1	1329.6	1331.3	1327.1	1322.9
37.5°	1440.5	1435.5	1434.6	1442.2	1440.5	1442.2	1442.2	1436.3
40°	1570.7	1567.3	1573.2	1585.8	1590.8	1590.0	1591.7	1584.1
42.5°	1720.2	1714.3	1716.8	1727.8	1733.6	1735.3	1734.5	1727.8
45°	1869.7	1871.4	1871.4	1883.1	1889.0	1892.4	1886.5	1884.0
47.5°	2038.5	2041.0	2035.2	2042.7	2044.4	2050.3	2045.2	2041.0
50°	2233.4	2224.2	2210.7	2213.2	2213.2	2211.6	2205.7	2200.6
52.5°	2450.9	2429.9	2404.7	2396.3	2387.1	2377.9	2366.1	2356.9
55°	2698.7	2662.6	2617.2	2596.2	2578.6	2557.6	2530.7	2521.5
57.5°	2986.0	2923.8	2863.3	2825.6	2780.2	2752.5	2718.0	2716.4
60°	3327.0	3243.0	3136.3	3080.1	3034.7	3001.9	2975.9	2965.8
62.5°	3720.9	3576.5	3461.4	3400.9	3348.0	3327.8	3295.1	3299.3
65°	4124.9	3977.9	3866.2	3817.5	3768.0	3754.5	3724.3	3735.2
67.5°	4562.5	4441.6	4319.0	4273.6	4228.2	4214.8	4183.7	4193.0
70°	4954.8	4801.1	4661.7	4572.6	4495.3	4433.2	4393.7	4377.8
72.5°	5032.9	4766.6	4547.4	4324.8	4196.3	4083.8	4037.6	4019.9
75°	4522.2	4109.0	3796.5	3535.3	3390.8	3227.0	3209.4	3185.0
77.5°	3517.7	3047.3	2669.3	2333.3	2139.3	1939.4	1870.5	1818.5
80°	2098.2	1612.7	1249.8	876.1	714.8	575.4	540.9	504.8
82.5°	750.9	481.3	324.2	252.8	225.9	208.3	194.9	177.2
85°	181.4	152.9	144.5	131.0	129.4	110.0	78.1	69.7
87.5°	58.0	52.9	53.8	51.2	53.8	40.3	32.8	29.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)