

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: P196875

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196875
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-03-D-UNV-5MQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 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: 10371 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

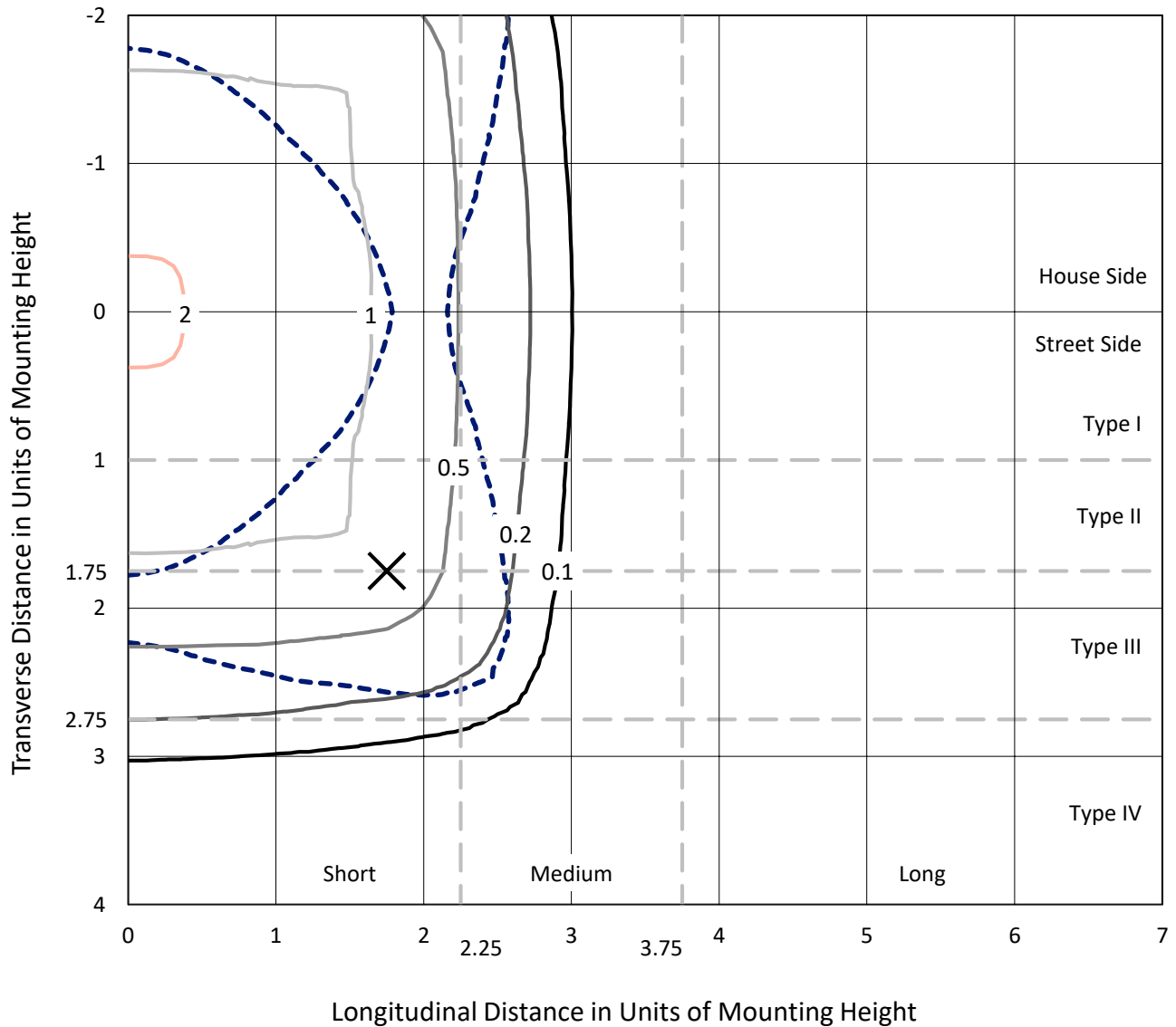
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

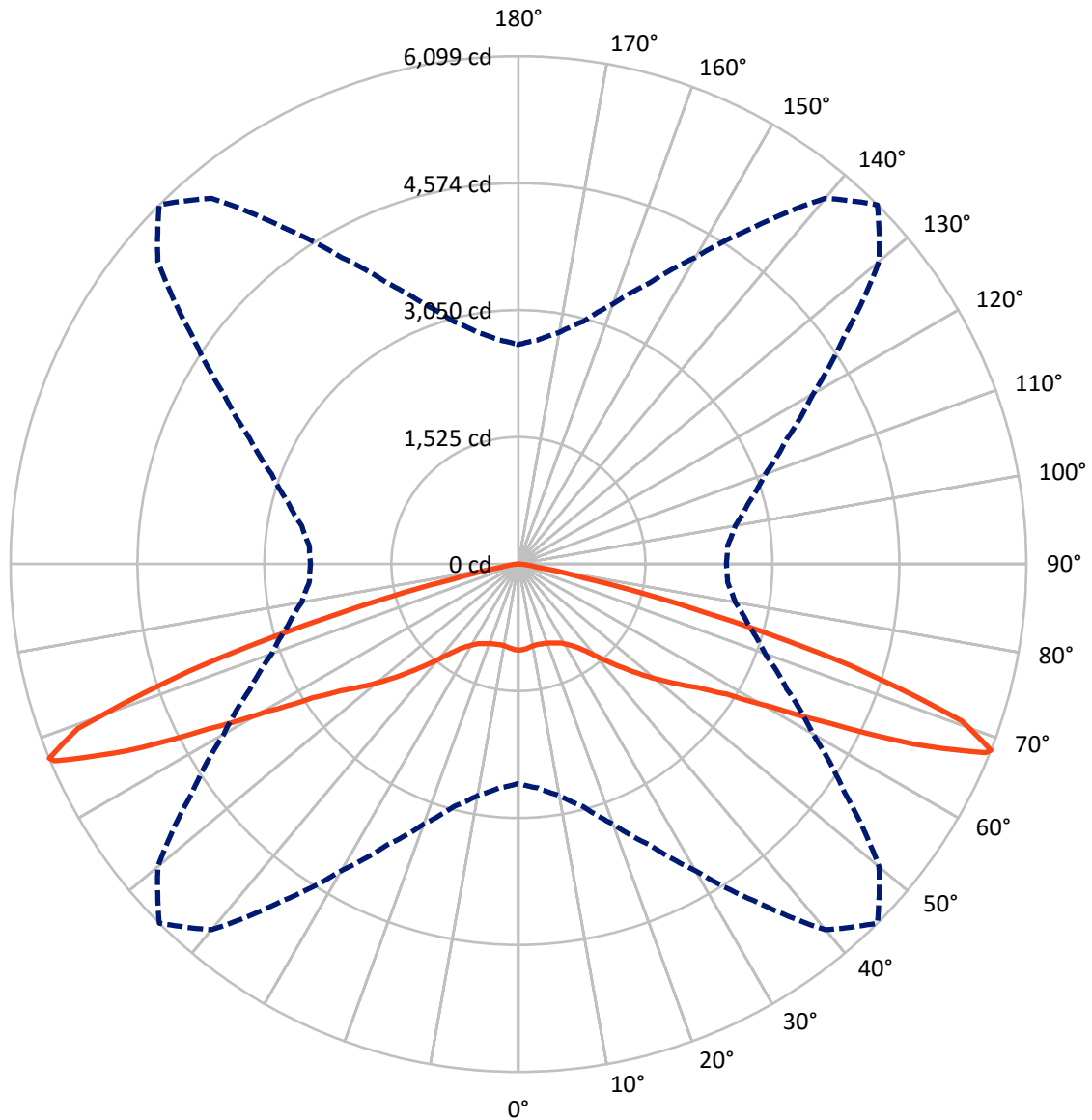
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.6 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	5185.5	0.0	5185.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5185.5	0.0	5185.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	10371.0	0.0	10371.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.8	0.9
10°-20°	280.8	2.7
20°-30°	477.3	4.6
30°-40°	781.1	7.5
40°-50°	1395.9	13.5
50°-60°	2357.5	22.7
60°-70°	3655.6	35.2
70°-80°	1256.9	12.1
80°-90°	69.1	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°	10371.0	100.0
0°-180°	10371.0	100.0

Coefficient of Utilization



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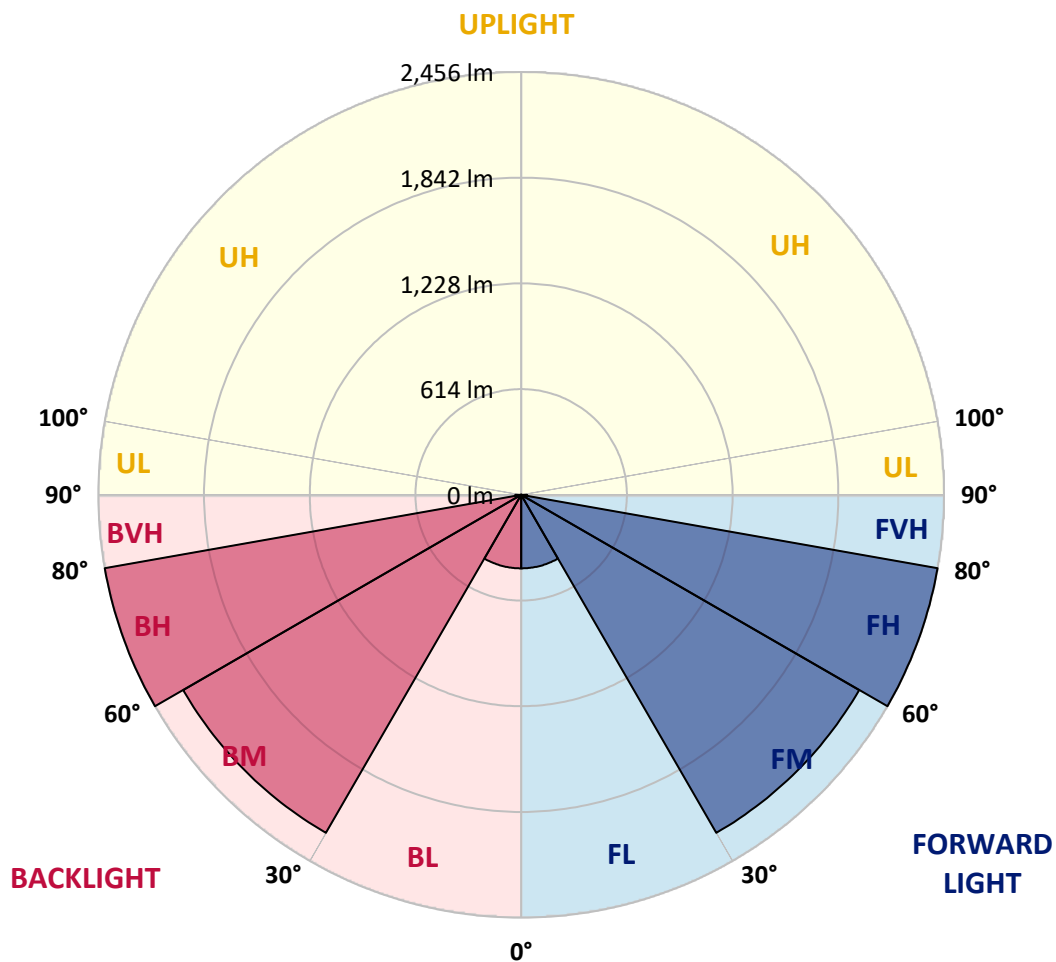
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	427.4	4.1			
FM	(30°-60°)	2267.3	21.9			
FH	(60°-80°)	2456.3	23.7			G2/5000
FVH	(80°-90°)	34.5	0.3			G1/100
BL	(0°-30°)	427.4	4.1	B1/500		
BM	(30°-60°)	2267.3	21.9	B2/2500		
BH	(60°-80°)	2456.3	23.7	B3/2500		G2/5000
BVH	(80°-90°)	34.5	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°	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5
2.5°	1039.0	1039.0	1040.3	1039.6	1037.7	1035.8	1033.9	1032.0	1030.7	1029.5	1028.2
5°	1028.2	1028.2	1030.1	1028.8	1027.6	1025.6	1024.4	1022.5	1021.2	1019.9	1020.6
7.5°	1014.2	1015.5	1016.8	1016.1	1013.6	1012.9	1011.0	1010.4	1009.1	1007.2	1007.9
10°	1002.1	1002.8	1004.1	1003.4	1002.8	1000.9	1000.2	999.6	999.0	996.4	995.8
12.5°	990.1	991.4	992.6	993.3	992.6	993.3	993.9	994.5	993.9	992.6	992.6
15°	980.6	981.8	983.7	985.6	986.3	990.1	992.6	995.2	997.1	997.7	995.8
17.5°	975.5	977.4	979.9	983.7	986.9	991.4	995.8	999.6	1002.8	1003.4	1001.5
20°	974.8	976.7	980.6	985.0	990.7	996.4	1003.4	1009.1	1012.3	1014.2	1012.3
22.5°	979.3	981.8	986.9	992.6	999.6	1007.2	1016.1	1022.5	1028.8	1031.4	1029.5
25°	992.0	994.5	1000.2	1007.2	1014.9	1024.4	1033.3	1041.5	1047.9	1051.1	1048.5
27.5°	1018.7	1019.3	1025.6	1033.3	1042.2	1050.4	1061.8	1065.7	1070.7	1073.9	1070.7
30°	1056.1	1057.4	1063.1	1075.2	1083.4	1094.2	1100.6	1104.4	1110.1	1113.3	1109.5
32.5°	1113.3	1114.6	1119.6	1131.1	1138.7	1146.9	1154.6	1157.1	1162.8	1166.6	1162.2
35°	1193.9	1196.5	1200.9	1208.5	1214.9	1221.3	1227.0	1225.1	1228.9	1234.0	1229.5
37.5°	1304.4	1303.8	1305.1	1310.8	1317.1	1321.0	1329.8	1325.4	1329.2	1333.7	1331.1
40°	1433.4	1433.4	1432.7	1442.9	1445.4	1449.2	1458.8	1453.1	1458.1	1463.2	1458.8
42.5°	1580.1	1582.6	1585.8	1594.0	1601.0	1602.3	1606.7	1604.2	1610.6	1615.0	1610.6
45°	1749.0	1752.8	1756.6	1775.7	1778.8	1781.4	1784.6	1776.3	1783.3	1787.1	1785.8
47.5°	1924.3	1931.3	1939.5	1959.2	1971.9	1977.6	1980.2	1970.6	1971.3	1977.0	1977.6
50°	2122.4	2130.0	2138.3	2160.5	2172.6	2182.8	2185.9	2175.1	2176.4	2180.8	2182.1
52.5°	2305.3	2314.2	2332.0	2361.8	2379.0	2396.8	2398.0	2384.7	2390.4	2393.6	2391.1
55°	2477.4	2488.9	2512.4	2552.4	2583.5	2618.4	2634.3	2619.7	2619.7	2617.1	2615.9
57.5°	2678.1	2690.8	2714.9	2761.3	2804.5	2854.7	2897.8	2912.5	2939.1	2948.0	2934.0
60°	2980.4	2993.7	3018.5	3079.5	3134.1	3207.1	3278.3	3336.1	3430.0	3480.8	3435.1
62.5°	3256.7	3277.0	3335.4	3442.1	3560.2	3695.5	3852.4	3964.1	4135.0	4220.1	4105.1
65°	3193.8	3235.1	3349.4	3517.0	3760.9	4054.3	4373.8	4680.5	5033.6	5214.6	4980.9
67.5°	2789.9	2824.8	2948.0	3143.0	3447.2	3851.7	4348.4	4983.4	5711.9	6051.0	5637.6
68°	2635.6	2701.0	2823.5	3017.2	3324.0	3721.5	4251.8	4937.7	5732.8	6099.3	5652.8
70°	2020.8	2044.3	2161.8	2335.8	2666.7	3056.6	3592.0	4373.8	5272.4	5649.6	5190.5
72.5°	960.2	974.2	1050.4	1221.9	1432.1	1749.6	2222.1	2959.5	3769.2	4161.7	3703.8
75°	351.8	355.0	372.8	413.4	492.2	611.6	838.3	1296.8	1919.8	2289.4	1927.5
77.5°	189.9	190.5	197.5	207.7	221.6	237.5	271.8	364.5	588.1	800.2	621.1
80°	119.4	118.8	125.7	134.0	143.5	151.1	154.3	165.1	186.1	217.8	200.0
82.5°	61.0	66.7	82.6	91.5	105.4	108.0	104.8	104.2	110.5	119.4	123.2
85°	33.7	29.8	43.8	58.4	63.5	65.4	66.0	62.2	61.0	59.7	62.9
87.5°	17.1	15.9	19.1	29.2	31.1	25.4	26.0	22.2	15.2	15.2	15.9
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°	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5	1034.5
2.5°	1026.9	1027.6	1026.3	1026.3	1026.3	1026.9	1026.3	1025.6
5°	1018.7	1019.9	1019.9	1020.6	1021.2	1021.2	1021.2	1021.2
7.5°	1006.6	1007.2	1008.5	1008.5	1008.5	1008.5	1008.5	1008.5
10°	995.2	993.9	993.3	992.0	992.0	990.1	990.7	991.4
12.5°	989.4	986.9	985.6	983.7	982.5	980.6	980.6	981.2
15°	992.0	988.2	984.4	983.1	981.8	980.6	979.3	979.9
17.5°	997.1	992.6	988.2	985.6	983.1	981.2	980.6	981.2
20°	1007.9	1001.5	994.5	990.1	985.0	983.7	981.8	983.7
22.5°	1022.5	1014.9	1006.0	997.7	992.0	989.4	986.9	988.8
25°	1040.3	1032.0	1023.1	1013.6	1007.2	1005.3	1002.1	1002.1
27.5°	1065.0	1058.0	1050.4	1041.5	1035.2	1033.3	1028.2	1028.2
30°	1104.4	1097.4	1090.4	1082.8	1076.5	1074.5	1068.2	1068.2
32.5°	1156.5	1148.9	1144.4	1138.1	1133.0	1129.8	1122.2	1121.5
35°	1226.3	1219.3	1218.7	1214.3	1209.2	1209.8	1202.2	1200.9
37.5°	1326.7	1321.0	1322.9	1319.1	1314.6	1318.4	1314.0	1314.0
40°	1455.0	1453.1	1455.0	1452.4	1453.1	1453.7	1449.9	1451.1
42.5°	1609.9	1604.8	1616.3	1615.0	1613.1	1618.2	1609.3	1602.9
45°	1788.4	1786.5	1797.9	1799.8	1796.0	1799.2	1783.3	1782.7
47.5°	1982.1	1982.1	1992.2	1991.0	1987.2	1987.8	1968.7	1956.7
50°	2184.0	2182.8	2192.9	2190.4	2185.3	2184.7	2165.0	2152.9
52.5°	2394.2	2394.2	2408.8	2401.9	2389.8	2384.1	2359.9	2344.1
55°	2626.7	2623.5	2627.9	2605.1	2581.6	2564.4	2534.6	2522.5
57.5°	2920.7	2883.9	2852.1	2822.9	2789.9	2769.6	2734.6	2721.9
60°	3338.0	3239.5	3197.0	3138.5	3083.9	3056.6	3010.3	2985.5
62.5°	3915.9	3752.7	3637.1	3508.2	3383.7	3296.0	3225.5	3194.4
65°	4584.0	4228.3	3934.3	3658.0	3423.7	3237.6	3134.1	3101.7
67.5°	4838.0	4185.1	3677.7	3281.4	2996.9	2775.3	2651.4	2625.4
68°	4784.0	4086.1	3559.0	3153.2	2867.4	2643.8	2520.6	2497.1
70°	4220.1	3447.2	2890.9	2487.0	2220.2	2007.5	1920.5	1883.0
72.5°	2876.9	2213.9	1698.2	1358.4	1159.0	1024.4	944.4	917.0
75°	1324.1	894.8	597.6	446.5	379.1	346.8	322.0	315.6
77.5°	386.1	280.7	241.3	223.5	210.2	198.8	190.5	189.9
80°	183.5	172.1	167.0	155.6	143.5	132.7	125.1	126.4
82.5°	123.2	120.0	120.0	108.6	89.5	76.8	63.5	57.2
85°	65.4	68.0	71.8	68.0	59.1	43.8	28.6	31.1
87.5°	22.2	25.4	26.7	26.0	23.5	17.8	13.3	13.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)