

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: P270402

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270402
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-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 11042.6 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

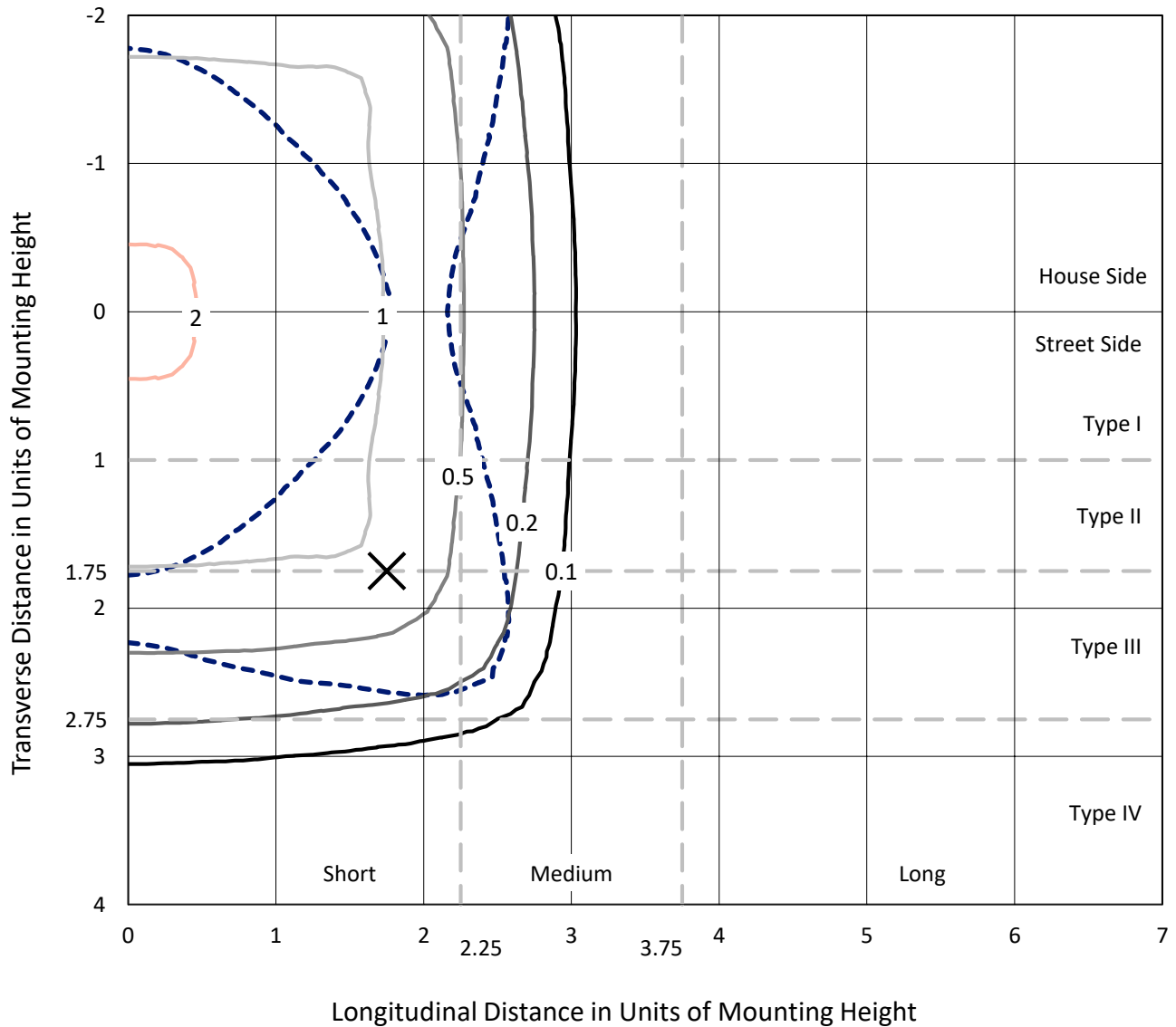
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270402
 CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-600

Iso-Footcandle Lines of Horizontal Illumination

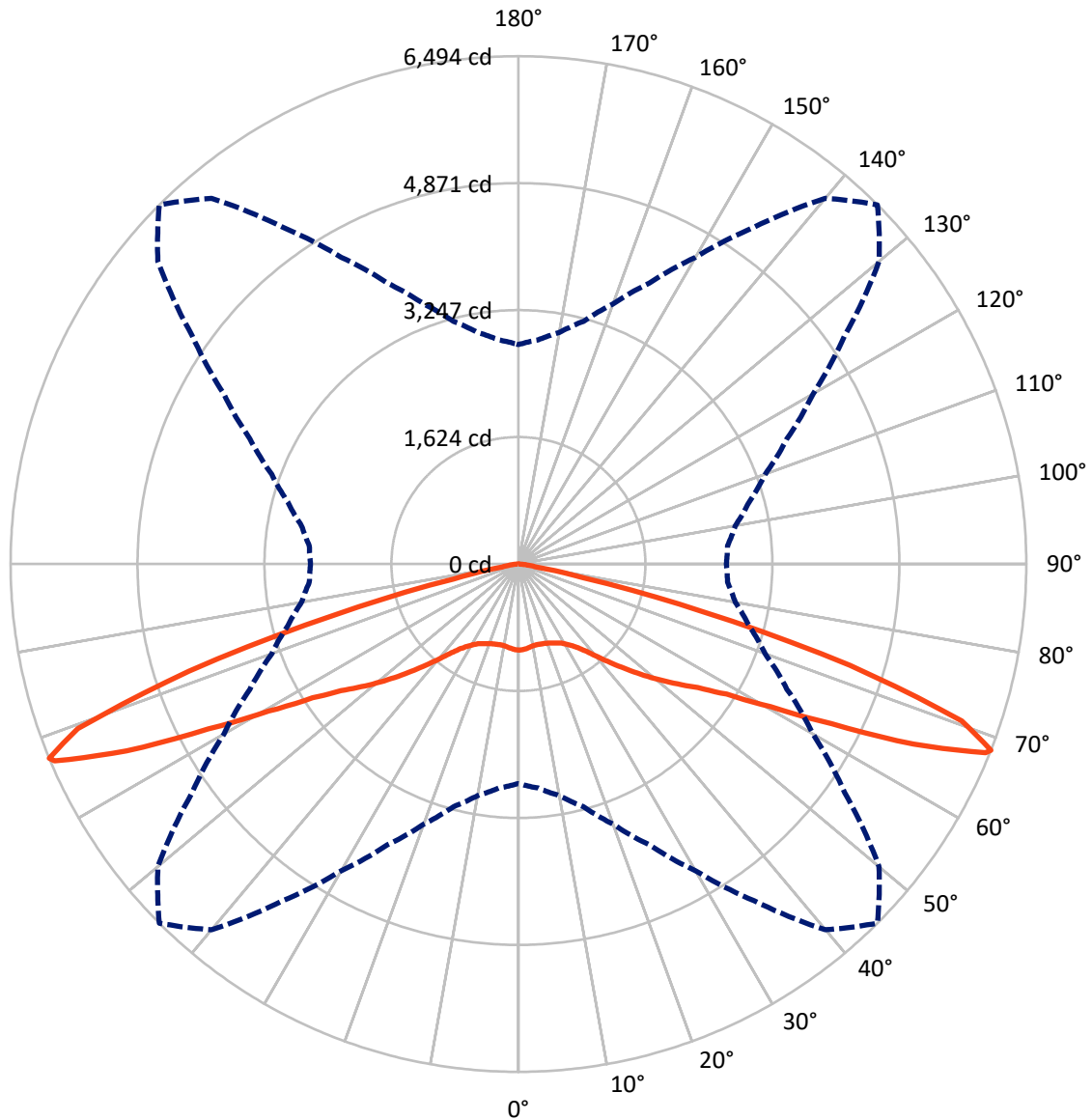
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.8 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P270402
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-600

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P270402

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-600

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5521.3	0.0	5521.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5521.3	0.0	5521.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	11042.6	0.0	11042.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.1	0.9
10°-20°	298.9	2.7
20°-30°	508.2	4.6
30°-40°	831.7	7.5
40°-50°	1486.3	13.5
50°-60°	2510.2	22.7
60°-70°	3892.4	35.2
70°-80°	1338.3	12.1
80°-90°	73.5	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°	11042.6	100.0
0°-180°	11042.6	100.0



REPORT NUMBER: P270402

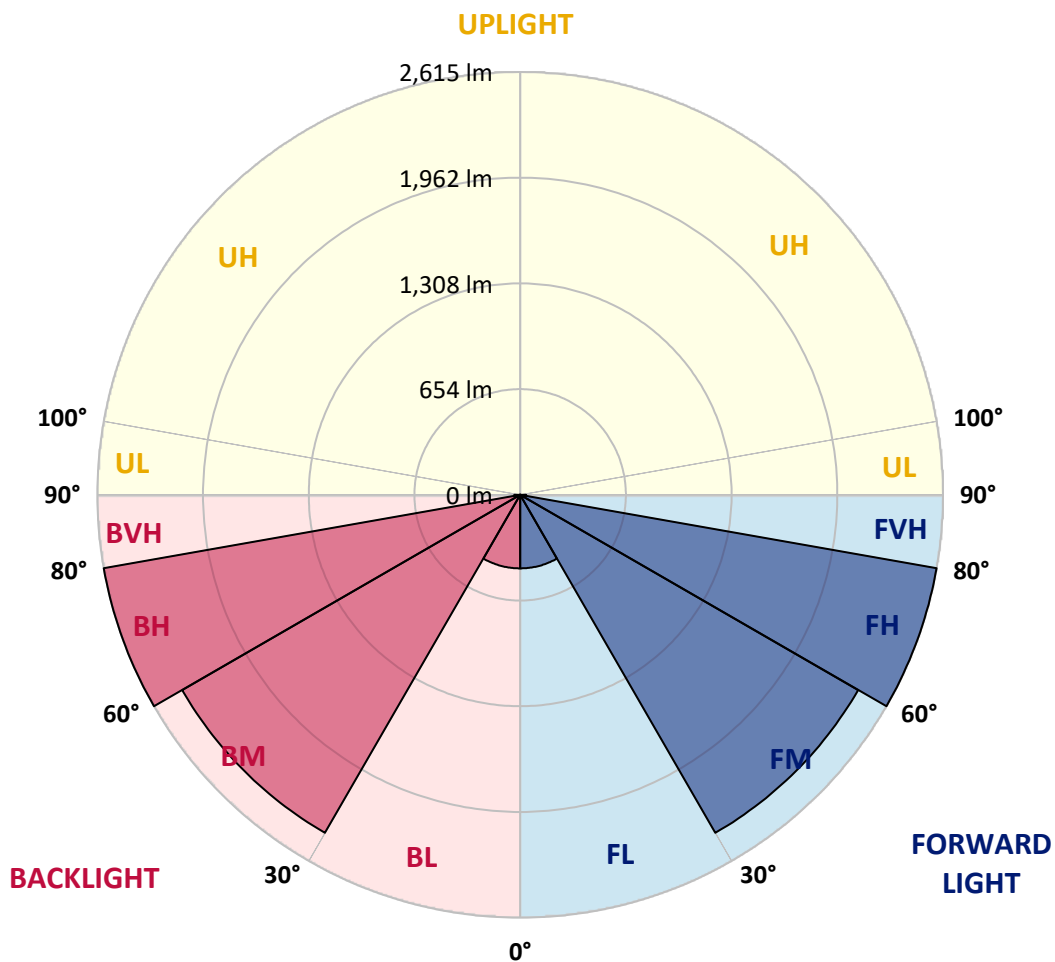
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	455.1	4.1			
FM	(30°-60°)	2414.1	21.9			
FH	(60°-80°)	2615.3	23.7			G2/5000
FVH	(80°-90°)	36.8	0.3			G1/100
BL	(0°-30°)	455.1	4.1	B1/500		
BM	(30°-60°)	2414.1	21.9	B2/2500		
BH	(60°-80°)	2615.3	23.7	B4/5000		G2/5000
BVH	(80°-90°)	36.8	0.3			G1/100
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





REPORT NUMBER: P270402

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7027-600

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5
2.5°	1106.3	1106.3	1107.6	1106.9	1104.9	1102.8	1100.9	1098.8	1097.5	1096.1	1094.8
5°	1094.8	1094.8	1096.8	1095.5	1094.0	1092.1	1090.7	1088.7	1087.4	1086.1	1086.7
7.5°	1079.9	1081.3	1082.5	1081.9	1079.3	1078.5	1076.4	1075.8	1074.6	1072.4	1073.1
10°	1067.0	1067.7	1069.2	1068.4	1067.7	1065.7	1065.0	1064.3	1063.7	1061.0	1060.3
12.5°	1054.3	1055.6	1056.9	1057.6	1056.9	1057.6	1058.3	1058.9	1058.3	1056.9	1056.9
15°	1044.1	1045.4	1047.5	1049.5	1050.2	1054.3	1056.9	1059.6	1061.6	1062.3	1060.3
17.5°	1038.6	1040.6	1043.4	1047.5	1050.7	1055.6	1060.3	1064.3	1067.7	1068.4	1066.4
20°	1038.0	1040.0	1044.1	1048.9	1054.9	1061.0	1068.4	1074.6	1077.8	1079.9	1077.8
22.5°	1042.8	1045.4	1050.7	1056.9	1064.3	1072.4	1081.9	1088.7	1095.5	1098.2	1096.1
25°	1056.2	1058.9	1065.0	1072.4	1080.7	1090.7	1100.2	1109.0	1115.8	1119.1	1116.5
27.5°	1084.7	1085.3	1092.1	1100.2	1109.6	1118.4	1130.5	1134.6	1140.0	1143.5	1140.0
30°	1124.5	1125.8	1132.0	1144.8	1153.7	1165.1	1171.8	1175.9	1182.0	1185.5	1181.4
32.5°	1185.5	1186.8	1192.1	1204.3	1212.4	1221.2	1229.3	1232.0	1238.1	1242.1	1237.4
35°	1271.3	1273.9	1278.6	1286.8	1293.6	1300.3	1306.5	1304.3	1308.4	1314.0	1309.1
37.5°	1388.9	1388.2	1389.6	1395.6	1402.4	1406.4	1416.0	1411.2	1415.3	1420.0	1417.3
40°	1526.2	1526.2	1525.5	1536.3	1539.1	1543.1	1553.2	1547.2	1552.6	1558.0	1553.2
42.5°	1682.3	1685.1	1688.5	1697.3	1704.8	1706.2	1710.8	1708.0	1714.9	1719.5	1714.9
45°	1862.2	1866.3	1870.5	1890.7	1894.0	1896.7	1900.2	1891.3	1898.7	1902.8	1901.5
47.5°	2048.9	2056.3	2065.2	2086.1	2099.6	2105.6	2108.4	2098.4	2098.9	2105.0	2105.6
50°	2259.9	2268.0	2276.8	2300.5	2313.2	2324.2	2327.5	2316.0	2317.4	2322.1	2323.5
52.5°	2454.6	2464.1	2483.1	2514.8	2533.1	2551.9	2553.3	2539.1	2545.3	2548.6	2545.8
55°	2637.9	2650.0	2675.1	2717.6	2750.8	2788.0	2804.9	2789.3	2789.3	2786.6	2785.3
57.5°	2851.6	2865.1	2890.7	2940.2	2986.1	3039.5	3085.5	3101.0	3129.4	3138.9	3124.0
60°	3173.4	3187.6	3214.0	3279.0	3337.1	3414.8	3490.5	3552.1	3652.1	3706.2	3657.5
62.5°	3467.5	3489.1	3551.4	3665.1	3790.8	3934.8	4101.8	4220.9	4402.8	4493.4	4371.1
65°	3400.7	3444.6	3566.4	3744.9	4004.5	4316.9	4657.1	4983.6	5359.6	5552.3	5303.5
67.5°	2970.5	3007.7	3138.9	3346.5	3670.5	4101.2	4630.0	5306.2	6081.7	6442.9	6002.7
68°	2806.2	2876.0	3006.4	3212.7	3539.2	3962.6	4527.2	5257.5	6104.2	6494.2	6019.0
70°	2151.7	2176.8	2301.7	2487.0	2839.5	3254.6	3824.7	4657.1	5613.9	6015.5	5526.6
72.5°	1022.5	1037.4	1118.4	1301.0	1524.9	1862.9	2366.0	3151.2	4013.3	4431.2	3943.6
75°	374.7	377.9	397.0	440.2	524.0	651.2	892.6	1380.9	2044.2	2437.7	2052.3
77.5°	202.2	202.8	210.4	221.2	236.0	253.0	289.4	388.2	626.2	852.0	661.3
80°	127.1	126.4	133.8	142.7	152.8	160.9	164.3	175.8	198.2	231.9	213.0
82.5°	64.9	71.0	87.9	97.3	112.3	115.0	111.6	110.9	117.7	127.1	131.2
85°	35.8	31.8	46.6	62.3	67.6	69.7	70.3	66.3	64.9	63.6	67.0
87.5°	18.2	16.9	20.3	31.1	33.1	27.0	27.7	23.6	16.2	16.2	16.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270402

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5	1101.5
2.5°	1093.4	1094.0	1092.8	1092.8	1092.8	1093.4	1092.8	1092.1
5°	1084.7	1086.1	1086.1	1086.7	1087.4	1087.4	1087.4	1087.4
7.5°	1071.8	1072.4	1073.8	1073.8	1073.8	1073.8	1073.8	1073.8
10°	1059.6	1058.3	1057.6	1056.2	1056.2	1054.3	1054.9	1055.6
12.5°	1053.5	1050.7	1049.5	1047.5	1046.0	1044.1	1044.1	1044.6
15°	1056.2	1052.2	1048.1	1046.7	1045.4	1044.1	1042.8	1043.4
17.5°	1061.6	1056.9	1052.2	1049.5	1046.7	1044.6	1044.1	1044.6
20°	1073.1	1066.4	1058.9	1054.3	1048.9	1047.5	1045.4	1047.5
22.5°	1088.7	1080.7	1071.0	1062.3	1056.2	1053.5	1050.7	1052.9
25°	1107.6	1098.8	1089.4	1079.3	1072.4	1070.4	1067.0	1067.0
27.5°	1134.0	1126.6	1118.4	1109.0	1102.2	1100.2	1094.8	1094.8
30°	1175.9	1168.4	1161.0	1153.0	1146.1	1144.1	1137.3	1137.3
32.5°	1231.3	1223.2	1218.6	1211.8	1206.3	1203.0	1194.8	1194.1
35°	1305.7	1298.3	1297.6	1292.9	1287.5	1288.2	1280.1	1278.6
37.5°	1412.6	1406.4	1408.5	1404.5	1399.7	1403.8	1399.1	1399.1
40°	1549.1	1547.2	1549.1	1546.5	1547.2	1547.8	1543.7	1545.2
42.5°	1714.1	1708.8	1721.0	1719.5	1717.6	1722.9	1713.4	1706.7
45°	1904.1	1902.3	1914.4	1916.4	1912.3	1915.6	1898.7	1898.1
47.5°	2110.5	2110.5	2121.3	2119.9	2115.9	2116.5	2096.3	2083.3
50°	2325.4	2324.2	2335.0	2332.2	2326.8	2326.2	2305.2	2292.4
52.5°	2549.3	2549.3	2564.8	2557.5	2544.5	2538.5	2512.7	2495.9
55°	2796.9	2793.4	2798.1	2773.7	2748.8	2730.5	2698.8	2685.9
57.5°	3109.8	3070.6	3036.8	3005.6	2970.5	2949.0	2911.8	2898.2
60°	3554.1	3449.3	3403.9	3341.9	3283.7	3254.6	3205.2	3178.8
62.5°	4169.5	3995.8	3872.7	3735.3	3602.8	3509.5	3434.4	3401.3
65°	4880.9	4502.1	4189.1	3895.0	3645.4	3447.2	3337.1	3302.6
67.5°	5151.3	4456.2	3915.9	3494.0	3191.0	2955.1	2823.2	2795.4
68°	5093.8	4350.8	3789.4	3357.3	3053.1	2815.1	2683.9	2658.9
70°	4493.4	3670.5	3078.1	2648.1	2364.0	2137.4	2044.8	2004.9
72.5°	3063.2	2357.2	1808.2	1446.5	1234.1	1090.7	1005.6	976.5
75°	1409.9	952.7	636.3	475.4	403.7	369.3	342.9	336.1
77.5°	411.2	298.9	256.9	238.1	223.8	211.6	202.8	202.2
80°	195.4	183.3	177.9	165.6	152.8	141.4	133.2	134.6
82.5°	131.2	127.7	127.7	115.6	95.3	81.8	67.6	60.8
85°	69.7	72.4	76.4	72.4	62.9	46.6	30.5	33.1
87.5°	23.6	27.0	28.3	27.7	25.1	19.0	14.3	14.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)