

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: P196925

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196925
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-05-D-UNV-5WQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 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: 16819 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B4 - U0 - G2

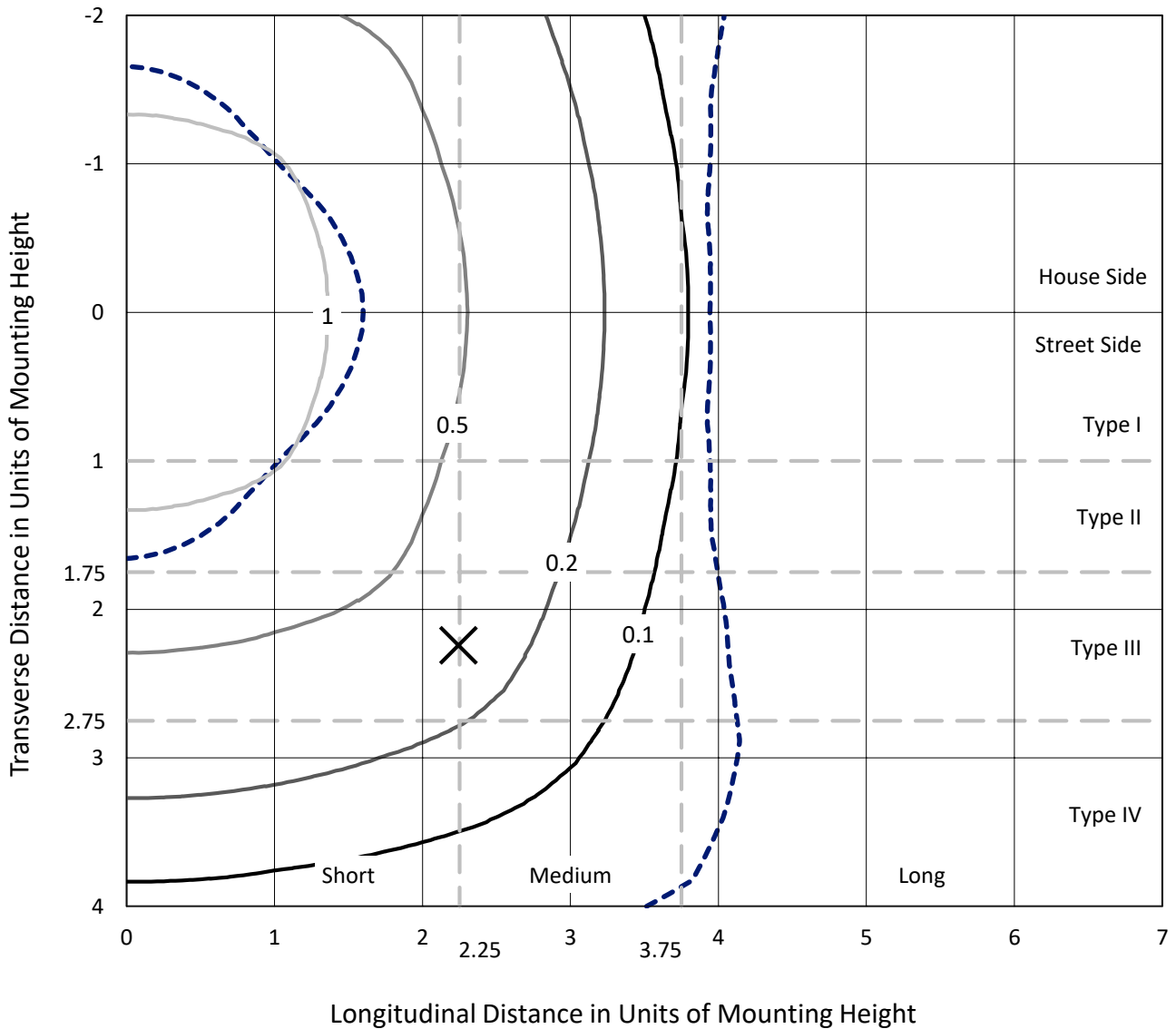
Input Watts (W): 162
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

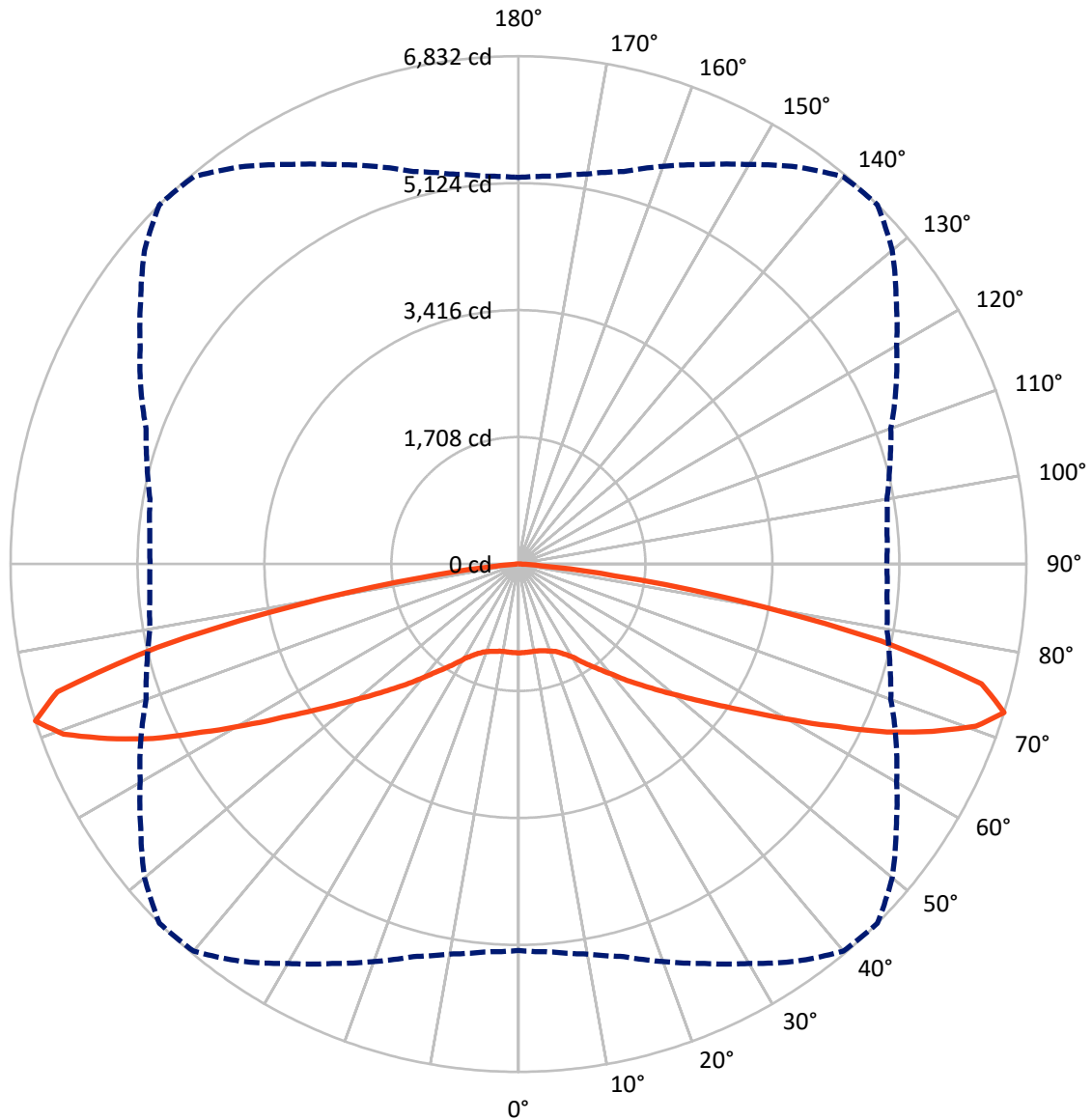
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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	8409.5	0.0	8409.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8409.5	0.0	8409.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	16819.0	0.0	16819.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.1	0.7
10°-20°	345.4	2.1
20°-30°	623.5	3.7
30°-40°	1063.6	6.3
40°-50°	1810.8	10.8
50°-60°	2914.2	17.3
60°-70°	4846.4	28.8
70°-80°	4688.3	27.9
80°-90°	412.6	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°	16819.0	100.0
0°-180°	16819.0	100.0



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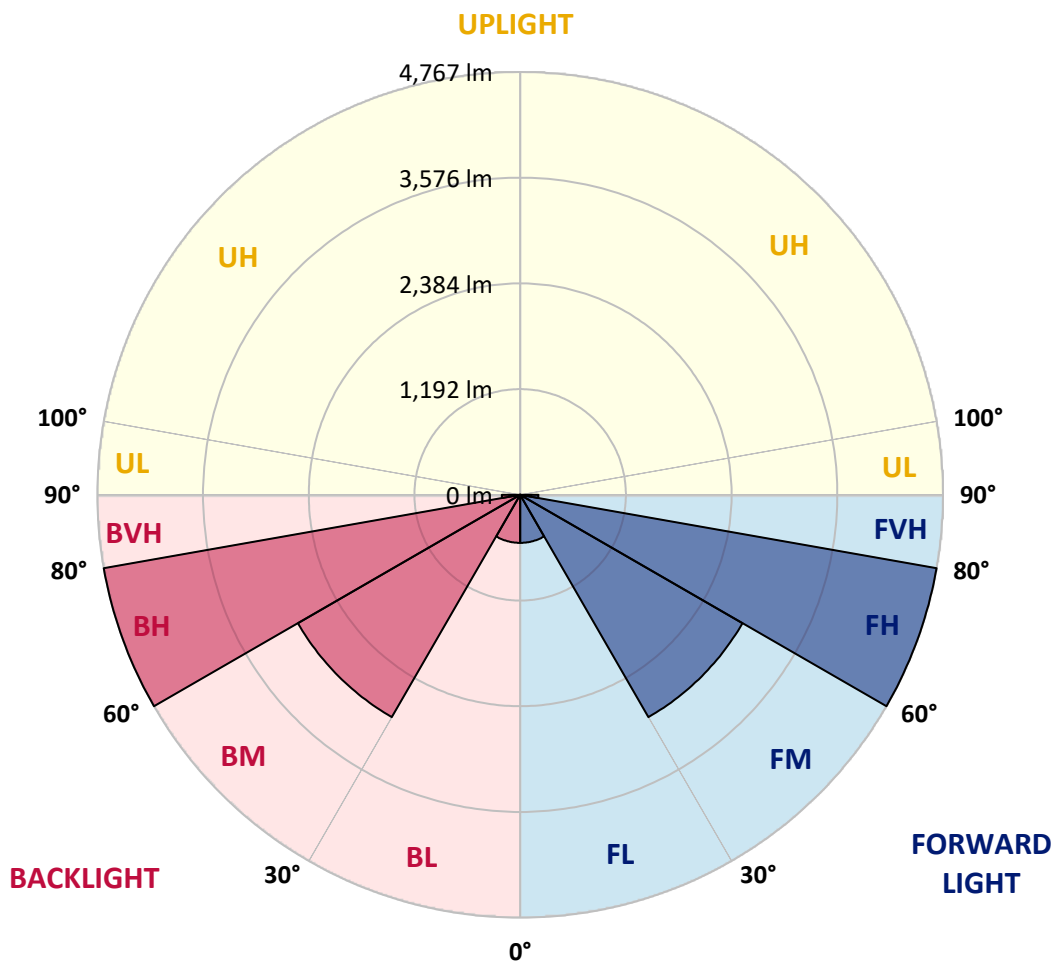
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	541.5	3.2			
FM (30°-60°)	2894.3	17.2			
FH (60°-80°)	4767.4	28.3			G2/5000
FVH (80°-90°)	206.3	1.2			G2/225
BL (0°-30°)	541.5	3.2	B2/1000		
BM (30°-60°)	2894.3	17.2	B3/5000		
BH (60°-80°)	4767.4	28.3	B4/5000		G2/5000
BVH (80°-90°)	206.3	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°	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7
2.5°	1205.0	1205.0	1206.1	1205.0	1203.0	1201.9	1198.8	1196.7	1194.7	1193.6	1191.6
5°	1206.1	1206.1	1207.1	1206.1	1204.0	1201.9	1199.8	1196.7	1194.7	1192.6	1191.6
7.5°	1210.2	1211.2	1212.3	1211.2	1207.1	1205.0	1201.9	1198.8	1194.7	1192.6	1190.5
10°	1218.5	1218.5	1218.5	1217.4	1214.3	1210.2	1206.1	1203.0	1197.8	1192.6	1189.5
12.5°	1224.7	1225.7	1225.7	1223.7	1219.5	1214.3	1210.2	1207.1	1203.0	1198.8	1195.7
15°	1234.0	1234.0	1233.0	1228.8	1222.6	1218.5	1216.4	1215.4	1214.3	1212.3	1209.2
17.5°	1252.6	1251.6	1248.5	1242.3	1235.0	1231.9	1229.9	1229.9	1229.9	1228.8	1226.8
20°	1279.6	1279.6	1275.4	1265.1	1258.9	1255.7	1252.6	1252.6	1252.6	1249.5	1246.4
22.5°	1323.0	1324.1	1317.9	1305.4	1297.2	1290.9	1286.8	1283.7	1280.6	1278.5	1273.3
25°	1382.0	1381.0	1373.8	1358.2	1352.0	1345.8	1337.5	1332.4	1328.2	1325.1	1318.9
27.5°	1444.2	1443.1	1434.8	1421.4	1417.2	1407.9	1401.7	1394.5	1389.3	1384.1	1377.9
30°	1523.9	1518.7	1512.5	1502.1	1500.1	1492.8	1484.5	1474.2	1465.9	1457.6	1450.4
32.5°	1595.3	1595.3	1586.0	1580.8	1585.0	1581.8	1582.9	1576.7	1571.5	1568.4	1561.1
35°	1694.7	1694.7	1690.6	1684.3	1685.4	1678.1	1677.1	1678.1	1682.3	1682.3	1674.0
37.5°	1827.2	1829.3	1815.8	1813.7	1808.6	1798.2	1793.0	1795.1	1804.4	1809.6	1798.2
40°	1991.8	1995.9	1991.8	1978.3	1972.1	1954.5	1944.2	1944.2	1951.4	1956.6	1952.5
42.5°	2154.3	2161.6	2154.3	2144.0	2138.8	2125.4	2120.2	2124.3	2133.6	2139.8	2133.6
45°	2335.5	2340.7	2331.4	2318.9	2312.7	2305.5	2302.4	2305.5	2315.8	2322.0	2320.0
47.5°	2513.6	2520.8	2509.4	2504.3	2504.3	2497.0	2505.3	2513.6	2522.9	2537.4	2531.2
50°	2687.5	2696.8	2689.6	2690.6	2698.9	2712.3	2727.9	2744.4	2761.0	2776.5	2778.6
52.5°	2842.8	2857.3	2858.3	2876.9	2902.8	2923.5	2967.0	3003.2	3042.6	3056.0	3049.8
55°	3006.3	3026.0	3051.9	3080.9	3122.3	3164.7	3238.2	3303.5	3355.2	3387.3	3382.1
57.5°	3240.3	3260.0	3286.9	3334.5	3396.6	3454.6	3555.0	3656.5	3735.2	3783.8	3760.0
60°	3543.6	3564.3	3599.5	3650.3	3731.0	3809.7	3947.4	4093.3	4215.5	4271.4	4227.9
62.5°	3945.3	3965.0	3987.8	4055.0	4145.1	4246.6	4419.4	4606.8	4762.1	4815.9	4754.9
65°	4517.8	4541.6	4548.9	4603.7	4691.7	4785.9	4972.3	5183.5	5360.5	5448.5	5326.3
67.5°	5162.8	5172.1	5201.1	5265.2	5355.3	5440.2	5587.2	5787.0	5956.8	6005.4	5875.0
70°	5540.6	5559.3	5610.0	5699.0	5806.7	5940.2	6100.7	6316.0	6508.6	6531.3	6365.7
72.5°	5199.0	5237.3	5327.4	5466.1	5691.8	5928.8	6205.2	6523.1	6799.5	6831.6	6565.5
75°	4170.0	4213.4	4321.1	4473.3	4740.4	5092.4	5492.0	5969.2	6383.3	6436.1	6084.1
77.5°	2222.7	2276.5	2432.8	2637.8	3018.8	3484.6	3966.0	4510.5	4862.5	4981.6	4728.0
80°	560.1	589.1	664.6	784.7	1042.5	1418.3	1833.4	2419.4	2856.2	3041.5	2856.2
82.5°	217.4	239.1	259.8	274.3	299.2	350.9	484.5	789.9	1064.2	1310.6	1134.6
85°	83.9	89.0	128.4	146.0	146.0	160.5	184.3	217.4	269.2	294.0	246.4
87.5°	33.1	36.2	44.5	68.3	70.4	62.1	66.3	74.5	56.9	47.6	53.8
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°	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7	1195.7
2.5°	1190.5	1189.5	1187.4	1188.5	1187.4	1187.4	1187.4	1187.4
5°	1189.5	1189.5	1187.4	1187.4	1187.4	1188.5	1187.4	1187.4
7.5°	1188.5	1187.4	1185.4	1184.3	1184.3	1183.3	1183.3	1183.3
10°	1186.4	1184.3	1182.2	1181.2	1181.2	1179.1	1179.1	1179.1
12.5°	1191.6	1188.5	1186.4	1185.4	1185.4	1185.4	1186.4	1186.4
15°	1206.1	1199.8	1196.7	1195.7	1196.7	1198.8	1199.8	1200.9
17.5°	1221.6	1215.4	1210.2	1208.1	1209.2	1212.3	1215.4	1217.4
20°	1241.3	1236.1	1229.9	1227.8	1227.8	1231.9	1234.0	1237.1
22.5°	1269.2	1265.1	1259.9	1256.8	1254.7	1259.9	1263.0	1265.1
25°	1313.7	1309.6	1305.4	1302.3	1301.3	1306.5	1308.5	1309.6
27.5°	1372.7	1368.6	1366.5	1365.5	1362.4	1364.4	1367.6	1366.5
30°	1449.3	1452.4	1449.3	1449.3	1444.2	1446.2	1444.2	1442.1
32.5°	1551.8	1548.7	1539.4	1533.2	1525.9	1525.9	1522.8	1519.7
35°	1654.3	1644.0	1638.8	1641.9	1638.8	1640.9	1635.7	1630.5
37.5°	1775.4	1769.2	1768.2	1777.5	1775.4	1777.5	1777.5	1770.3
40°	1935.9	1931.8	1939.0	1954.5	1960.7	1959.7	1961.8	1952.5
42.5°	2120.2	2112.9	2116.0	2129.5	2136.7	2138.8	2137.8	2129.5
45°	2304.4	2306.5	2306.5	2321.0	2328.3	2332.4	2325.2	2322.0
47.5°	2512.5	2515.6	2508.4	2517.7	2519.8	2527.0	2520.8	2515.6
50°	2752.7	2741.3	2724.8	2727.9	2727.9	2725.8	2718.5	2712.3
52.5°	3020.8	2995.0	2963.9	2953.5	2942.2	2930.8	2916.3	2904.9
55°	3326.2	3281.7	3225.8	3199.9	3178.2	3152.3	3119.2	3107.8
57.5°	3680.3	3603.7	3529.1	3482.6	3426.7	3392.5	3350.0	3348.0
60°	4100.6	3997.1	3865.6	3796.2	3740.3	3700.0	3667.9	3655.4
62.5°	4586.1	4408.1	4266.2	4191.7	4126.5	4101.6	4061.3	4066.4
65°	5084.1	4902.9	4765.2	4705.2	4644.1	4627.5	4590.3	4603.7
67.5°	5623.4	5474.4	5323.2	5267.3	5211.4	5194.8	5156.5	5167.9
70°	6106.9	5917.4	5745.6	5635.9	5540.6	5464.0	5415.4	5395.7
72.5°	6203.2	5875.0	5604.8	5330.5	5172.1	5033.3	4976.4	4954.7
75°	5573.7	5064.4	4679.3	4357.3	4179.3	3977.4	3955.7	3925.6
77.5°	4335.6	3755.9	3290.0	2875.9	2636.8	2390.4	2305.5	2241.3
80°	2586.0	1987.7	1540.4	1079.8	881.0	709.1	666.7	622.2
82.5°	925.5	593.2	399.6	311.6	278.5	256.7	240.2	218.4
85°	223.6	188.4	178.1	161.5	159.4	135.6	96.3	85.9
87.5°	71.4	65.2	66.3	63.1	66.3	49.7	40.4	36.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)