

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: P270409

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270409  
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-03-D-UNV-5WQ-7027  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16373.1 lumens  
Efficiency: N/A  
Efficacy: 98.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 166  
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

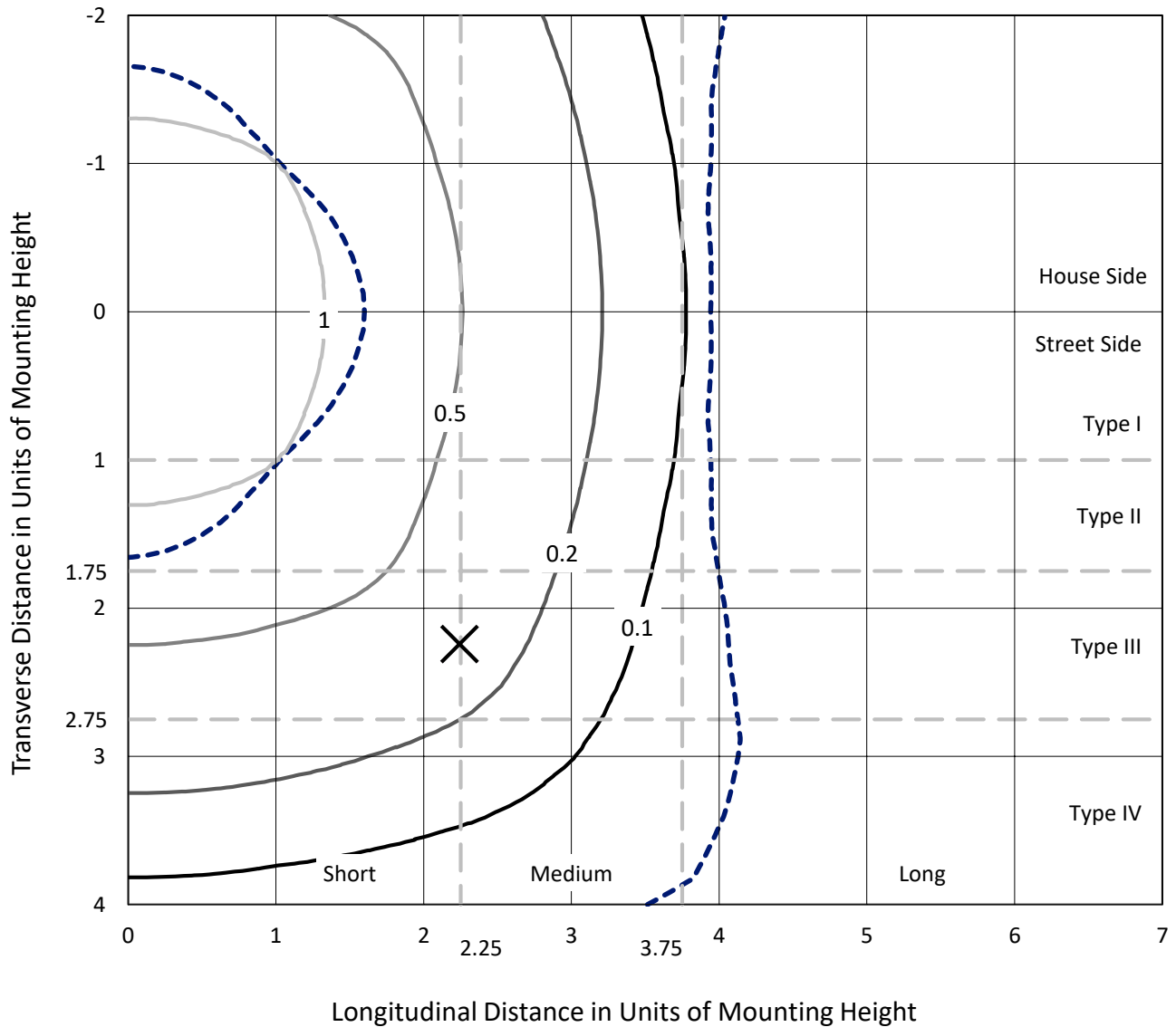


REPORT NUMBER: P270409

CATALOG NUMBER: NAV-AF-03-D-UNV-5WQ-7027

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

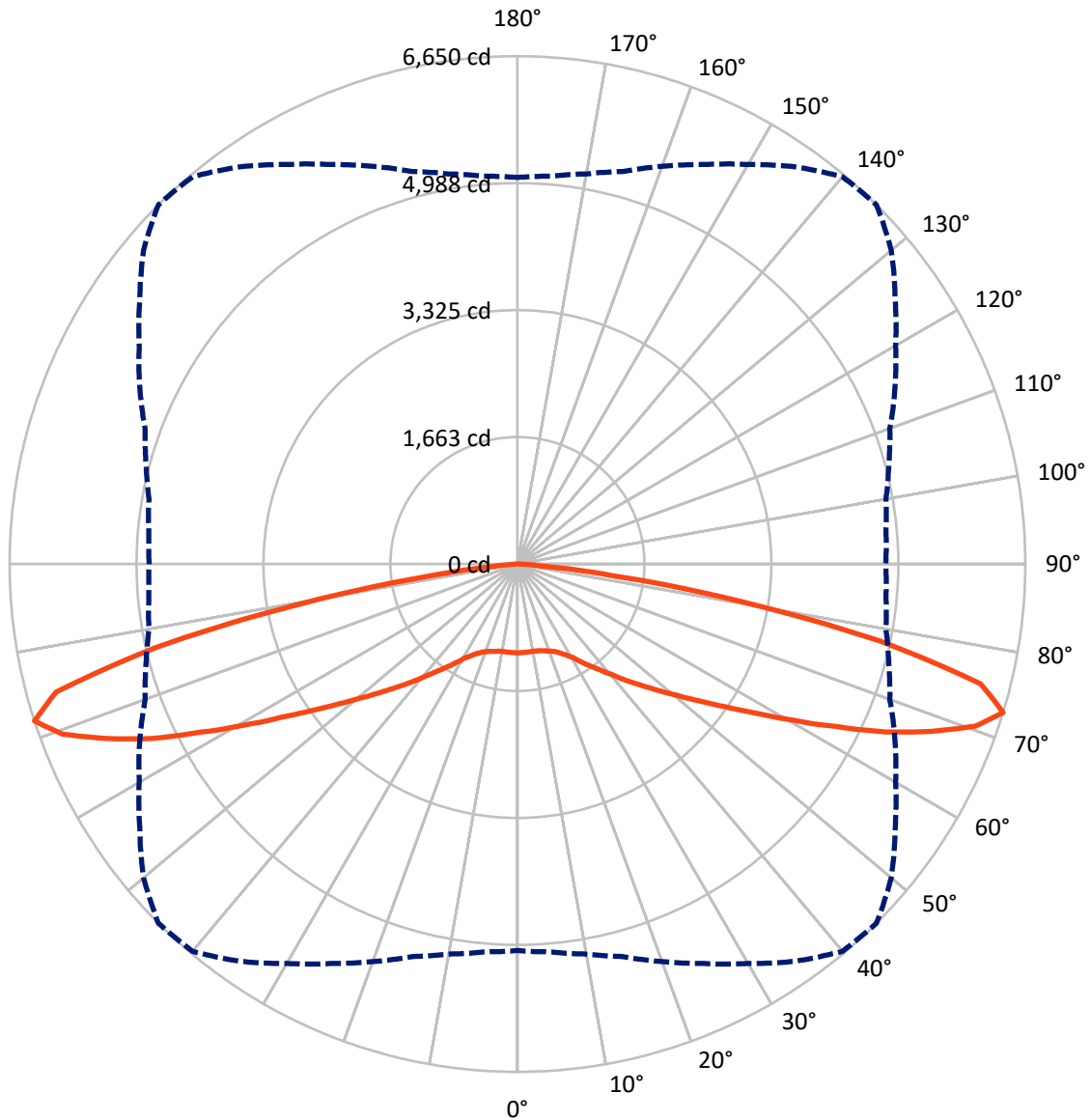


Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P270409

CATALOG NUMBER: NAV-AF-03-D-UNV-5WQ-7027

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P270409

CATALOG NUMBER: NAV-AF-03-D-UNV-5WQ-7027

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8186.5	0.0	8186.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8186.5	0.0	8186.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	16373.1	0.0	16373.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.1	0.7
10°-20°	336.2	2.1
20°-30°	607.0	3.7
30°-40°	1035.4	6.3
40°-50°	1762.8	10.8
50°-60°	2836.9	17.3
60°-70°	4717.9	28.8
70°-80°	4564.0	27.9
80°-90°	401.7	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°	16373.1	100.0
0°-180°	16373.1	100.0



REPORT NUMBER: P270409

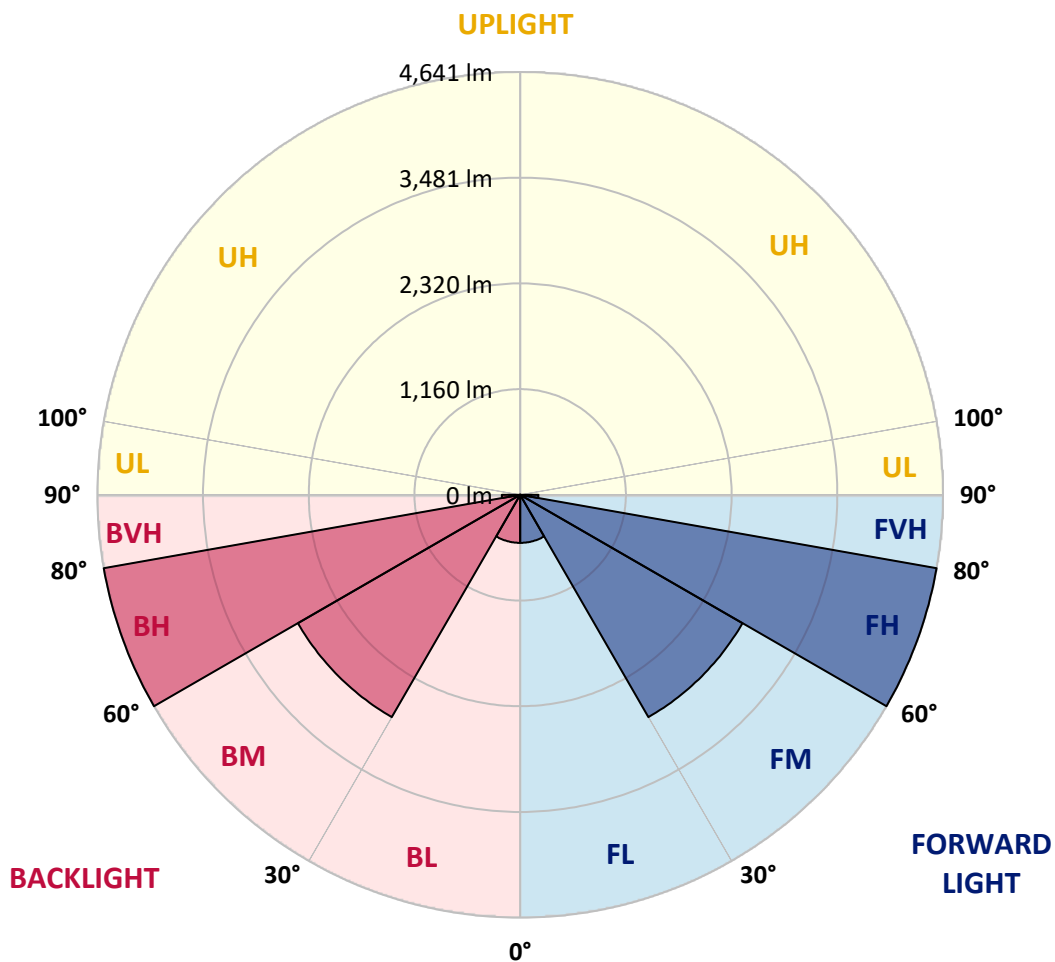
CATALOG NUMBER: NAV-AF-03-D-UNV-5WQ-7027

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	527.2	3.2			
FM	(30°-60°)	2817.6	17.2			
FH	(60°-80°)	4640.9	28.3			G2/5000
FVH	(80°-90°)	200.8	1.2			G2/225
BL	(0°-30°)	527.2	3.2	B2/1000		
BM	(30°-60°)	2817.6	17.2	B3/5000		
BH	(60°-80°)	4640.9	28.3	B4/5000		G2/5000
BVH	(80°-90°)	200.8	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





REPORT NUMBER: P270409

CATALOG NUMBER: NAV-AF-03-D-UNV-5WQ-7027

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1
2.5°	1173.0	1173.0	1174.1	1173.0	1171.1	1170.0	1167.0	1165.0	1162.9	1162.0	1160.0
5°	1174.1	1174.1	1175.2	1174.1	1172.1	1170.0	1168.1	1165.0	1162.9	1161.0	1160.0
7.5°	1178.0	1179.1	1180.2	1179.1	1175.2	1173.0	1170.0	1167.0	1162.9	1161.0	1159.0
10°	1186.2	1186.2	1186.2	1185.1	1182.1	1178.0	1174.1	1171.1	1166.0	1161.0	1157.9
12.5°	1192.2	1193.2	1193.2	1191.2	1187.2	1182.1	1178.0	1175.2	1171.1	1167.0	1164.1
15°	1201.4	1201.4	1200.2	1196.3	1190.3	1186.2	1184.1	1183.2	1182.1	1180.2	1177.0
17.5°	1219.4	1218.5	1215.3	1209.4	1202.3	1199.2	1197.3	1197.3	1197.3	1196.3	1194.2
20°	1245.6	1245.6	1241.5	1231.5	1225.5	1222.5	1219.4	1219.4	1219.4	1216.5	1213.4
22.5°	1288.0	1289.0	1282.9	1270.8	1262.7	1256.6	1252.6	1249.6	1246.7	1244.6	1239.7
25°	1345.4	1344.5	1337.3	1322.2	1316.1	1310.2	1302.1	1297.1	1293.0	1290.0	1283.9
27.5°	1405.8	1404.9	1396.9	1383.7	1379.6	1370.6	1364.5	1357.5	1352.5	1347.4	1341.3
30°	1483.6	1478.4	1472.4	1462.4	1460.3	1453.3	1445.2	1435.1	1427.0	1419.0	1412.0
32.5°	1553.0	1553.0	1543.9	1538.8	1542.8	1540.0	1541.0	1534.8	1529.9	1526.8	1519.8
35°	1649.7	1649.7	1645.8	1639.6	1640.7	1633.7	1632.6	1633.7	1637.7	1637.7	1629.6
37.5°	1778.7	1780.8	1767.7	1765.7	1760.6	1750.5	1745.4	1747.6	1756.5	1761.7	1750.5
40°	1939.0	1943.0	1939.0	1925.8	1919.9	1902.7	1892.5	1892.5	1899.6	1904.8	1900.8
42.5°	2097.3	2104.3	2097.3	2087.1	2082.1	2068.9	2063.9	2068.0	2077.2	2083.1	2077.2
45°	2273.6	2278.6	2269.6	2257.5	2251.4	2244.3	2241.4	2244.3	2254.4	2260.4	2258.5
47.5°	2447.0	2454.0	2442.9	2437.9	2437.9	2430.9	2438.9	2447.0	2456.0	2470.1	2464.1
50°	2616.3	2625.2	2618.3	2619.3	2627.4	2640.4	2655.5	2671.6	2687.8	2702.9	2704.9
52.5°	2767.4	2781.5	2782.5	2800.6	2825.9	2846.0	2888.3	2923.7	2961.9	2974.9	2969.0
55°	2926.7	2945.8	2971.0	2999.3	3039.5	3080.8	3152.4	3215.8	3266.2	3297.5	3292.5
57.5°	3154.4	3173.5	3199.8	3246.1	3306.7	3363.1	3460.8	3559.5	3636.1	3683.5	3660.4
60°	3449.8	3469.9	3504.1	3553.4	3632.0	3708.7	3842.7	3984.8	4103.7	4158.2	4115.9
62.5°	3840.8	3859.8	3882.0	3947.5	4035.1	4134.0	4302.3	4484.7	4635.9	4688.3	4628.7
65°	4398.0	4421.2	4428.3	4481.6	4567.3	4659.0	4840.4	5046.0	5218.3	5304.0	5185.0
67.5°	5025.8	5034.9	5063.1	5125.6	5213.4	5296.0	5439.1	5633.6	5798.9	5846.2	5719.1
70°	5393.8	5411.8	5461.2	5547.9	5652.8	5782.7	5939.0	6148.5	6336.0	6358.2	6197.0
72.5°	5061.1	5098.4	5186.2	5321.2	5540.8	5771.6	6040.7	6350.1	6619.3	6650.4	6391.4
75°	4059.4	4101.8	4206.6	4354.7	4614.8	4957.3	5346.4	5811.0	6214.0	6265.5	5922.9
77.5°	2163.7	2216.2	2368.3	2567.8	2938.7	3392.2	3860.8	4390.9	4733.6	4849.5	4602.6
80°	545.2	573.5	647.0	763.9	1014.8	1380.7	1784.8	2355.3	2780.6	2961.0	2780.6
82.5°	211.6	232.8	253.0	267.1	291.2	341.6	471.6	768.9	1036.0	1275.9	1104.6
85°	81.7	86.6	125.0	142.1	142.1	156.2	179.4	211.6	262.0	286.2	239.8
87.5°	32.2	35.3	43.4	66.6	68.5	60.5	64.5	72.6	55.4	46.4	52.5
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: P270409

CATALOG NUMBER: NAV-AF-03-D-UNV-5WQ-7027

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1	1164.1
2.5°	1159.0	1157.9	1155.9	1156.9	1155.9	1155.9	1155.9	1155.9
5°	1157.9	1157.9	1155.9	1155.9	1155.9	1156.9	1155.9	1155.9
7.5°	1156.9	1155.9	1154.0	1153.0	1153.0	1151.8	1151.8	1151.8
10°	1155.0	1153.0	1150.9	1149.9	1149.9	1147.9	1147.9	1147.9
12.5°	1160.0	1156.9	1155.0	1154.0	1154.0	1154.0	1155.0	1155.0
15°	1174.1	1168.1	1165.0	1164.1	1165.0	1167.0	1168.1	1169.1
17.5°	1189.1	1183.2	1178.0	1176.2	1177.0	1180.2	1183.2	1185.1
20°	1208.3	1203.3	1197.3	1195.3	1195.3	1199.2	1201.4	1204.3
22.5°	1235.6	1231.5	1226.5	1223.4	1221.4	1226.5	1229.5	1231.5
25°	1278.8	1274.9	1270.8	1267.8	1266.8	1271.8	1273.8	1274.9
27.5°	1336.3	1332.2	1330.3	1329.3	1326.3	1328.2	1331.3	1330.3
30°	1410.9	1413.9	1410.9	1410.9	1405.8	1408.0	1405.8	1403.8
32.5°	1510.7	1507.6	1498.6	1492.5	1485.4	1485.4	1482.5	1479.5
35°	1610.4	1600.4	1595.3	1598.4	1595.3	1597.4	1592.3	1587.2
37.5°	1728.3	1722.3	1721.3	1730.3	1728.3	1730.3	1730.3	1723.3
40°	1884.6	1880.5	1887.6	1902.7	1908.8	1907.8	1909.7	1900.8
42.5°	2063.9	2056.8	2060.0	2073.0	2080.0	2082.1	2081.2	2073.0
45°	2243.3	2245.4	2245.4	2259.4	2266.6	2270.6	2263.5	2260.4
47.5°	2445.9	2448.9	2442.0	2450.9	2453.0	2460.0	2454.0	2448.9
50°	2679.7	2668.7	2652.5	2655.5	2655.5	2653.6	2646.4	2640.4
52.5°	2940.7	2915.5	2885.4	2875.2	2864.2	2853.0	2839.0	2827.9
55°	3238.0	3194.7	3140.2	3115.1	3093.9	3068.7	3036.5	3025.4
57.5°	3582.7	3508.2	3435.6	3390.3	3335.8	3302.6	3261.2	3259.2
60°	3991.9	3891.1	3763.1	3695.5	3641.2	3601.8	3570.7	3558.5
62.5°	4464.5	4291.3	4153.1	4080.6	4017.1	3992.8	3953.6	3958.7
65°	4949.3	4773.0	4638.8	4580.4	4521.0	4504.8	4468.6	4481.6
67.5°	5474.4	5329.3	5182.1	5127.6	5073.3	5057.1	5019.8	5030.9
70°	5945.0	5760.6	5593.2	5486.5	5393.8	5319.1	5271.8	5252.6
72.5°	6038.6	5719.1	5456.1	5189.1	5034.9	4899.9	4844.5	4823.3
75°	5425.9	4930.2	4555.2	4241.7	4068.5	3872.0	3850.8	3821.6
77.5°	4220.6	3656.3	3202.7	2799.7	2566.8	2327.0	2244.3	2181.9
80°	2517.5	1934.9	1499.6	1051.1	857.6	690.3	649.0	605.6
82.5°	901.0	577.5	389.0	303.4	271.1	249.9	233.7	212.7
85°	217.7	183.4	173.4	157.3	155.1	132.1	93.8	83.6
87.5°	69.4	63.5	64.5	61.4	64.5	48.4	39.3	35.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)