

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: P195944

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195944  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-5NQ-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10349.2 lumens  
Efficiency: N/A  
Efficacy: 121.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

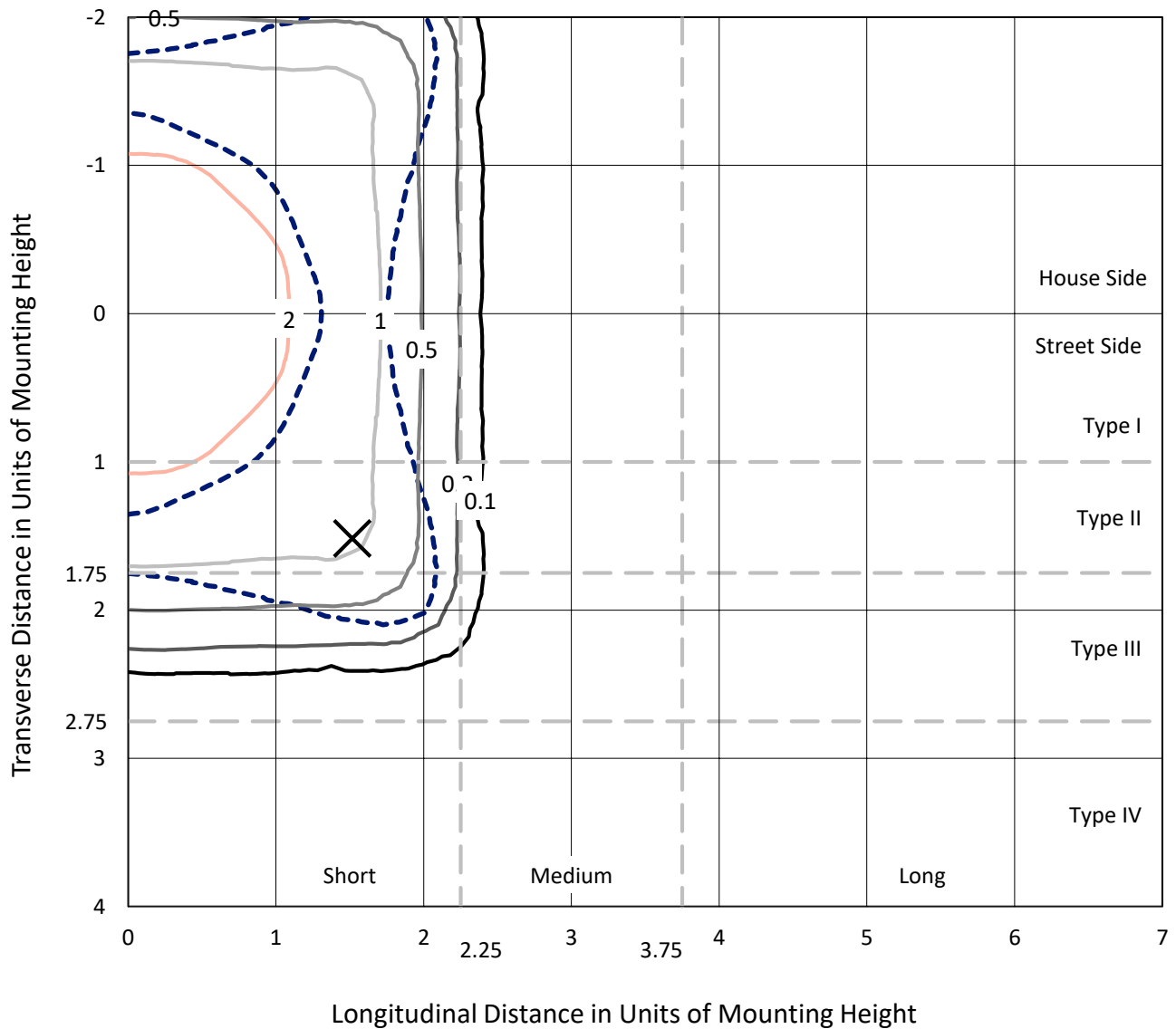
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

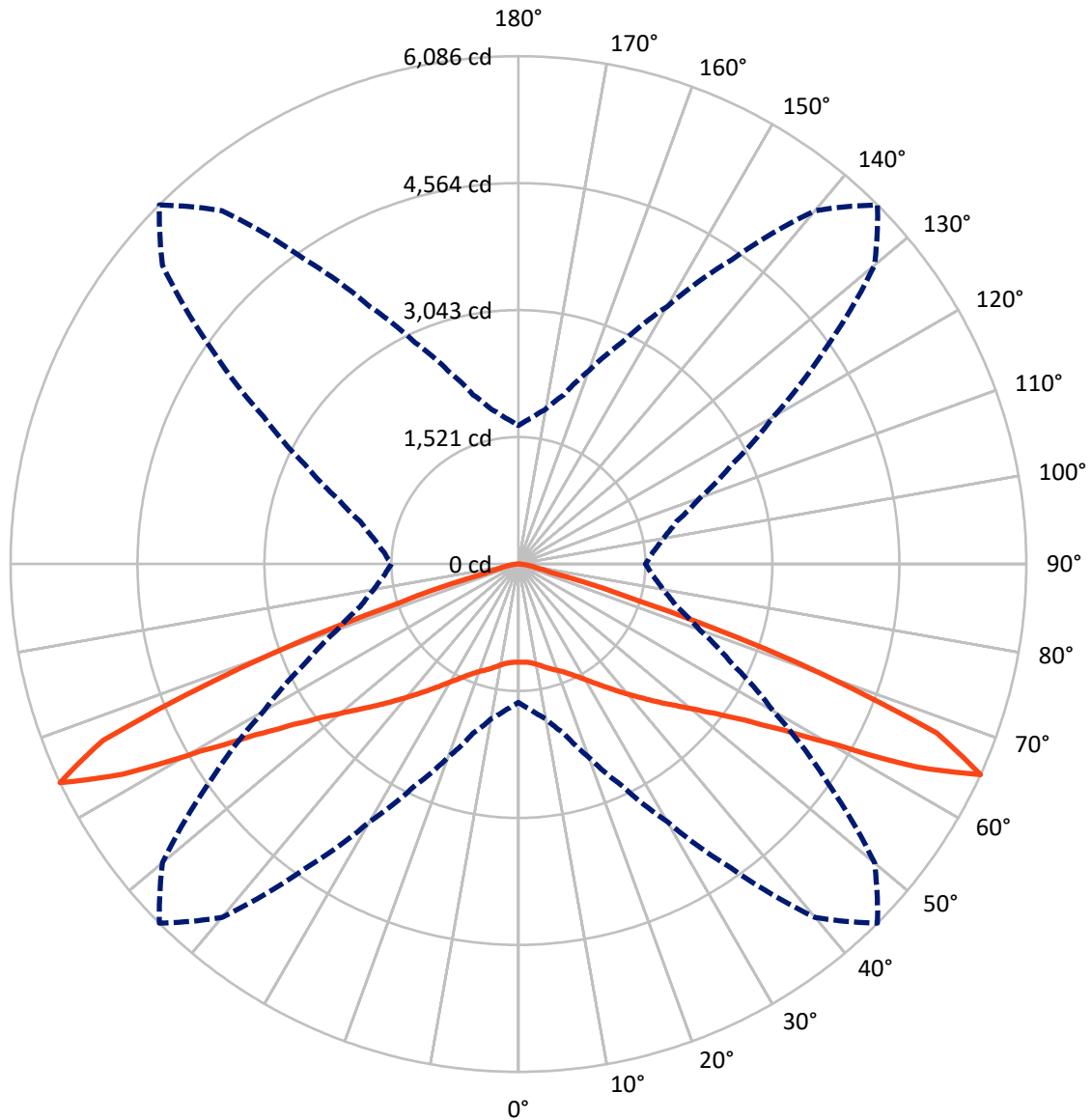
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.9 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5174.6	0.0	5174.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5174.6	0.0	5174.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10349.2	0.0	10349.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.6	1.1
10°-20°	367.4	3.6
20°-30°	685.4	6.6
30°-40°	1155.7	11.2
40°-50°	1877.2	18.1
50°-60°	2941.2	28.4
60°-70°	2776.4	26.8
70°-80°	374.2	3.6
80°-90°	57.0	0.6
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°	10349.2	100.0
0°-180°	10349.2	100.0

**Coefficient of Utilization**



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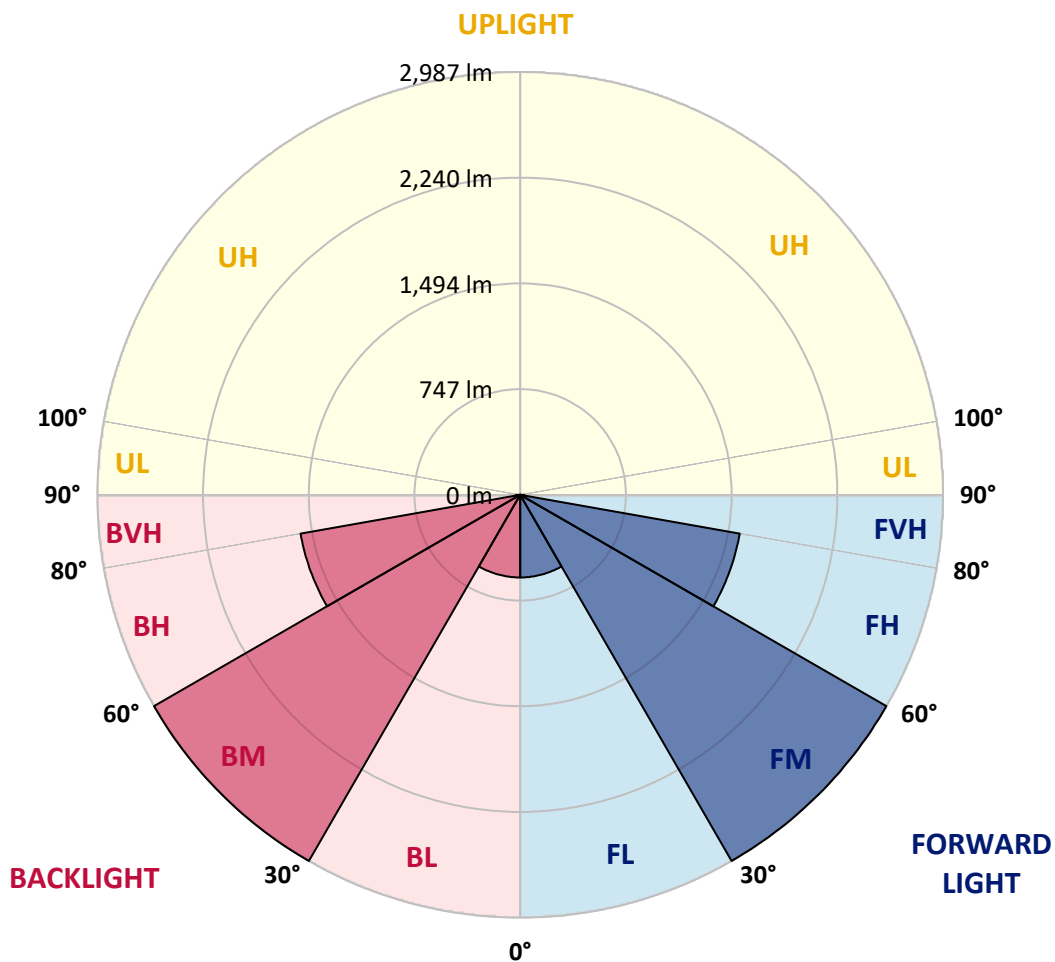
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	583.7	5.6			
FM	(30°-60°)	2987.1	28.9			
FH	(60°-80°)	1575.3	15.2			G1/1800
FVH	(80°-90°)	28.5	0.3			G1/100
BL	(0°-30°)	583.7	5.6	B2/1000		
BM	(30°-60°)	2987.1	28.9	B3/5000		
BH	(60°-80°)	1575.3	15.2	B3/2500		G1/1800
BVH	(80°-90°)	28.5	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-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2
2.5°	1186.9	1186.9	1188.8	1188.2	1185.6	1183.7	1181.7	1179.2	1177.8	1176.6	1175.9
5°	1193.4	1193.4	1195.2	1194.6	1192.7	1190.1	1188.8	1186.9	1185.0	1183.7	1184.3
7.5°	1209.4	1210.0	1210.8	1210.0	1208.1	1206.3	1203.6	1203.0	1200.4	1198.5	1199.8
10°	1234.0	1234.0	1234.6	1235.2	1234.0	1229.4	1229.4	1228.2	1225.6	1222.9	1223.7
12.5°	1261.0	1261.0	1261.7	1261.7	1261.7	1259.0	1259.8	1259.0	1255.9	1254.5	1255.9
15°	1287.5	1288.1	1288.1	1289.4	1289.4	1290.0	1292.6	1292.6	1291.3	1290.7	1290.7
17.5°	1318.4	1319.7	1320.3	1322.3	1322.9	1324.2	1326.8	1327.4	1328.1	1326.2	1326.8
20°	1359.7	1360.3	1362.3	1362.9	1365.4	1365.4	1366.8	1366.2	1364.8	1362.3	1362.3
22.5°	1406.0	1407.4	1411.3	1411.3	1414.4	1412.5	1413.2	1411.3	1408.0	1406.8	1405.4
25°	1466.7	1468.7	1471.8	1470.6	1471.8	1468.7	1468.7	1468.7	1466.7	1464.8	1464.0
27.5°	1543.4	1540.2	1543.4	1540.8	1540.2	1537.6	1538.2	1537.0	1535.0	1534.3	1531.8
30°	1623.3	1619.4	1621.4	1622.1	1620.8	1620.1	1617.5	1615.6	1612.4	1613.0	1611.0
32.5°	1714.9	1711.0	1712.9	1713.5	1712.3	1713.5	1712.9	1708.4	1704.5	1707.1	1707.1
35°	1823.8	1821.3	1826.4	1828.3	1824.4	1822.6	1819.9	1814.8	1809.0	1812.9	1813.5
37.5°	1954.8	1951.5	1955.4	1960.5	1953.4	1949.5	1939.2	1931.5	1927.6	1929.6	1932.1
40°	2090.7	2091.4	2102.4	2103.6	2095.9	2091.4	2081.1	2069.4	2058.5	2058.5	2061.8
42.5°	2233.8	2235.8	2248.7	2253.2	2250.6	2242.2	2228.1	2213.9	2199.7	2202.3	2206.1
45°	2395.6	2393.1	2406.6	2417.6	2415.7	2413.0	2399.5	2373.8	2360.9	2360.3	2366.7
47.5°	2565.9	2571.1	2585.2	2603.9	2603.3	2596.9	2579.4	2555.5	2531.7	2533.6	2541.4
50°	2764.4	2771.6	2795.4	2814.0	2816.7	2814.8	2794.1	2766.4	2732.8	2734.8	2745.1
52.5°	2942.4	2952.6	2980.4	3019.1	3043.0	3053.9	3040.4	3014.5	2980.4	2982.3	2993.3
55°	3103.5	3119.7	3160.9	3213.8	3261.5	3306.0	3325.9	3325.3	3300.1	3306.0	3320.2
57.5°	3204.8	3227.3	3289.9	3374.9	3469.7	3559.4	3636.7	3709.5	3725.7	3756.0	3756.0
60°	3068.8	3121.6	3204.8	3350.5	3536.8	3738.0	3955.9	4167.9	4304.6	4412.3	4354.3
62.5°	2562.7	2640.6	2757.4	2949.5	3239.6	3598.6	4036.5	4529.6	5044.1	5358.7	5127.8
65°	1658.1	1756.1	1883.2	2099.1	2464.7	2926.9	3564.5	4451.0	5527.6	6085.9	5570.2
67.5°	656.9	723.3	800.7	954.1	1271.3	1725.2	2440.8	3534.2	4881.0	5407.7	4829.4
70°	313.9	324.9	339.7	372.7	451.9	609.9	980.6	1741.3	2993.3	3548.4	2921.8
72.5°	226.9	228.8	236.0	246.9	270.2	302.4	367.4	532.5	1032.2	1500.9	1033.5
75°	172.2	174.7	178.6	184.3	196.6	212.1	236.6	283.7	353.3	407.4	352.6
77.5°	130.8	133.5	136.7	142.5	148.9	159.9	168.9	187.6	217.3	228.8	227.6
80°	95.4	99.9	105.1	110.3	114.8	119.9	120.6	129.6	146.4	157.3	154.1
82.5°	60.6	64.4	78.1	83.8	84.5	85.7	85.1	85.7	94.7	102.5	99.9
85°	38.7	41.2	48.4	54.8	53.5	56.1	56.1	54.8	50.9	43.9	52.2
87.5°	19.3	19.9	23.2	29.1	27.7	24.4	23.8	23.8	17.4	14.8	16.2
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°	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2	1177.2
2.5°	1173.9	1175.3	1173.3	1173.3	1172.7	1173.9	1172.1	1172.1
5°	1183.0	1185.0	1184.3	1184.3	1185.6	1186.9	1186.2	1185.6
7.5°	1199.1	1200.4	1201.7	1202.4	1203.6	1203.0	1204.3	1203.6
10°	1223.7	1222.3	1224.3	1222.3	1222.9	1221.7	1222.3	1222.3
12.5°	1254.5	1252.6	1251.4	1250.0	1250.0	1247.5	1247.5	1248.1
15°	1290.0	1286.8	1284.2	1283.0	1281.7	1281.7	1279.7	1281.0
17.5°	1324.8	1321.7	1317.2	1317.2	1315.2	1313.9	1312.5	1315.8
20°	1361.5	1358.4	1355.8	1355.1	1351.3	1350.0	1350.6	1354.5
22.5°	1404.1	1402.2	1402.2	1400.9	1398.4	1396.4	1396.4	1400.9
25°	1461.5	1457.6	1458.3	1458.9	1457.6	1457.6	1456.4	1459.5
27.5°	1531.8	1528.6	1530.5	1531.8	1530.5	1532.5	1530.5	1533.1
30°	1614.3	1612.4	1614.3	1616.3	1613.0	1613.0	1611.8	1613.7
32.5°	1712.9	1710.4	1711.7	1711.7	1707.1	1703.3	1698.1	1702.0
35°	1821.3	1818.0	1820.6	1822.6	1817.4	1813.5	1805.8	1809.0
37.5°	1940.5	1941.8	1945.0	1953.4	1952.1	1945.7	1939.9	1942.5
40°	2073.9	2080.4	2094.6	2100.4	2099.1	2092.7	2085.0	2086.2
42.5°	2224.8	2233.2	2248.0	2257.8	2253.2	2244.1	2234.5	2238.4
45°	2389.2	2402.1	2421.4	2431.1	2425.3	2415.7	2402.1	2409.3
47.5°	2563.3	2589.1	2614.9	2627.8	2625.8	2612.3	2594.9	2596.9
50°	2771.6	2805.7	2838.6	2851.5	2841.8	2821.2	2796.6	2796.0
52.5°	3030.7	3067.4	3094.5	3091.3	3067.4	3035.2	3007.5	3006.2
55°	3354.4	3366.6	3362.7	3335.0	3293.1	3242.8	3207.4	3201.5
57.5°	3745.6	3704.4	3643.8	3560.0	3465.9	3370.4	3306.0	3282.1
60°	4224.1	4037.7	3821.1	3592.9	3384.6	3228.6	3130.0	3070.0
62.5°	4619.2	4079.6	3595.5	3199.0	2874.7	2681.9	2547.1	2464.0
65°	4483.8	3524.6	2823.1	2311.9	1957.9	1758.8	1616.3	1521.4
67.5°	3463.9	2355.0	1638.8	1136.0	861.3	729.2	637.0	577.0
70°	1746.5	903.2	547.4	386.2	330.1	306.9	291.4	282.3
72.5°	512.5	342.4	284.3	251.4	231.5	217.3	208.3	203.8
75°	283.7	231.5	204.4	185.7	172.8	163.1	157.3	153.4
77.5°	195.4	168.3	154.8	142.5	132.2	125.1	120.6	116.7
80°	136.7	123.2	117.3	110.9	103.1	97.4	90.9	88.3
82.5°	90.9	85.1	83.8	78.7	74.2	67.7	56.1	52.2
85°	53.5	52.9	52.9	50.9	47.7	41.9	33.6	33.6
87.5°	18.7	19.3	19.9	21.3	20.7	17.4	14.2	13.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)