

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: P196424

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196424  
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-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 3000K, 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: 9785.3 lumens  
Efficiency: N/A  
Efficacy: 115.1 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

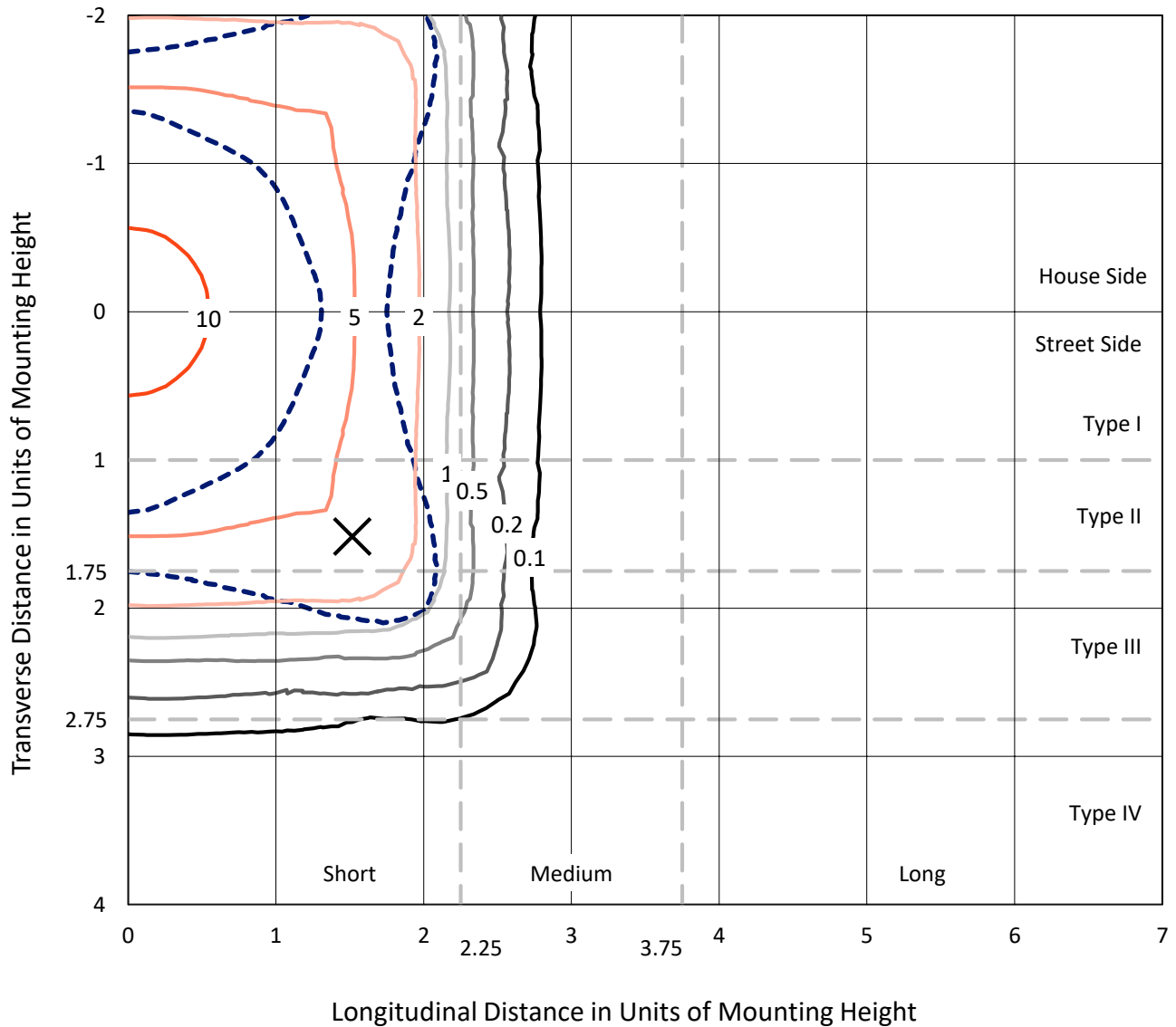
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

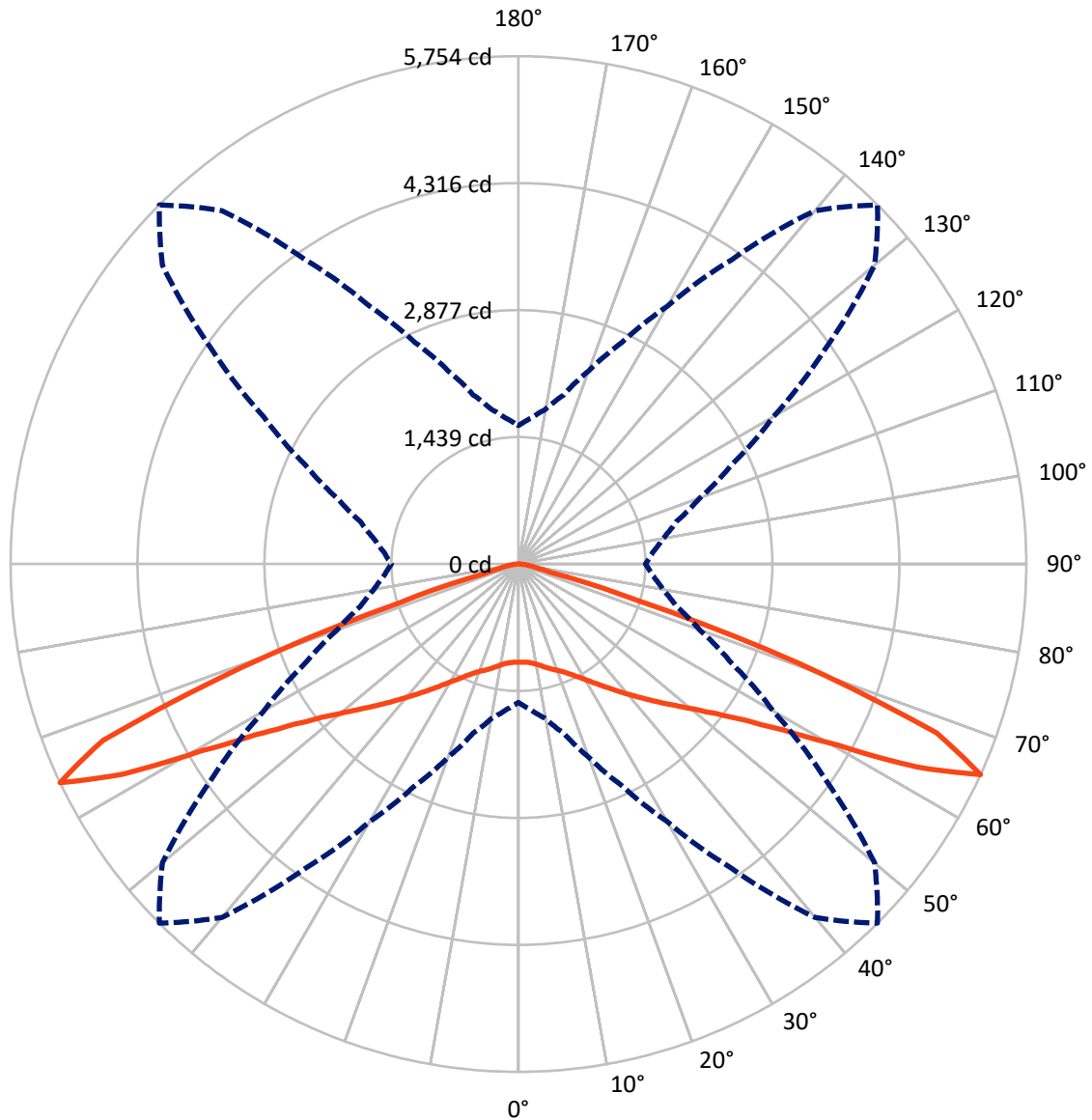
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.1 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	4892.6	0.0	4892.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	4892.6	0.0	4892.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	9785.3	0.0	9785.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.4	1.1
10°-20°	347.4	3.6
20°-30°	648.1	6.6
30°-40°	1092.7	11.2
40°-50°	1774.9	18.1
50°-60°	2781.0	28.4
60°-70°	2625.1	26.8
70°-80°	353.8	3.6
80°-90°	53.9	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°	9785.3	100.0
0°-180°	9785.3	100.0



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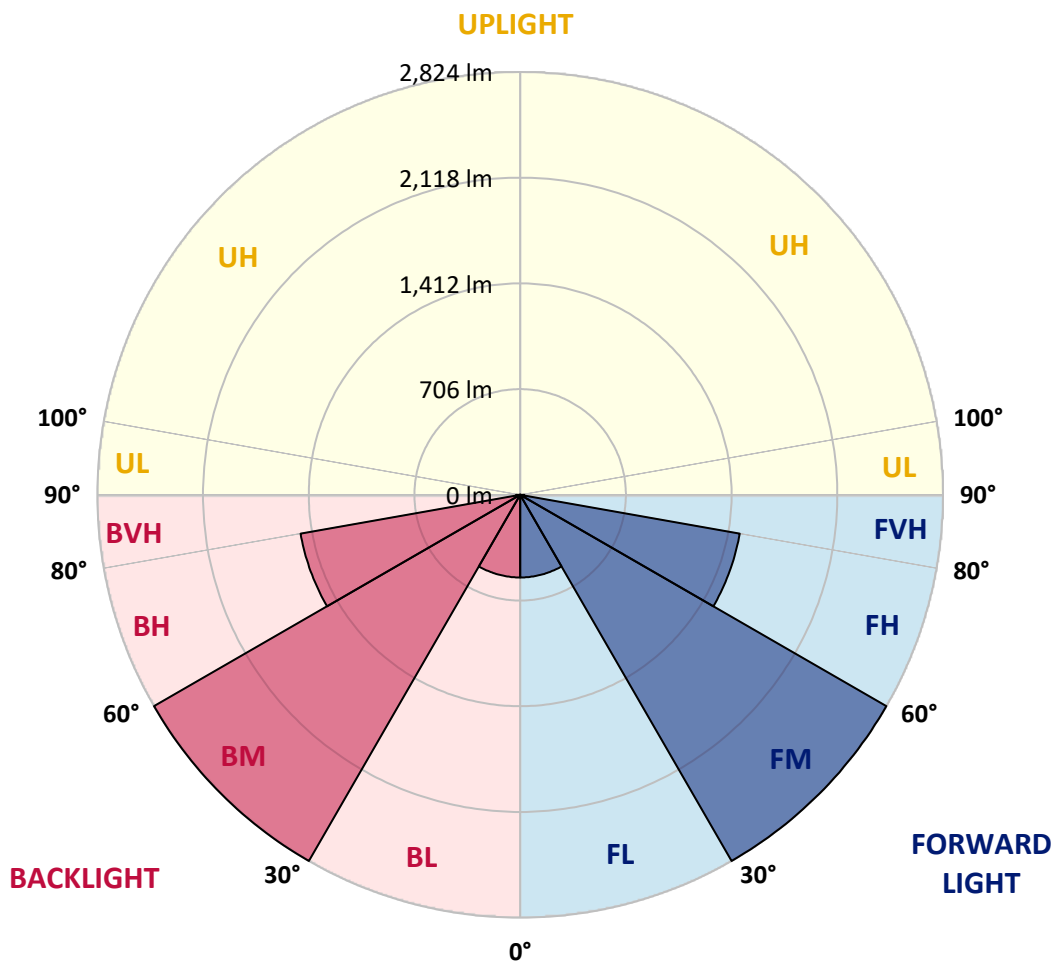
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	551.9	5.6			
FM	(30°-60°)	2824.3	28.9			
FH	(60°-80°)	1489.5	15.2			G1/1800
FVH	(80°-90°)	26.9	0.3			G1/100
BL	(0°-30°)	551.9	5.6	B2/1000		
BM	(30°-60°)	2824.3	28.9	B3/5000		
BH	(60°-80°)	1489.5	15.2	B3/2500		G1/1800
BVH	(80°-90°)	26.9	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°	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1
2.5°	1122.2	1122.2	1124.1	1123.4	1121.0	1119.2	1117.2	1114.9	1113.7	1112.5	1111.8
5°	1128.3	1128.3	1130.2	1129.5	1127.7	1125.3	1124.1	1122.2	1120.4	1119.2	1119.8
7.5°	1143.5	1144.2	1144.7	1144.2	1142.3	1140.4	1138.1	1137.5	1134.9	1133.1	1134.4
10°	1166.7	1166.7	1167.3	1167.9	1166.7	1162.4	1162.4	1161.2	1158.8	1156.3	1156.9
12.5°	1192.3	1192.3	1192.9	1192.9	1192.9	1190.5	1191.0	1190.5	1187.4	1186.2	1187.4
15°	1217.2	1217.9	1217.9	1219.2	1219.2	1219.8	1222.2	1222.2	1221.0	1220.3	1220.3
17.5°	1246.5	1247.7	1248.4	1250.3	1250.8	1252.0	1254.6	1255.1	1255.7	1253.9	1254.6
20°	1285.6	1286.2	1288.0	1288.6	1291.0	1291.0	1292.3	1291.7	1290.5	1288.0	1288.0
22.5°	1329.4	1330.7	1334.4	1334.4	1337.4	1335.5	1336.1	1334.4	1331.4	1330.0	1328.8
25°	1386.7	1388.5	1391.6	1390.5	1391.6	1388.5	1388.5	1388.5	1386.7	1385.0	1384.4
27.5°	1459.2	1456.2	1459.2	1456.9	1456.2	1453.8	1454.5	1453.1	1451.4	1450.8	1448.3
30°	1534.9	1531.3	1533.0	1533.7	1532.5	1531.9	1529.4	1527.6	1524.5	1525.1	1523.3
32.5°	1621.4	1617.8	1619.7	1620.2	1619.0	1620.2	1619.7	1615.3	1611.7	1614.1	1614.1
35°	1724.4	1722.0	1726.9	1728.7	1725.1	1723.2	1720.9	1715.9	1710.5	1714.1	1714.8
37.5°	1848.2	1845.2	1848.7	1853.7	1847.0	1843.3	1833.6	1826.3	1822.6	1824.4	1826.9
40°	1976.8	1977.4	1987.8	1988.9	1981.6	1977.4	1967.6	1956.8	1946.4	1946.4	1949.4
42.5°	2112.1	2113.9	2126.1	2130.4	2128.0	2120.0	2106.6	2093.2	2079.9	2082.3	2086.0
45°	2265.2	2262.6	2275.6	2285.8	2284.1	2281.6	2268.8	2244.4	2232.1	2231.6	2237.7
47.5°	2426.1	2430.9	2444.3	2462.0	2461.4	2455.3	2438.8	2416.3	2393.8	2395.6	2402.9
50°	2613.8	2620.5	2643.1	2660.8	2663.2	2661.3	2641.9	2615.6	2584.0	2585.7	2595.6
52.5°	2782.1	2791.8	2818.1	2854.6	2877.2	2887.5	2874.7	2850.3	2818.1	2819.9	2830.3
55°	2934.4	2949.7	2988.7	3038.7	3083.8	3125.8	3144.7	3144.2	3120.3	3125.8	3139.2
57.5°	3030.1	3051.5	3110.6	3191.0	3280.6	3365.4	3438.5	3507.4	3522.6	3551.4	3551.4
60°	2901.5	2951.5	3030.1	3167.9	3344.1	3534.2	3740.3	3940.9	4070.0	4171.8	4117.0
62.5°	2423.1	2496.8	2607.2	2788.8	3063.1	3402.6	3816.4	4282.8	4769.1	5066.7	4848.5
65°	1567.8	1660.4	1780.5	1984.7	2330.4	2767.4	3370.3	4208.4	5226.4	5754.2	5266.7
67.5°	621.1	684.0	757.0	902.2	1202.1	1631.2	2307.8	3341.5	4615.0	5113.0	4566.3
70°	296.8	307.2	321.2	352.4	427.3	576.7	927.2	1646.4	2830.3	3355.1	2762.5
72.5°	214.5	216.5	223.1	233.5	255.4	285.9	347.5	503.4	975.9	1419.1	977.1
75°	162.8	165.2	168.8	174.4	186.0	200.6	223.8	268.2	334.0	385.2	333.5
77.5°	123.8	126.2	129.3	134.7	140.8	151.3	159.7	177.4	205.4	216.5	215.1
80°	90.2	94.5	99.3	104.3	108.5	113.4	113.9	122.5	138.3	148.7	145.7
82.5°	57.3	60.9	73.8	79.2	79.9	81.1	80.5	81.1	89.6	96.9	94.5
85°	36.6	39.0	45.7	51.8	50.6	53.0	53.0	51.8	48.2	41.4	49.3
87.5°	18.2	18.9	22.0	27.5	26.2	23.2	22.5	22.5	16.5	13.9	15.2
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°	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1	1113.1
2.5°	1110.0	1111.2	1109.4	1109.4	1108.8	1110.0	1108.2	1108.2
5°	1118.6	1120.4	1119.8	1119.8	1121.0	1122.2	1121.5	1121.0
7.5°	1133.8	1134.9	1136.2	1136.9	1138.1	1137.5	1138.7	1138.1
10°	1156.9	1155.8	1157.6	1155.8	1156.3	1155.1	1155.8	1155.8
12.5°	1186.2	1184.4	1183.2	1181.9	1181.9	1179.5	1179.5	1180.1
15°	1219.8	1216.7	1214.2	1213.0	1211.8	1211.8	1209.9	1211.2
17.5°	1252.6	1249.6	1245.3	1245.3	1243.5	1242.3	1241.0	1244.1
20°	1287.4	1284.4	1281.9	1281.3	1277.7	1276.4	1277.0	1280.7
22.5°	1327.6	1325.8	1325.8	1324.5	1322.1	1320.3	1320.3	1324.5
25°	1381.9	1378.2	1378.9	1379.4	1378.2	1378.2	1377.0	1380.1
27.5°	1448.3	1445.3	1447.1	1448.3	1447.1	1448.9	1447.1	1449.6
30°	1526.4	1524.5	1526.4	1528.2	1525.1	1525.1	1523.9	1525.7
32.5°	1619.7	1617.1	1618.3	1618.3	1614.1	1610.5	1605.6	1609.3
35°	1722.0	1718.9	1721.4	1723.2	1718.3	1714.8	1707.4	1710.5
37.5°	1834.8	1836.0	1839.1	1847.0	1845.7	1839.7	1834.1	1836.6
40°	1960.9	1967.1	1980.5	1986.0	1984.7	1978.6	1971.4	1972.5
42.5°	2103.6	2111.6	2125.5	2134.7	2130.4	2122.0	2112.7	2116.4
45°	2259.1	2271.3	2289.5	2298.7	2293.2	2284.1	2271.3	2277.9
47.5°	2423.6	2448.0	2472.4	2484.5	2482.7	2470.0	2453.5	2455.3
50°	2620.5	2652.9	2684.0	2696.1	2686.9	2667.4	2644.3	2643.6
52.5°	2865.6	2900.3	2925.9	2922.9	2900.3	2869.8	2843.6	2842.4
55°	3171.6	3183.2	3179.5	3153.2	3113.7	3066.2	3032.6	3027.1
57.5°	3541.5	3502.6	3445.3	3366.1	3277.0	3186.8	3125.8	3103.3
60°	3993.9	3817.7	3612.8	3397.1	3200.2	3052.7	2959.4	2902.7
62.5°	4367.5	3857.3	3399.5	3024.7	2718.1	2535.8	2408.4	2329.7
65°	4239.5	3332.5	2669.3	2185.8	1851.3	1662.9	1528.2	1438.6
67.5°	3275.1	2226.7	1549.6	1074.0	814.4	689.4	602.2	545.5
70°	1651.4	854.0	517.6	365.2	312.1	290.2	275.6	267.0
72.5°	484.6	323.6	268.8	237.7	218.8	205.4	196.8	192.7
75°	268.2	218.8	193.3	175.6	163.4	154.2	148.7	145.1
77.5°	184.6	159.1	146.3	134.7	125.0	118.2	113.9	110.4
80°	129.3	116.5	110.9	104.9	97.6	92.0	86.0	83.5
82.5°	86.0	80.5	79.2	74.4	70.2	64.0	53.0	49.3
85°	50.6	49.9	49.9	48.2	45.2	39.7	31.6	31.6
87.5°	17.7	18.2	18.9	20.1	19.5	16.5	13.4	12.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)