

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: P882963

Luminaire Tested: **NAV-SB3A-830-U-SL4-HSS**

Issue Date: 10/7/2024

**Test Information**

Test Method: LM-79-08  
Report Number: P882963  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-SB3A-830-U-SL4-HSS  
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE  
(3) 80 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

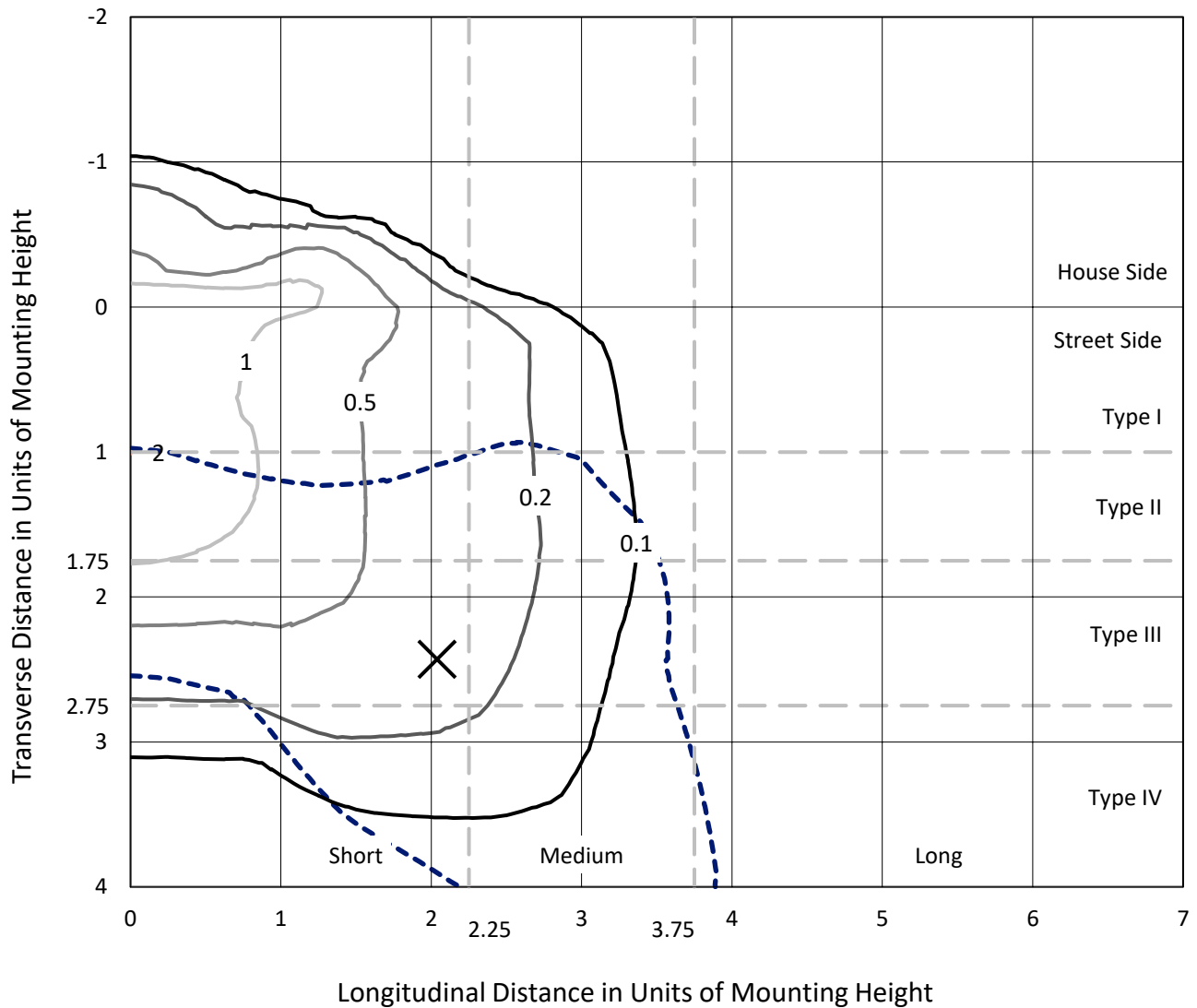
Lumens per Lamp: N/A  
Luminaire Lumens: 8218 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 84.7  
Input Voltage (V): 120.0  
Input Current (Ain): 0.717  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 11.969  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

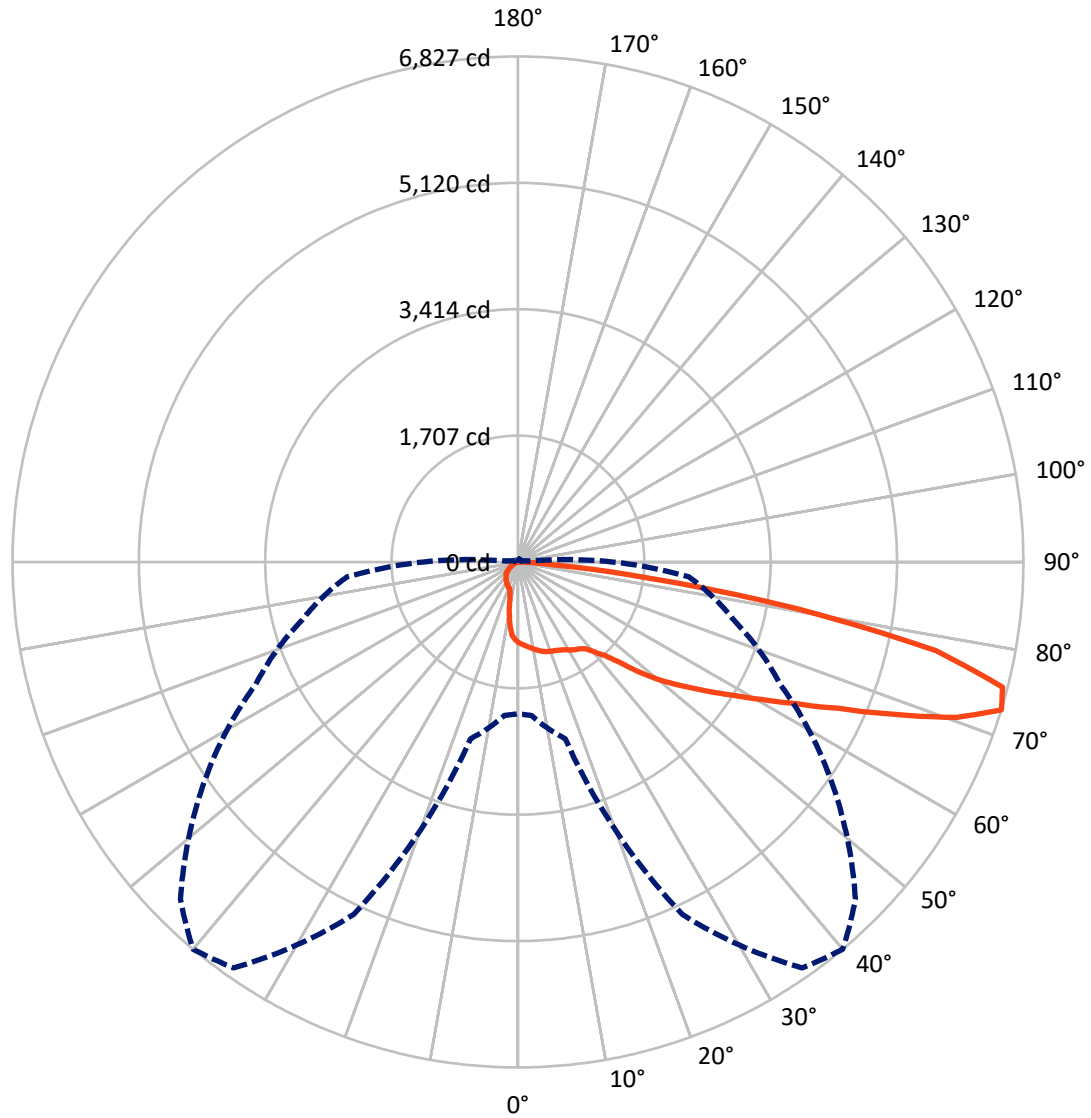
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral      - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1061.3	0.0	1061.3
	% Fixture	12.9	0.0	12.9
<b>Street Side</b>	Lumens	7156.7	0.0	7156.7
	% Fixture	87.1	0.0	87.1
<b>Total</b>	Lumens	8218.0	0.0	8218.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.4	1.2
10°-20°	269.9	3.3
20°-30°	436.7	5.3
30°-40°	644.7	7.8
40°-50°	1085.0	13.2
50°-60°	1684.7	20.5
60°-70°	2108.1	25.7
70°-80°	1725.9	21.0
80°-90°	163.6	2.0
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°	8218.0	100.0
0°-180°	8218.0	100.0

**Coefficient of Utilization**



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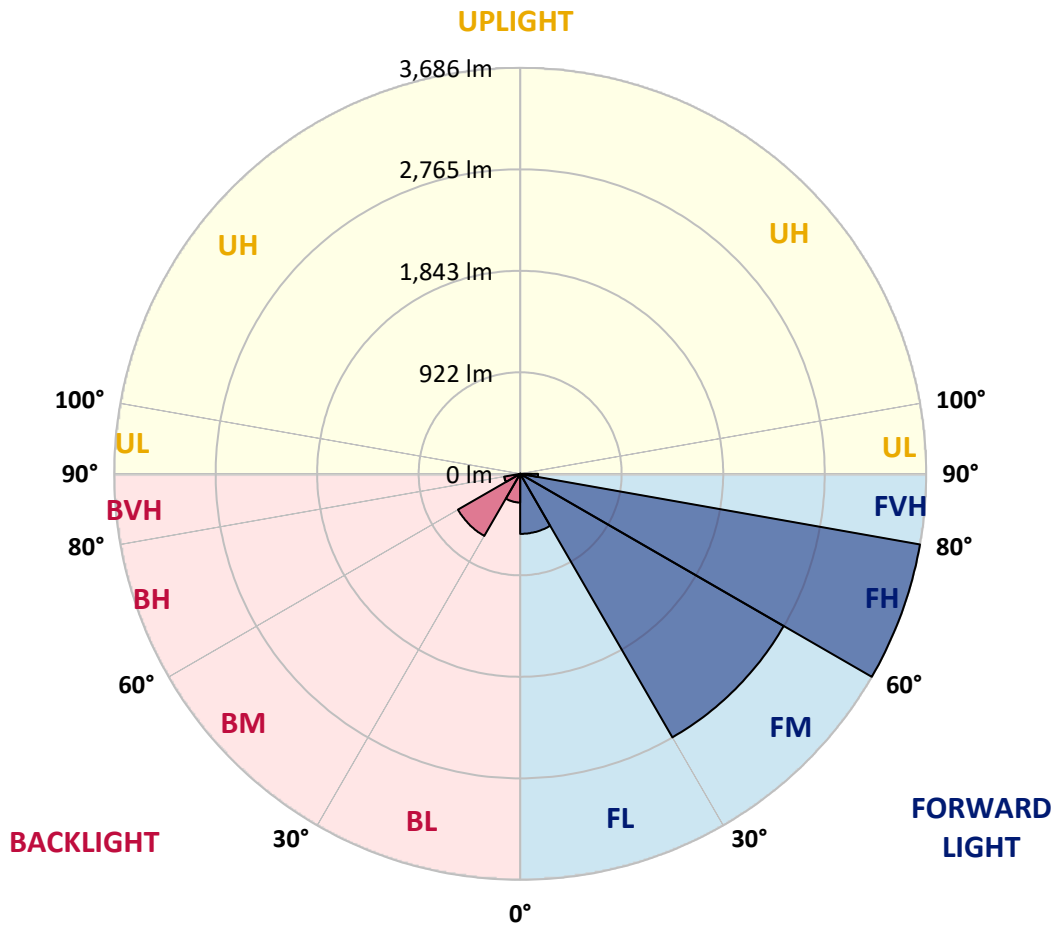
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	545.4	6.6			
FM (30°-60°)	2762.8	33.6			
FH (60°-80°)	3686.1	44.9			G2/5000
FVH (80°-90°)	162.4	2.0			G2/225
BL (0°-30°)	260.5	3.2	B1/500		
BM (30°-60°)	651.7	7.9	B1/1000		
BH (60°-80°)	147.8	1.8	B1/500		G1/500
BVH (80°-90°)	1.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1
2.5°	1120.9	1125.3	1122.8	1117.8	1116.6	1114.1	1111.0	1109.8	1105.5	1101.7	1097.4
5°	1152.5	1156.8	1153.7	1146.9	1143.8	1140.7	1136.4	1132.7	1124.0	1116.0	1106.1
7.5°	1187.2	1190.9	1187.2	1177.3	1172.3	1168.6	1162.4	1156.8	1146.9	1135.2	1122.8
10°	1225.5	1228.6	1223.1	1210.1	1202.0	1196.4	1190.9	1184.7	1175.4	1162.4	1147.5
12.5°	1261.4	1265.2	1256.5	1241.0	1231.7	1226.2	1220.0	1215.0	1205.7	1193.4	1177.9
15°	1294.2	1299.8	1285.0	1268.2	1257.7	1253.4	1247.2	1244.1	1237.9	1229.3	1215.0
17.5°	1319.0	1322.7	1307.2	1287.4	1275.7	1272.6	1268.2	1270.1	1268.9	1264.5	1255.2
20°	1340.0	1342.5	1322.1	1298.0	1285.0	1285.6	1284.3	1290.5	1293.0	1293.0	1292.4
22.5°	1366.0	1366.7	1340.7	1310.3	1294.9	1299.2	1301.1	1307.9	1312.8	1317.8	1328.9
25°	1400.1	1398.8	1367.9	1326.4	1312.8	1319.0	1323.3	1325.8	1331.4	1339.4	1364.8
27.5°	1450.8	1447.1	1407.5	1352.4	1336.3	1341.9	1349.9	1348.7	1346.2	1352.4	1395.1
30°	1515.2	1510.3	1457.6	1388.9	1374.1	1379.0	1381.5	1370.4	1352.4	1358.0	1421.7
32.5°	1617.3	1608.7	1535.6	1429.8	1406.9	1412.5	1409.4	1386.5	1359.9	1365.4	1448.4
35°	1795.0	1773.9	1670.6	1515.2	1444.0	1437.8	1430.4	1408.1	1375.3	1369.8	1470.6
37.5°	2172.5	2135.4	1959.0	1681.7	1528.2	1488.0	1465.1	1442.8	1392.0	1369.8	1496.0
40°	2598.4	2560.6	2357.0	1960.2	1668.1	1600.0	1545.5	1483.6	1409.4	1377.8	1535.6
42.5°	3042.8	3001.3	2792.1	2305.6	1868.0	1728.1	1626.6	1516.4	1437.8	1402.6	1588.2
45°	3539.2	3487.2	3213.6	2665.9	2158.3	1941.1	1757.2	1583.9	1487.4	1446.5	1660.0
47.5°	4062.8	3995.4	3633.9	3015.6	2470.9	2235.7	1996.1	1704.6	1560.4	1512.1	1757.2
50°	4527.1	4460.2	4067.8	3381.4	2763.0	2516.1	2268.5	1871.7	1670.0	1605.0	1887.8
52.5°	4860.7	4809.9	4462.7	3758.9	3066.9	2779.1	2515.4	2066.1	1808.6	1723.8	2041.9
55°	5084.1	5037.7	4742.5	4116.7	3420.4	3068.8	2758.7	2277.1	1975.7	1866.2	2212.2
57.5°	5219.7	5193.1	4944.9	4436.1	3770.7	3385.7	3037.2	2509.3	2172.5	2033.9	2402.2
60°	5268.0	5246.3	5070.5	4740.6	4194.1	3766.4	3364.7	2771.1	2411.5	2224.5	2597.2
62.5°	5139.2	5143.5	5160.9	5101.5	4640.3	4212.0	3757.1	3085.5	2676.4	2440.6	2780.4
65°	4533.3	4569.2	4898.4	5501.3	5231.4	4770.3	4256.6	3469.3	2979.7	2686.3	2925.8
67.5°	3753.4	3805.4	4215.1	5735.3	5861.5	5495.1	4952.3	3958.2	3341.1	2936.3	2980.9
70°	2873.2	2928.9	3425.3	5686.4	6451.4	6287.4	5812.6	4580.3	3715.6	3109.6	2840.4
72.5°	2050.6	2079.1	2470.3	5251.2	6693.4	6827.1	6446.5	5169.5	3906.9	3013.7	2316.8
75°	1440.9	1436.0	1695.3	4228.7	6316.5	6761.5	6224.3	4850.8	3535.5	2394.1	1428.6
77.5°	627.6	628.9	846.7	2568.1	5041.4	5774.9	5173.9	3038.5	2464.7	1268.9	602.9
80°	162.8	167.7	310.7	1022.5	3035.4	3811.5	3155.5	1335.7	1138.9	309.5	115.1
82.5°	57.6	61.3	143.0	321.2	1119.7	1747.9	1405.0	427.1	297.1	88.5	30.9
85°	16.7	19.8	76.8	98.4	231.5	493.9	341.0	82.9	73.0	45.8	8.0
87.5°	0.0	2.5	15.5	13.6	13.6	9.3	17.3	9.3	11.8	5.6	2.5
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1	1088.1
2.5°	1093.7	1089.4	1080.1	1070.2	1060.9	1052.2	1049.8	1040.5	1036.1	1036.8	1036.1
5°	1099.3	1091.2	1073.3	1051.6	1029.3	1004.0	982.9	953.2	927.8	924.7	922.9
7.5°	1114.1	1101.1	1072.0	1029.9	974.2	904.3	839.3	774.9	738.4	718.6	717.4
10°	1137.0	1119.7	1075.1	994.7	876.4	751.4	653.0	571.9	530.4	511.3	507.5
12.5°	1164.3	1145.1	1080.1	934.6	750.2	586.2	479.7	430.2	421.5	420.3	419.7
15°	1202.6	1181.6	1085.7	853.5	613.4	446.3	397.4	398.0	404.8	408.5	407.9
17.5°	1245.3	1224.3	1077.6	754.5	478.5	381.3	380.0	385.6	395.5	399.2	398.6
20°	1288.7	1268.9	1049.1	638.1	386.8	363.3	368.3	374.5	384.4	389.3	389.3
22.5°	1333.2	1315.9	1004.0	514.4	349.1	350.3	356.5	362.7	373.9	379.4	379.4
25°	1380.9	1366.0	943.9	412.2	333.0	336.7	344.8	352.2	363.9	370.8	370.8
27.5°	1429.2	1418.0	875.8	344.1	318.1	322.5	331.8	341.7	353.4	361.5	362.1
30°	1481.8	1475.6	821.4	318.8	303.9	307.6	318.1	329.3	342.3	352.2	353.4
32.5°	1535.6	1534.4	794.7	337.3	290.9	293.4	302.7	313.8	329.9	342.3	343.5
35°	1588.9	1591.3	779.3	389.9	286.6	279.8	286.0	295.9	315.1	330.5	333.0
37.5°	1657.0	1663.1	778.7	446.9	297.1	266.2	270.5	277.3	294.0	312.0	315.1
40°	1758.5	1791.3	818.3	495.8	315.7	253.8	255.0	256.2	264.9	279.8	284.7
42.5°	1893.4	1989.3	961.2	529.2	323.1	242.6	238.3	231.5	230.3	238.3	242.6
45°	2061.1	2228.9	1212.5	547.8	315.7	230.3	218.5	200.5	193.7	199.3	199.3
47.5°	2258.6	2491.3	1510.3	552.1	303.3	214.8	193.7	170.2	164.6	166.5	165.9
50°	2451.1	2688.1	1772.1	516.2	282.9	195.0	166.5	146.7	143.0	143.6	143.6
52.5°	2621.3	2755.6	1846.4	431.4	255.6	170.8	143.0	129.4	126.9	126.9	126.3
55°	2733.9	2682.6	1646.4	329.9	221.6	146.1	122.6	115.7	114.5	113.9	112.7
57.5°	2757.5	2444.9	1243.5	238.3	173.3	123.2	108.9	105.2	102.7	100.3	99.0
60°	2673.3	2048.8	791.6	166.5	130.0	105.2	96.6	94.1	89.1	84.2	82.3
62.5°	2491.3	1547.4	438.2	115.7	104.6	89.7	85.4	82.3	73.0	65.0	62.5
65°	2246.8	1028.7	193.7	90.4	85.4	75.5	73.0	68.7	57.6	48.3	46.4
67.5°	2001.1	592.3	87.3	72.4	68.7	61.9	60.0	56.9	48.9	40.2	39.0
70°	1720.7	300.2	60.0	57.6	53.2	47.0	48.9	48.3	40.2	32.8	31.6
72.5°	1281.2	149.2	45.2	43.3	38.4	33.4	40.2	39.6	31.6	24.8	23.5
75°	725.4	73.7	32.8	30.3	22.9	24.8	32.2	30.3	21.7	16.1	14.9
77.5°	287.8	37.8	21.7	18.6	13.6	16.7	23.5	20.4	11.1	6.8	6.2
80°	66.2	18.6	11.1	8.0	6.2	9.9	12.4	7.4	3.1	0.6	0.0
82.5°	18.6	8.0	3.7	3.1	3.1	3.7	3.1	1.2	0.0	0.0	0.0
85°	6.2	3.7	1.2	0.6	0.6	0.6	0.6	0.0	0.0	0.0	0.0
87.5°	2.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)