

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: P196395

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196395  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)  
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-5MQ-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12292.8 lumens  
Efficiency: N/A  
Efficacy: 128.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B4 - U0 - G2

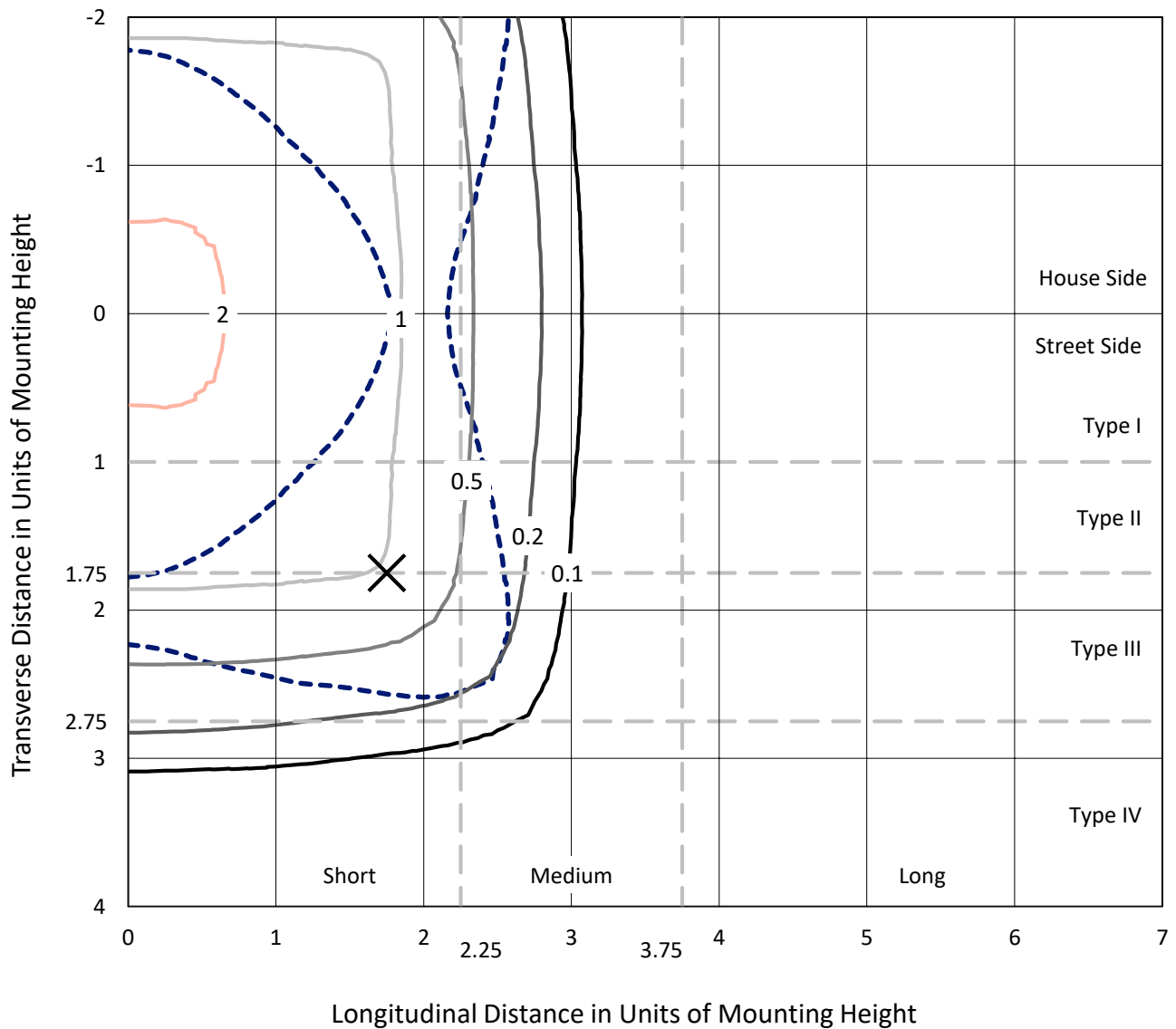
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

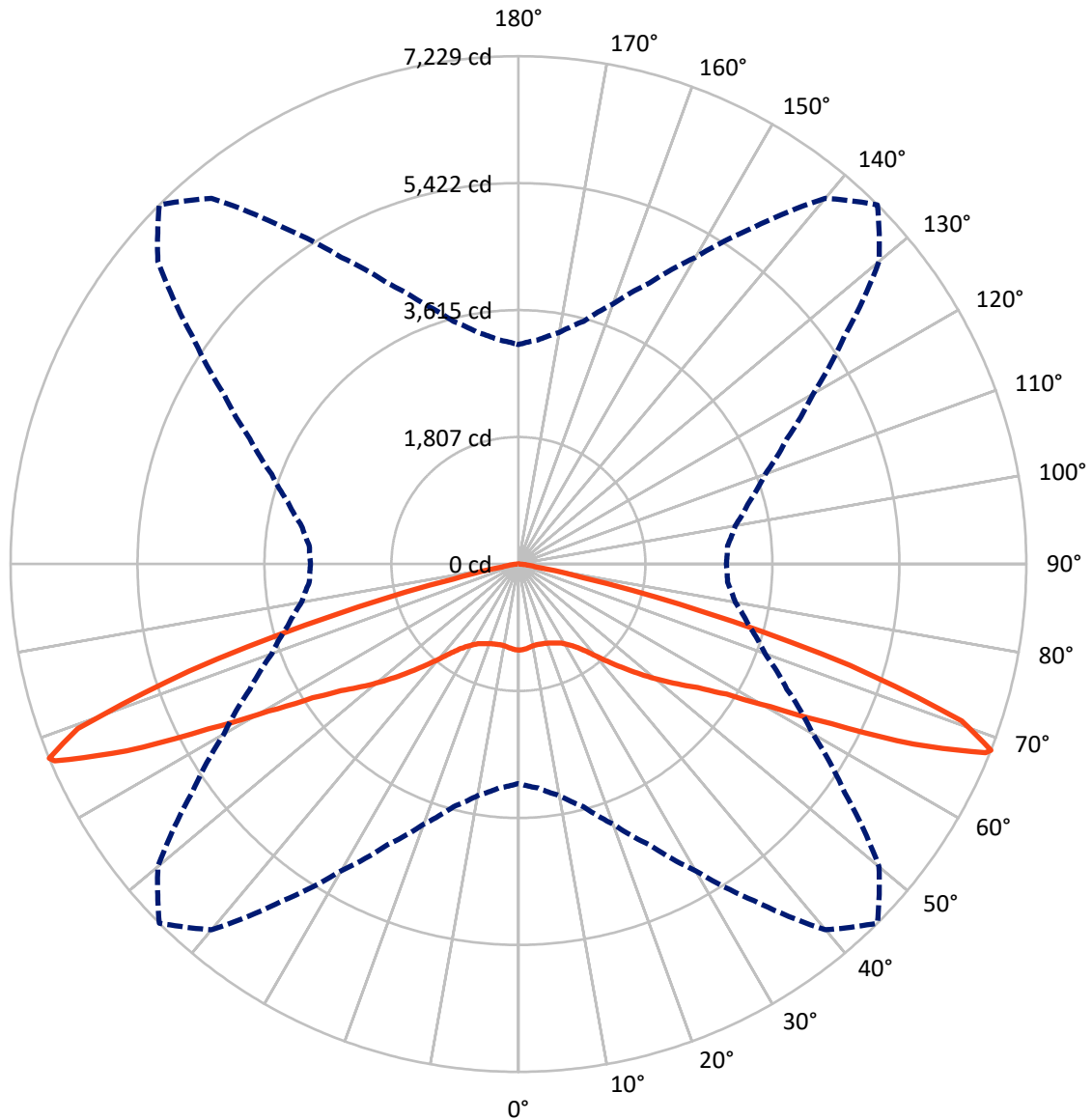
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.1 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	6146.4	0.0	6146.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	6146.4	0.0	6146.4
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	12292.8	0.0	12292.8
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.7	0.9
10°-20°	332.8	2.7
20°-30°	565.7	4.6
30°-40°	925.8	7.5
40°-50°	1654.6	13.5
50°-60°	2794.4	22.7
60°-70°	4333.0	35.2
70°-80°	1489.8	12.1
80°-90°	81.9	0.7
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°	12292.8	100.0
0°-180°	12292.8	100.0



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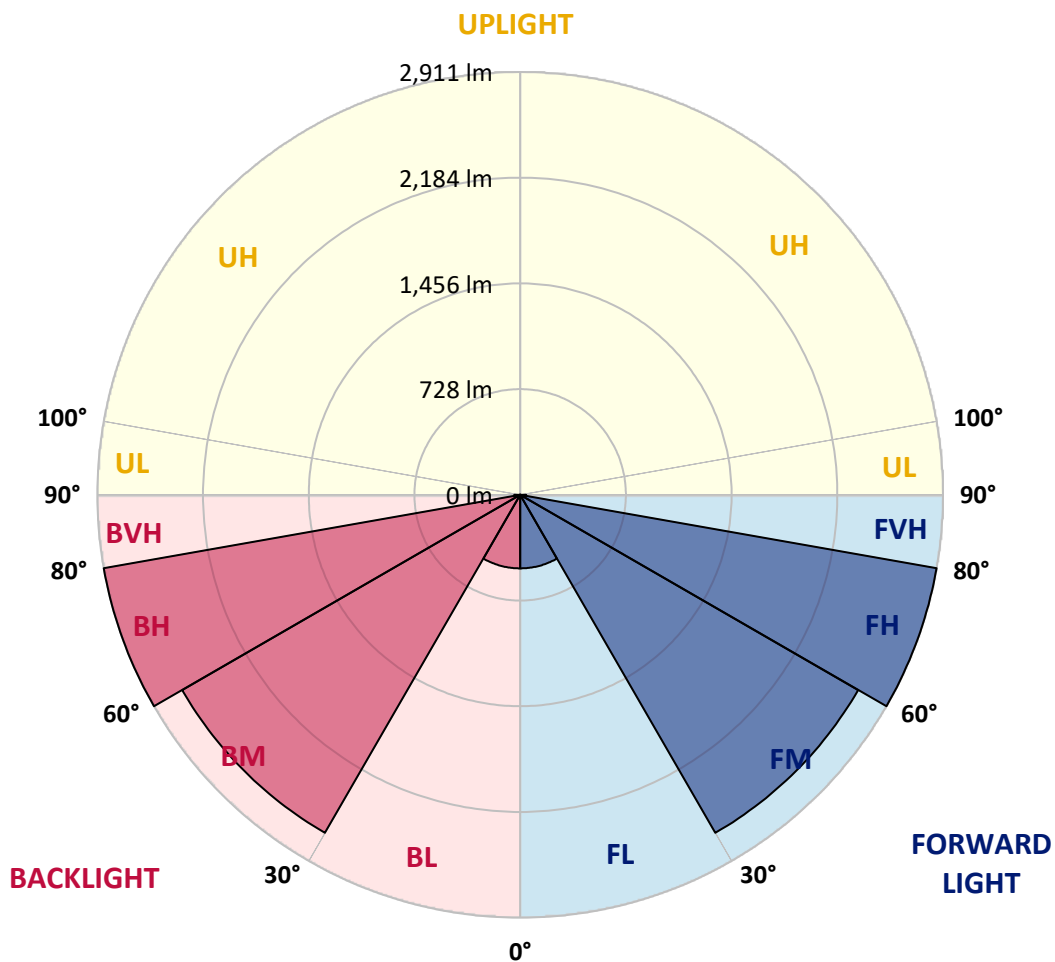
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	506.6	4.1			
FM	(30°-60°)	2687.4	21.9			
FH	(60°-80°)	2911.4	23.7			G2/5000
FVH	(80°-90°)	40.9	0.3			G1/100
BL	(0°-30°)	506.6	4.1	B2/1000		
BM	(30°-60°)	2687.4	21.9	B3/5000		
BH	(60°-80°)	2911.4	23.7	B4/5000		G2/5000
BVH	(80°-90°)	40.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1231.5	1231.5	1233.0	1232.2	1230.0	1227.7	1225.5	1223.2	1221.7	1220.2	1218.7
5°	1218.7	1218.7	1221.0	1219.5	1217.9	1215.7	1214.2	1211.9	1210.5	1209.0	1209.7
7.5°	1202.2	1203.7	1205.1	1204.4	1201.5	1200.6	1198.3	1197.6	1196.2	1193.8	1194.6
10°	1187.8	1188.6	1190.2	1189.4	1188.6	1186.3	1185.6	1184.8	1184.1	1181.1	1180.3
12.5°	1173.6	1175.1	1176.5	1177.3	1176.5	1177.3	1178.1	1178.8	1178.1	1176.5	1176.5
15°	1162.3	1163.7	1166.1	1168.3	1169.1	1173.6	1176.5	1179.6	1181.8	1182.6	1180.3
17.5°	1156.2	1158.4	1161.5	1166.1	1169.7	1175.1	1180.3	1184.8	1188.6	1189.4	1187.1
20°	1155.5	1157.7	1162.3	1167.6	1174.3	1181.1	1189.4	1196.2	1199.8	1202.2	1199.8
22.5°	1160.8	1163.7	1169.7	1176.5	1184.8	1193.8	1204.4	1211.9	1219.5	1222.5	1220.2
25°	1175.8	1178.8	1185.6	1193.8	1203.0	1214.2	1224.7	1234.5	1242.1	1245.8	1242.9
27.5°	1207.5	1208.2	1215.7	1224.7	1235.2	1245.0	1258.5	1263.1	1269.1	1272.9	1269.1
30°	1251.8	1253.3	1260.1	1274.4	1284.3	1297.0	1304.5	1309.0	1315.8	1319.7	1315.1
32.5°	1319.7	1321.1	1327.1	1340.6	1349.7	1359.5	1368.5	1371.5	1378.3	1382.7	1377.5
35°	1415.2	1418.1	1423.4	1432.5	1440.0	1447.5	1454.4	1452.0	1456.5	1462.7	1457.3
37.5°	1546.1	1545.4	1546.9	1553.6	1561.2	1565.6	1576.3	1571.0	1575.5	1580.8	1577.8
40°	1699.0	1699.0	1698.2	1710.2	1713.3	1717.8	1729.0	1722.3	1728.4	1734.4	1729.0
42.5°	1872.8	1875.9	1879.6	1889.4	1897.8	1899.3	1904.5	1901.4	1909.0	1914.2	1909.0
45°	2073.0	2077.6	2082.2	2104.7	2108.4	2111.4	2115.3	2105.4	2113.7	2118.2	2116.8
47.5°	2280.9	2289.1	2299.0	2322.3	2337.3	2344.0	2347.1	2335.9	2336.5	2343.3	2344.0
50°	2515.7	2524.8	2534.5	2560.9	2575.1	2587.3	2591.0	2578.2	2579.7	2585.0	2586.5
52.5°	2732.5	2743.1	2764.2	2799.5	2819.9	2840.8	2842.4	2826.6	2833.4	2837.1	2834.0
55°	2936.5	2950.0	2977.9	3025.3	3062.2	3103.6	3122.4	3105.1	3105.1	3102.1	3100.6
57.5°	3174.4	3189.4	3218.0	3273.0	3324.2	3383.6	3434.8	3452.1	3483.7	3494.3	3477.7
60°	3532.7	3548.5	3577.8	3650.2	3714.9	3801.4	3885.7	3954.2	4065.6	4125.8	4071.6
62.5°	3860.1	3884.1	3953.4	4080.0	4219.9	4380.3	4566.2	4698.7	4901.2	5002.1	4865.9
65°	3785.7	3834.6	3970.1	4168.8	4457.8	4805.6	5184.3	5547.8	5966.3	6180.9	5903.9
67.5°	3306.8	3348.2	3494.3	3725.4	4086.0	4565.5	5154.1	5906.9	6770.2	7172.3	6682.2
68°	3123.9	3201.6	3346.7	3576.4	3939.9	4411.2	5039.7	5852.7	6795.2	7229.4	6700.4
70°	2395.3	2423.2	2562.3	2768.6	3160.9	3623.0	4257.7	5184.3	6249.4	6696.5	6152.3
72.5°	1138.2	1154.8	1245.0	1448.3	1697.5	2073.8	2633.9	3507.9	4467.6	4932.8	4390.0
75°	417.1	420.7	441.9	490.0	583.3	724.9	993.6	1537.2	2275.6	2713.7	2284.6
77.5°	225.1	225.8	234.2	246.2	262.7	281.6	322.2	432.1	697.1	948.5	736.2
80°	141.5	140.7	149.0	158.9	170.1	179.1	182.9	195.7	220.6	258.2	237.1
82.5°	72.2	79.0	97.9	108.3	125.0	128.0	124.2	123.5	131.0	141.5	146.1
85°	39.9	35.4	51.9	69.3	75.3	77.6	78.3	73.8	72.2	70.8	74.6
87.5°	20.3	18.8	22.6	34.6	36.9	30.1	30.8	26.3	18.0	18.0	18.8
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°	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1217.2	1217.9	1216.5	1216.5	1216.5	1217.2	1216.5	1215.7
5°	1207.5	1209.0	1209.0	1209.7	1210.5	1210.5	1210.5	1210.5
7.5°	1193.1	1193.8	1195.4	1195.4	1195.4	1195.4	1195.4	1195.4
10°	1179.6	1178.1	1177.3	1175.8	1175.8	1173.6	1174.3	1175.1
12.5°	1172.8	1169.7	1168.3	1166.1	1164.4	1162.3	1162.3	1162.9
15°	1175.8	1171.3	1166.8	1165.2	1163.7	1162.3	1160.8	1161.5
17.5°	1181.8	1176.5	1171.3	1168.3	1165.2	1162.9	1162.3	1162.9
20°	1194.6	1187.1	1178.8	1173.6	1167.6	1166.1	1163.7	1166.1
22.5°	1211.9	1203.0	1192.3	1182.6	1175.8	1172.8	1169.7	1172.1
25°	1233.0	1223.2	1212.7	1201.5	1193.8	1191.6	1187.8	1187.8
27.5°	1262.4	1254.1	1245.0	1234.5	1227.0	1224.7	1218.7	1218.7
30°	1309.0	1300.7	1292.4	1283.5	1275.9	1273.6	1266.1	1266.1
32.5°	1370.7	1361.7	1356.5	1349.0	1342.9	1339.2	1330.1	1329.3
35°	1453.5	1445.3	1444.5	1439.3	1433.3	1434.0	1425.0	1423.4
37.5°	1572.5	1565.6	1568.0	1563.5	1558.2	1562.7	1557.5	1557.5
40°	1724.5	1722.3	1724.5	1721.6	1722.3	1723.0	1718.5	1720.1
42.5°	1908.2	1902.2	1915.8	1914.2	1912.0	1918.0	1907.4	1899.9
45°	2119.7	2117.6	2131.1	2133.3	2128.8	2132.5	2113.7	2113.0
47.5°	2349.4	2349.4	2361.4	2359.9	2355.4	2356.1	2333.6	2319.2
50°	2588.7	2587.3	2599.3	2596.2	2590.2	2589.5	2566.2	2551.9
52.5°	2837.9	2837.9	2855.2	2847.0	2832.6	2825.9	2797.2	2778.5
55°	3113.5	3109.6	3114.9	3087.7	3060.0	3039.6	3004.3	2990.0
57.5°	3461.9	3418.2	3380.6	3345.9	3306.8	3282.8	3241.4	3226.3
60°	3956.5	3839.8	3789.3	3720.2	3655.4	3623.0	3568.1	3538.7
62.5°	4641.5	4448.1	4311.1	4158.2	4010.7	3906.8	3823.2	3786.4
65°	5433.4	5011.8	4663.3	4335.9	4058.1	3837.5	3714.9	3676.5
67.5°	5734.5	4960.7	4359.2	3889.5	3552.2	3289.6	3142.8	3111.9
68°	5670.5	4843.3	4218.4	3737.4	3398.7	3133.8	2987.7	2959.9
70°	5002.1	4086.0	3426.6	2947.9	2631.6	2379.4	2276.3	2231.9
72.5°	3410.0	2624.1	2012.9	1610.2	1373.8	1214.2	1119.4	1087.0
75°	1569.5	1060.6	708.3	529.2	449.4	411.1	381.7	374.1
77.5°	457.7	332.7	286.0	265.0	249.1	235.6	225.8	225.1
80°	217.5	204.0	198.0	184.4	170.1	157.4	148.3	149.8
82.5°	146.1	142.2	142.2	128.7	106.1	91.1	75.3	67.7
85°	77.6	80.6	85.1	80.6	70.0	51.9	33.9	36.9
87.5°	26.3	30.1	31.5	30.8	27.9	21.1	15.9	15.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)