

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: P196881

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196881
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-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12718 lumens
Efficiency: N/A
Efficacy: 102.6 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

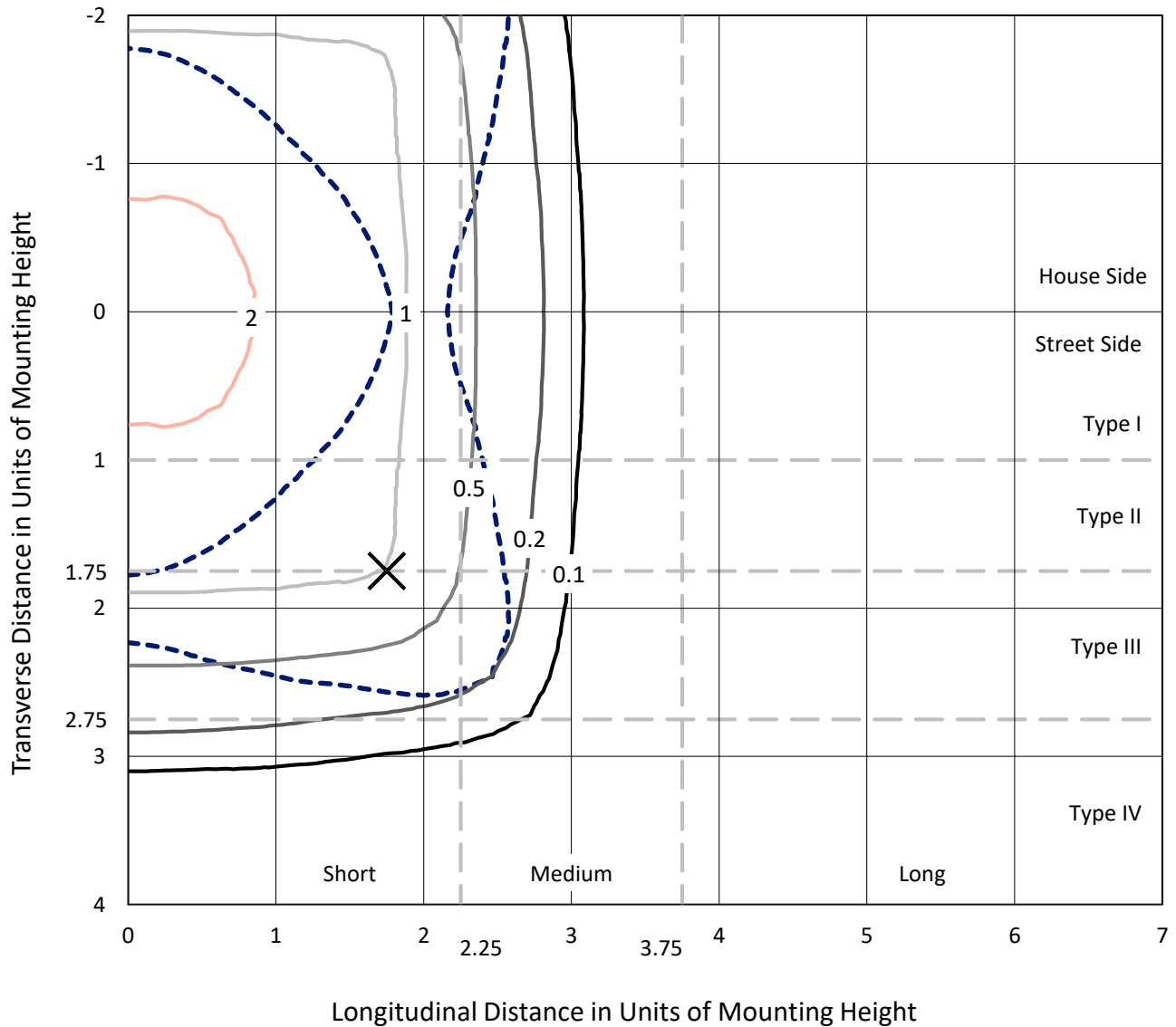
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

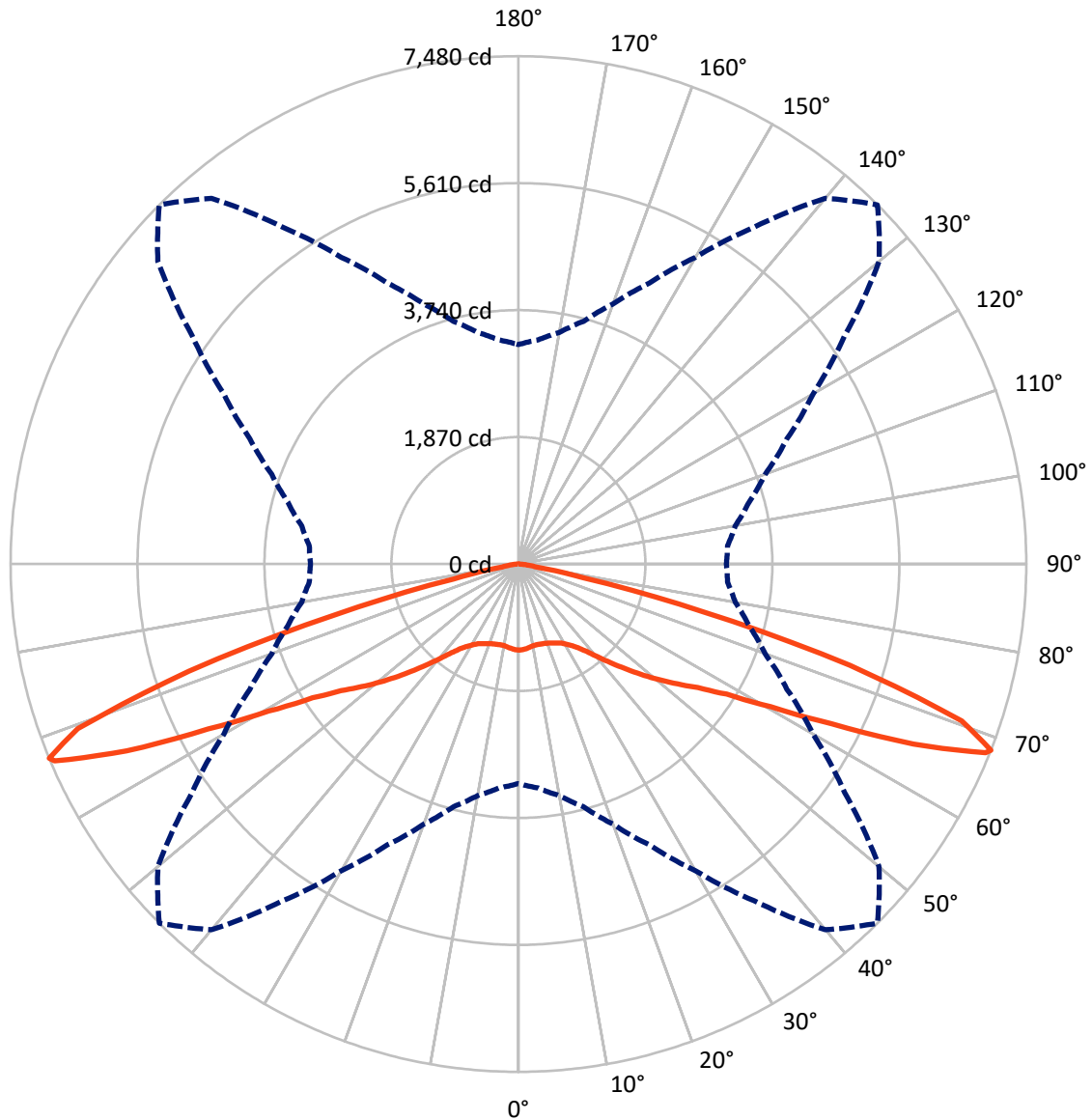
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.2 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
House Side	Lumens	6359.0	0.0	6359.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6359.0	0.0	6359.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	12718.0	0.0	12718.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.7	0.9
10°-20°	344.3	2.7
20°-30°	585.3	4.6
30°-40°	957.9	7.5
40°-50°	1711.8	13.5
50°-60°	2891.0	22.7
60°-70°	4482.9	35.2
70°-80°	1541.3	12.1
80°-90°	84.7	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°	12718.0	100.0
0°-180°	12718.0	100.0



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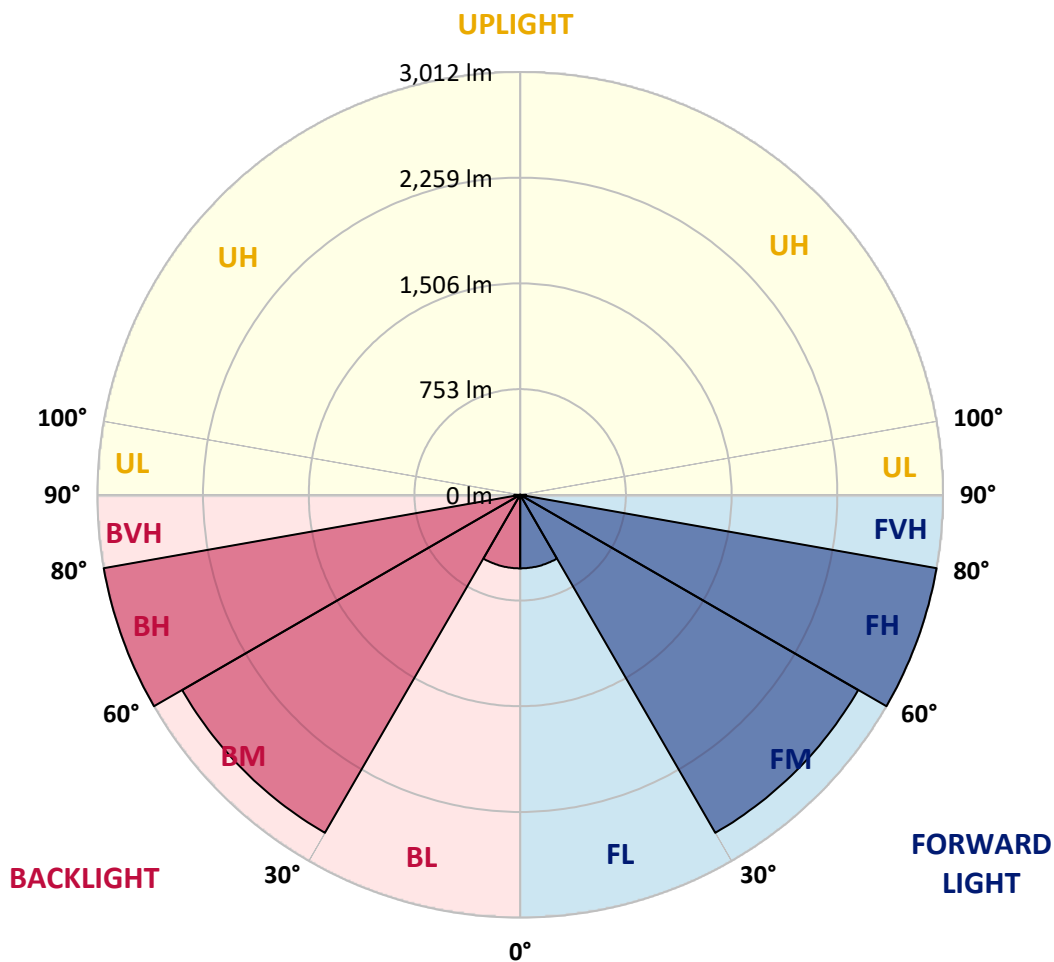
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	524.2	4.1			
FM	(30°-60°)	2780.4	21.9			
FH	(60°-80°)	3012.1	23.7			G2/5000
FVH	(80°-90°)	42.4	0.3			G1/100
BL	(0°-30°)	524.2	4.1	B2/1000		
BM	(30°-60°)	2780.4	21.9	B3/5000		
BH	(60°-80°)	3012.1	23.7	B4/5000		G2/5000
BVH	(80°-90°)	42.4	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°	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7
2.5°	1274.1	1274.1	1275.7	1274.9	1272.6	1270.2	1267.9	1265.5	1264.0	1262.4	1260.9
5°	1260.9	1260.9	1263.2	1261.6	1260.1	1257.8	1256.2	1253.9	1252.3	1250.7	1251.5
7.5°	1243.7	1245.3	1246.9	1246.1	1243.0	1242.2	1239.8	1239.1	1237.5	1235.2	1235.9
10°	1228.9	1229.7	1231.3	1230.5	1229.7	1227.4	1226.6	1225.8	1225.0	1221.9	1221.2
12.5°	1214.1	1215.7	1217.3	1218.0	1217.3	1218.0	1218.8	1219.6	1218.8	1217.3	1217.3
15°	1202.5	1204.0	1206.4	1208.7	1209.5	1214.1	1217.3	1220.4	1222.7	1223.5	1221.2
17.5°	1196.2	1198.6	1201.7	1206.4	1210.2	1215.7	1221.2	1225.8	1229.7	1230.5	1228.2
20°	1195.5	1197.8	1202.5	1207.9	1214.9	1221.9	1230.5	1237.5	1241.4	1243.7	1241.4
22.5°	1200.9	1204.0	1210.2	1217.3	1225.8	1235.2	1246.1	1253.9	1261.6	1264.8	1262.4
25°	1216.5	1219.6	1226.6	1235.2	1244.5	1256.2	1267.1	1277.2	1285.0	1288.9	1285.8
27.5°	1249.2	1250.0	1257.8	1267.1	1278.0	1288.1	1302.1	1306.8	1313.0	1316.9	1313.0
30°	1295.1	1296.7	1303.7	1318.5	1328.6	1341.9	1349.7	1354.3	1361.3	1365.2	1360.6
32.5°	1365.2	1366.8	1373.0	1387.0	1396.4	1406.5	1415.9	1419.0	1426.0	1430.6	1425.2
35°	1464.1	1467.3	1472.7	1482.0	1489.8	1497.6	1504.6	1502.3	1507.0	1513.2	1507.7
37.5°	1599.6	1598.9	1600.4	1607.4	1615.2	1619.9	1630.8	1625.3	1630.0	1635.5	1632.4
40°	1757.7	1757.7	1757.0	1769.4	1772.5	1777.2	1788.9	1781.9	1788.1	1794.3	1788.9
42.5°	1937.6	1940.8	1944.7	1954.8	1963.3	1964.9	1970.4	1967.2	1975.0	1980.5	1975.0
45°	2144.8	2149.5	2154.1	2177.5	2181.4	2184.5	2188.4	2178.3	2186.9	2191.5	2190.0
47.5°	2359.8	2368.3	2378.4	2402.6	2418.2	2425.2	2428.3	2416.6	2417.4	2424.4	2425.2
50°	2602.7	2612.1	2622.2	2649.5	2664.3	2676.7	2680.6	2667.4	2668.9	2674.4	2675.9
52.5°	2827.0	2837.9	2859.7	2896.3	2917.4	2939.2	2940.7	2924.4	2931.4	2935.3	2932.2
55°	3038.1	3052.1	3080.9	3130.0	3168.1	3211.0	3230.4	3212.5	3212.5	3209.4	3207.9
57.5°	3284.2	3299.8	3329.4	3386.2	3439.2	3500.7	3553.6	3571.6	3604.3	3615.2	3598.0
60°	3654.9	3671.2	3701.6	3776.4	3843.4	3932.9	4020.1	4091.0	4206.3	4268.6	4212.5
62.5°	3993.7	4018.6	4090.2	4221.1	4365.9	4531.8	4724.2	4861.2	5070.7	5175.1	5034.1
65°	3916.6	3967.2	4107.4	4313.0	4612.0	4971.8	5363.6	5739.7	6172.7	6394.7	6108.1
67.5°	3421.2	3464.1	3615.2	3854.3	4227.3	4723.4	5332.4	6111.2	7004.5	7420.4	6913.4
68°	3232.0	3312.2	3462.5	3700.1	4076.2	4563.7	5214.0	6055.1	7030.2	7479.6	6932.1
70°	2478.1	2506.9	2651.0	2864.4	3270.2	3748.3	4404.9	5363.6	6465.6	6928.2	6365.1
72.5°	1177.5	1194.7	1288.1	1498.4	1756.2	2145.6	2725.0	3629.2	4622.2	5103.4	4541.9
75°	431.5	435.3	457.2	507.0	603.6	750.0	1028.0	1590.3	2354.3	2807.6	2363.6
77.5°	232.9	233.6	242.2	254.7	271.8	291.3	333.3	447.0	721.2	981.3	761.7
80°	146.4	145.6	154.2	164.3	176.0	185.4	189.2	202.5	228.2	267.1	245.3
82.5°	74.8	81.8	101.2	112.1	129.3	132.4	128.5	127.7	135.5	146.4	151.1
85°	41.3	36.6	53.7	71.6	77.9	80.2	81.0	76.3	74.8	73.2	77.1
87.5°	21.0	19.5	23.4	35.8	38.2	31.2	31.9	27.3	18.7	18.7	19.5
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7	1268.7
2.5°	1259.3	1260.1	1258.5	1258.5	1258.5	1259.3	1258.5	1257.8
5°	1249.2	1250.7	1250.7	1251.5	1252.3	1252.3	1252.3	1252.3
7.5°	1234.4	1235.2	1236.7	1236.7	1236.7	1236.7	1236.7	1236.7
10°	1220.4	1218.8	1218.0	1216.5	1216.5	1214.1	1214.9	1215.7
12.5°	1213.4	1210.2	1208.7	1206.4	1204.8	1202.5	1202.5	1203.2
15°	1216.5	1211.8	1207.1	1205.6	1204.0	1202.5	1200.9	1201.7
17.5°	1222.7	1217.3	1211.8	1208.7	1205.6	1203.2	1202.5	1203.2
20°	1235.9	1228.2	1219.6	1214.1	1207.9	1206.4	1204.0	1206.4
22.5°	1253.9	1244.5	1233.6	1223.5	1216.5	1213.4	1210.2	1212.6
25°	1275.7	1265.5	1254.6	1243.0	1235.2	1232.8	1228.9	1228.9
27.5°	1306.0	1297.5	1288.1	1277.2	1269.4	1267.1	1260.9	1260.9
30°	1354.3	1345.8	1337.2	1327.8	1320.1	1317.7	1309.9	1309.9
32.5°	1418.2	1408.8	1403.4	1395.6	1389.4	1385.5	1376.1	1375.4
35°	1503.9	1495.3	1494.5	1489.1	1482.8	1483.6	1474.3	1472.7
37.5°	1626.9	1619.9	1622.2	1617.6	1612.1	1616.8	1611.3	1611.3
40°	1784.2	1781.9	1784.2	1781.1	1781.9	1782.7	1778.0	1779.5
42.5°	1974.2	1968.0	1982.0	1980.5	1978.1	1984.4	1973.5	1965.7
45°	2193.1	2190.8	2204.8	2207.1	2202.4	2206.3	2186.9	2186.1
47.5°	2430.6	2430.6	2443.1	2441.5	2436.9	2437.6	2414.3	2399.5
50°	2678.3	2676.7	2689.2	2686.1	2679.8	2679.1	2654.9	2640.1
52.5°	2936.1	2936.1	2954.0	2945.4	2930.6	2923.6	2894.0	2874.5
55°	3221.1	3217.2	3222.7	3194.6	3165.8	3144.8	3108.2	3093.4
57.5°	3581.7	3536.5	3497.6	3461.7	3421.2	3396.3	3353.5	3337.9
60°	4093.4	3972.6	3920.5	3848.8	3781.8	3748.3	3691.5	3661.1
62.5°	4802.1	4601.9	4460.2	4302.1	4149.4	4042.0	3955.5	3917.3
65°	5621.3	5185.2	4824.6	4485.9	4198.5	3970.3	3843.4	3803.6
67.5°	5932.9	5132.3	4510.0	4024.0	3675.1	3403.3	3251.5	3219.5
68°	5866.7	5010.8	4364.4	3866.7	3516.3	3242.1	3091.0	3062.2
70°	5175.1	4227.3	3545.1	3049.8	2722.7	2461.8	2355.1	2309.1
72.5°	3527.9	2714.9	2082.5	1665.8	1421.3	1256.2	1158.1	1124.6
75°	1623.8	1097.3	732.8	547.5	464.9	425.2	394.8	387.1
77.5°	473.5	344.2	295.9	274.1	257.8	243.8	233.6	232.9
80°	225.1	211.1	204.8	190.8	176.0	162.8	153.4	155.0
82.5°	151.1	147.2	147.2	133.2	109.8	94.2	77.9	70.1
85°	80.2	83.3	88.0	83.3	72.4	53.7	35.0	38.2
87.5°	27.3	31.2	32.7	31.9	28.8	21.8	16.4	16.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)