

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: P195484

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7050-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195484  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-5WQ-7050-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16723 lumens  
Efficiency: N/A  
Efficacy: 129.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

Input Watts (W): 129  
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

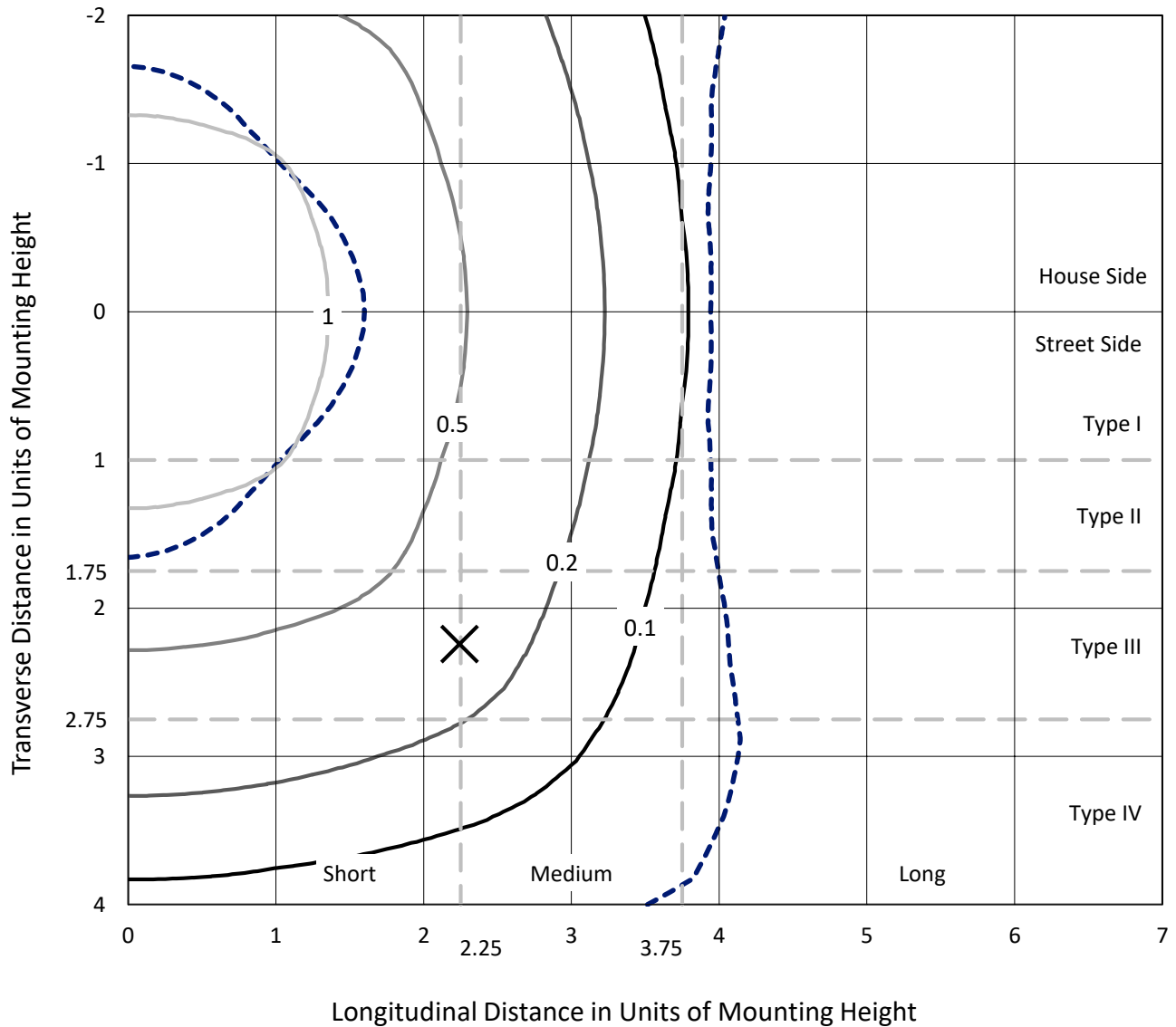


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### Iso-Footcandle Lines of Horizontal Illumination

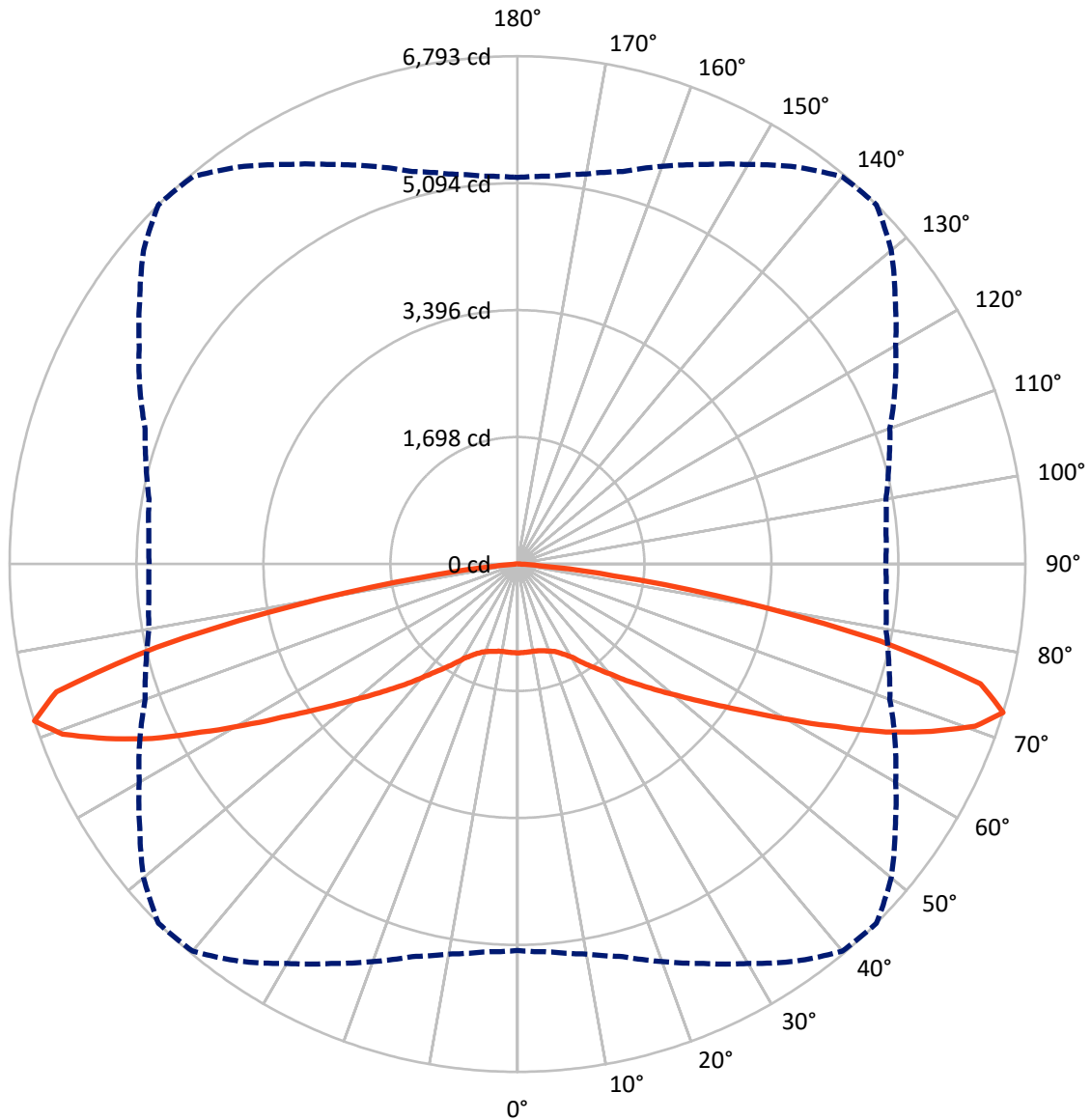
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8361.5	0.0	8361.5
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	8361.5	0.0	8361.5
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	16723.0	0.0	16723.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	113.5	0.7
10°-20°	343.4	2.1
20°-30°	620.0	3.7
30°-40°	1057.5	6.3
40°-50°	1800.5	10.8
50°-60°	2897.6	17.3
60°-70°	4818.7	28.8
70°-80°	4661.6	27.9
80°-90°	410.3	2.5
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°	16723.0	100.0
0°-180°	16723.0	100.0



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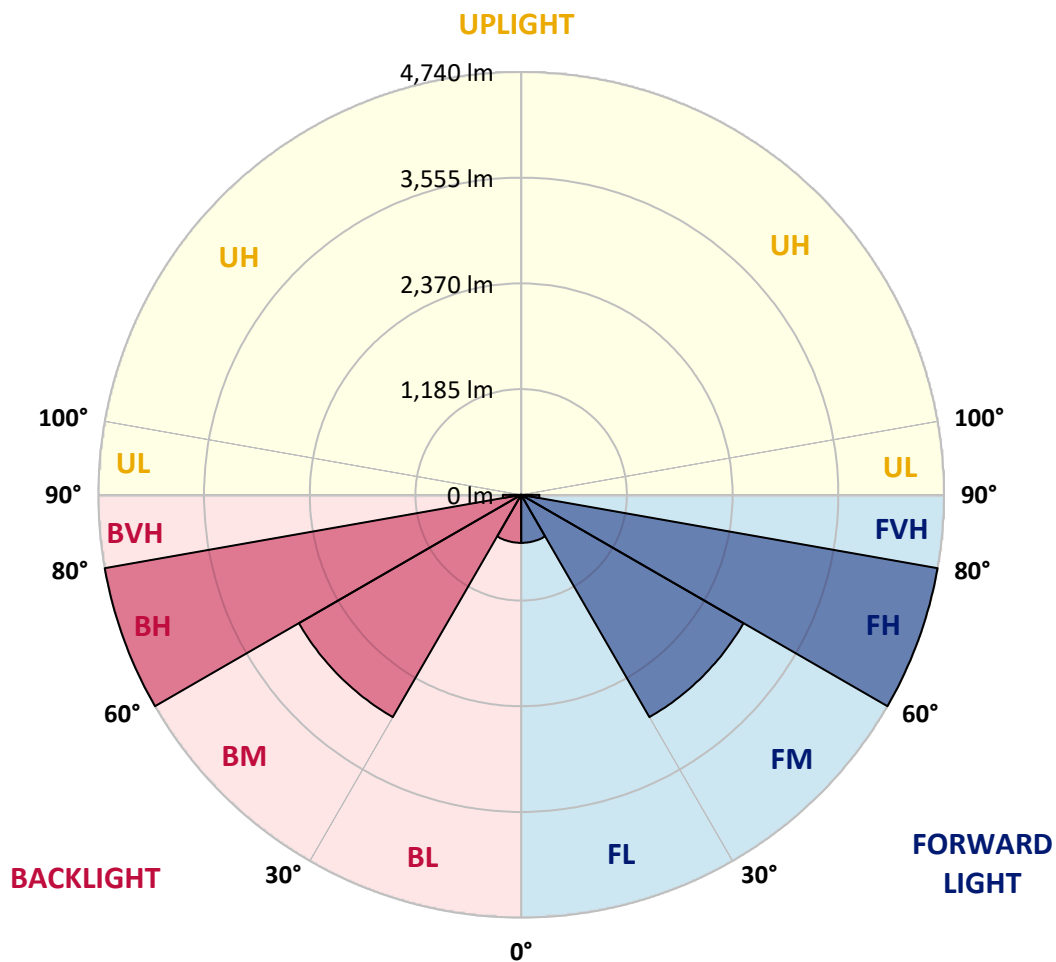
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	538.4	3.2			
FM (30°-60°)	2877.8	17.2			
FH (60°-80°)	4740.1	28.3			G2/5000
FVH (80°-90°)	205.1	1.2			G2/225
BL (0°-30°)	538.4	3.2	B2/1000		
BM (30°-60°)	2877.8	17.2	B3/5000		
BH (60°-80°)	4740.1	28.3	B4/5000		G2/5000
BVH (80°-90°)	205.1	1.2			G2/225
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°	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9
2.5°	1198.1	1198.1	1199.2	1198.1	1196.1	1195.1	1192.0	1189.9	1187.9	1186.8	1184.8
5°	1199.2	1199.2	1200.2	1199.2	1197.1	1195.1	1193.0	1189.9	1187.9	1185.8	1184.8
7.5°	1203.3	1204.3	1205.3	1204.3	1200.2	1198.1	1195.1	1192.0	1187.9	1185.8	1183.7
10°	1211.5	1211.5	1211.5	1210.5	1207.4	1203.3	1199.2	1196.1	1190.9	1185.8	1182.7
12.5°	1217.7	1218.7	1218.7	1216.7	1212.6	1207.4	1203.3	1200.2	1196.1	1192.0	1188.9
15°	1227.0	1227.0	1225.9	1221.8	1215.6	1211.5	1209.5	1208.4	1207.4	1205.3	1202.3
17.5°	1245.5	1244.5	1241.4	1235.2	1228.0	1224.9	1222.8	1222.8	1222.8	1221.8	1219.8
20°	1272.3	1272.3	1268.1	1257.8	1251.7	1248.6	1245.5	1245.5	1245.5	1242.4	1239.3
22.5°	1315.5	1316.5	1310.3	1298.0	1289.8	1283.6	1279.5	1276.4	1273.3	1271.2	1266.1
25°	1374.2	1373.1	1365.9	1350.5	1344.3	1338.1	1329.9	1324.8	1320.6	1317.5	1311.4
27.5°	1435.9	1434.9	1426.7	1413.3	1409.2	1399.9	1393.7	1386.5	1381.4	1376.2	1370.0
30°	1515.2	1510.0	1503.9	1493.6	1491.5	1484.3	1476.1	1465.8	1457.5	1449.3	1442.1
32.5°	1586.2	1586.2	1576.9	1571.8	1575.9	1572.8	1573.9	1567.7	1562.5	1559.4	1552.2
35°	1685.0	1685.0	1680.9	1674.7	1675.8	1668.5	1667.5	1668.5	1672.7	1672.7	1664.4
37.5°	1816.8	1818.8	1805.5	1803.4	1798.2	1788.0	1782.8	1784.9	1794.1	1799.3	1788.0
40°	1980.4	1984.6	1980.4	1967.1	1960.9	1943.4	1933.1	1933.1	1940.3	1945.4	1941.3
42.5°	2142.0	2149.2	2142.0	2131.7	2126.6	2113.2	2108.1	2112.2	2121.5	2127.6	2121.5
45°	2322.2	2327.3	2318.1	2305.7	2299.5	2292.3	2289.2	2292.3	2302.6	2308.8	2306.7
47.5°	2499.2	2506.4	2495.1	2490.0	2490.0	2482.8	2491.0	2499.2	2508.5	2522.9	2516.7
50°	2672.1	2681.4	2674.2	2675.2	2683.5	2696.9	2712.3	2728.8	2745.2	2760.7	2762.7
52.5°	2826.5	2841.0	2842.0	2860.5	2886.3	2906.8	2950.1	2986.1	3025.2	3038.6	3032.4
55°	2989.2	3008.7	3034.5	3063.3	3104.5	3146.7	3219.8	3284.6	3336.1	3368.0	3362.8
57.5°	3221.8	3241.4	3268.1	3315.5	3377.2	3434.9	3534.7	3635.6	3713.8	3762.2	3738.5
60°	3523.4	3544.0	3579.0	3629.4	3709.7	3787.9	3924.8	4070.0	4191.4	4247.0	4203.8
62.5°	3922.8	3942.3	3965.0	4031.9	4121.4	4222.3	4394.2	4580.5	4734.9	4788.5	4727.7
65°	4492.0	4515.7	4522.9	4577.4	4664.9	4758.6	4943.9	5153.9	5329.9	5417.4	5295.9
67.5°	5133.3	5142.5	5171.4	5235.2	5324.7	5409.1	5555.3	5754.0	5922.8	5971.2	5841.5
70°	5509.0	5527.5	5578.0	5666.5	5773.5	5906.3	6065.9	6280.0	6471.4	6494.1	6329.4
72.5°	5169.3	5207.4	5296.9	5434.9	5659.3	5895.0	6169.8	6485.8	6760.7	6792.6	6528.0
75°	4146.2	4189.4	4296.4	4447.7	4713.3	5063.3	5460.6	5935.1	6346.9	6399.4	6049.4
77.5°	2210.0	2263.5	2418.9	2622.7	3001.5	3464.7	3943.4	4484.8	4834.8	4953.2	4701.0
80°	556.9	585.7	660.8	780.2	1036.5	1410.2	1822.9	2405.6	2839.9	3024.2	2839.9
82.5°	216.2	237.8	258.4	272.8	297.5	348.9	481.7	785.4	1058.2	1303.1	1128.1
85°	83.4	88.5	127.6	145.1	145.1	159.5	183.2	216.2	267.6	292.3	245.0
87.5°	32.9	36.0	44.3	67.9	70.0	61.8	65.9	74.1	56.6	47.3	53.5
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°	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9	1188.9
2.5°	1183.7	1182.7	1180.6	1181.7	1180.6	1180.6	1180.6	1180.6
5°	1182.7	1182.7	1180.6	1180.6	1180.6	1181.7	1180.6	1180.6
7.5°	1181.7	1180.6	1178.6	1177.6	1177.6	1176.5	1176.5	1176.5
10°	1179.6	1177.6	1175.5	1174.5	1174.5	1172.4	1172.4	1172.4
12.5°	1184.8	1181.7	1179.6	1178.6	1178.6	1178.6	1179.6	1179.6
15°	1199.2	1193.0	1189.9	1188.9	1189.9	1192.0	1193.0	1194.0
17.5°	1214.6	1208.4	1203.3	1201.2	1202.3	1205.3	1208.4	1210.5
20°	1234.2	1229.0	1222.8	1220.8	1220.8	1224.9	1227.0	1230.1
22.5°	1262.0	1257.8	1252.7	1249.6	1247.6	1252.7	1255.8	1257.8
25°	1306.2	1302.1	1298.0	1294.9	1293.9	1299.0	1301.1	1302.1
27.5°	1364.9	1360.8	1358.7	1357.7	1354.6	1356.7	1359.7	1358.7
30°	1441.1	1444.2	1441.1	1441.1	1435.9	1438.0	1435.9	1433.9
32.5°	1543.0	1539.9	1530.6	1524.4	1517.2	1517.2	1514.1	1511.1
35°	1644.9	1634.6	1629.4	1632.5	1629.4	1631.5	1626.3	1621.2
37.5°	1765.3	1759.1	1758.1	1767.4	1765.3	1767.4	1767.4	1760.2
40°	1924.9	1920.7	1927.9	1943.4	1949.6	1948.5	1950.6	1941.3
42.5°	2108.1	2100.9	2104.0	2117.3	2124.5	2126.6	2125.6	2117.3
45°	2291.3	2293.4	2293.4	2307.8	2315.0	2319.1	2311.9	2308.8
47.5°	2498.2	2501.3	2494.1	2503.3	2505.4	2512.6	2506.4	2501.3
50°	2737.0	2725.7	2709.2	2712.3	2712.3	2710.2	2703.0	2696.9
52.5°	3003.6	2977.9	2947.0	2936.7	2925.4	2914.0	2899.6	2888.3
55°	3307.2	3263.0	3207.4	3181.7	3160.1	3134.3	3101.4	3090.1
57.5°	3659.3	3583.1	3509.0	3462.7	3407.1	3373.1	3330.9	3328.9
60°	4077.2	3974.3	3843.5	3774.6	3719.0	3678.8	3646.9	3634.6
62.5°	4559.9	4382.9	4241.9	4167.8	4102.9	4078.2	4038.1	4043.2
65°	5055.1	4874.9	4738.0	4678.3	4617.6	4601.1	4564.1	4577.4
67.5°	5591.3	5443.1	5292.8	5237.2	5181.7	5165.2	5127.1	5138.4
70°	6072.0	5883.7	5712.8	5603.7	5509.0	5432.8	5384.4	5364.9
72.5°	6167.8	5841.5	5572.8	5300.0	5142.5	5004.6	4948.0	4926.4
75°	5541.9	5035.5	4652.6	4332.5	4155.4	3954.7	3933.1	3903.2
77.5°	4310.8	3734.4	3271.2	2859.5	2621.7	2376.7	2292.3	2228.5
80°	2571.3	1976.3	1531.6	1073.6	876.0	705.1	662.9	618.6
82.5°	920.2	589.8	397.3	309.8	276.9	255.3	238.8	217.2
85°	222.3	187.3	177.0	160.6	158.5	134.8	95.7	85.4
87.5°	71.0	64.8	65.9	62.8	65.9	49.4	40.1	36.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)