

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: P196455

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196455
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-03-D-UNV-5WQ-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18226.6 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

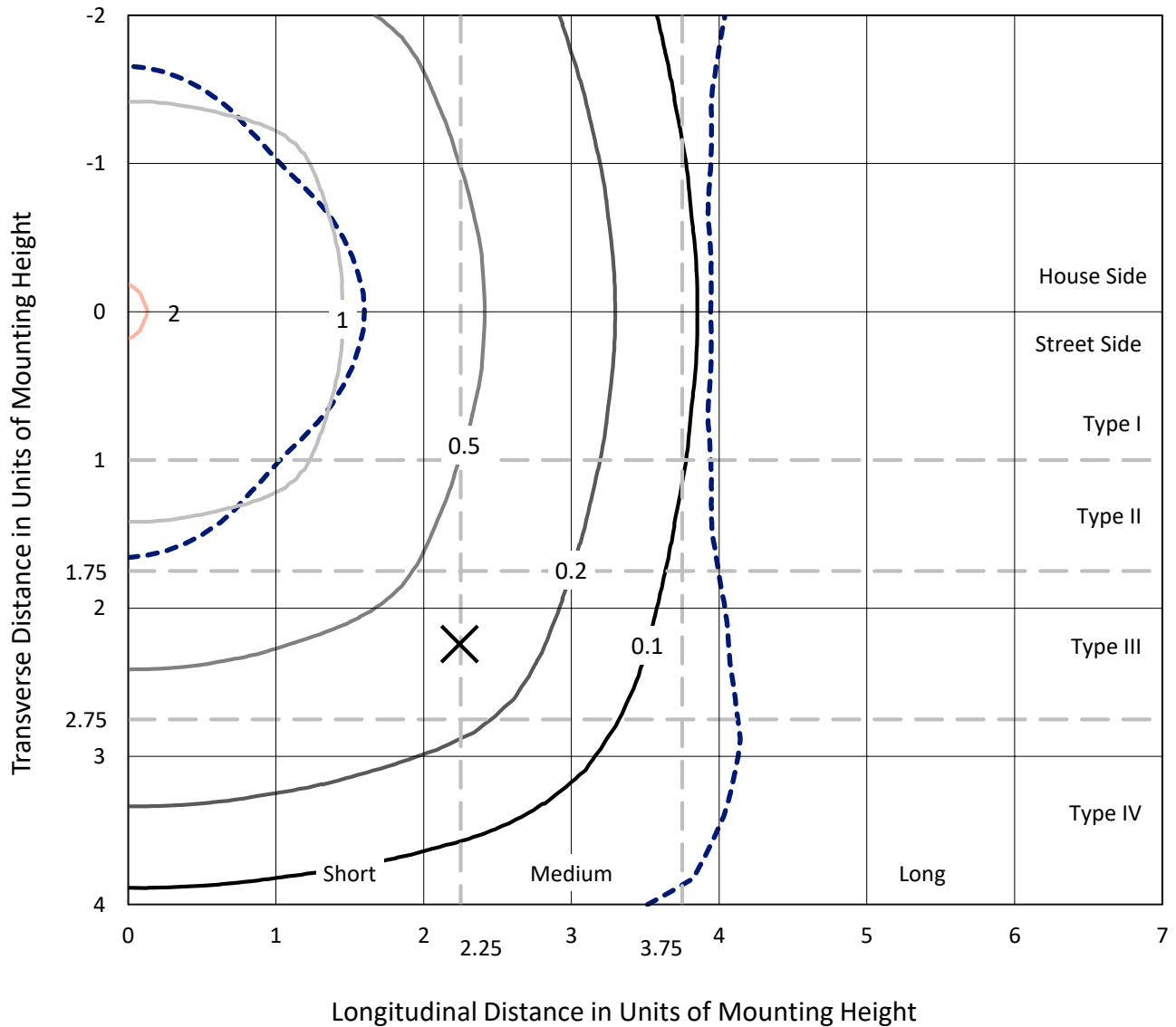
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

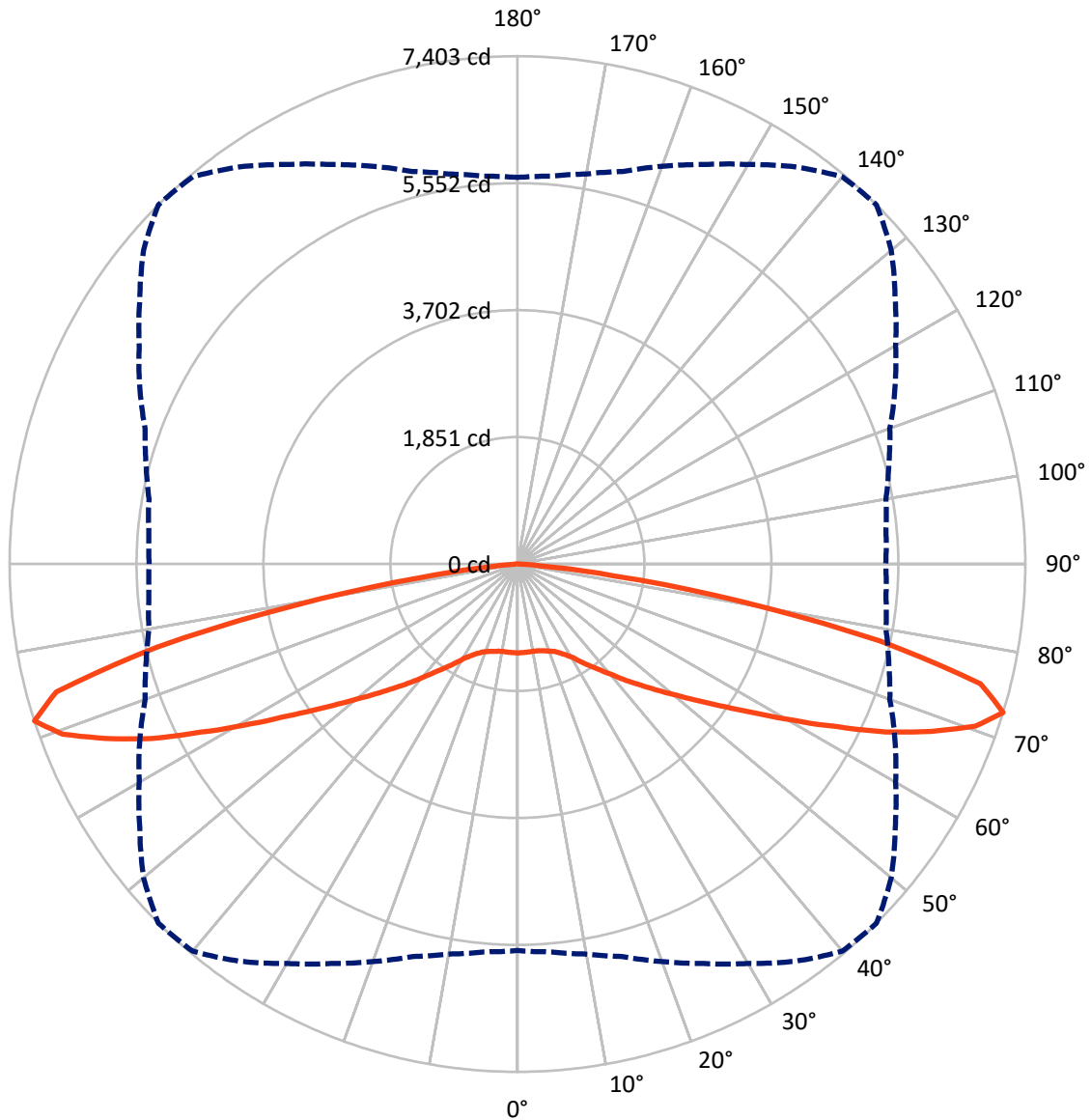
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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
House Side	Lumens	9113.3	0.0	9113.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	9113.3	0.0	9113.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	18226.6	0.0	18226.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.7	0.7
10°-20°	374.3	2.1
20°-30°	675.7	3.7
30°-40°	1152.6	6.3
40°-50°	1962.3	10.8
50°-60°	3158.1	17.3
60°-70°	5252.0	28.8
70°-80°	5080.7	27.9
80°-90°	447.2	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°	18226.6	100.0
0°-180°	18226.6	100.0

Coefficient of Utilization



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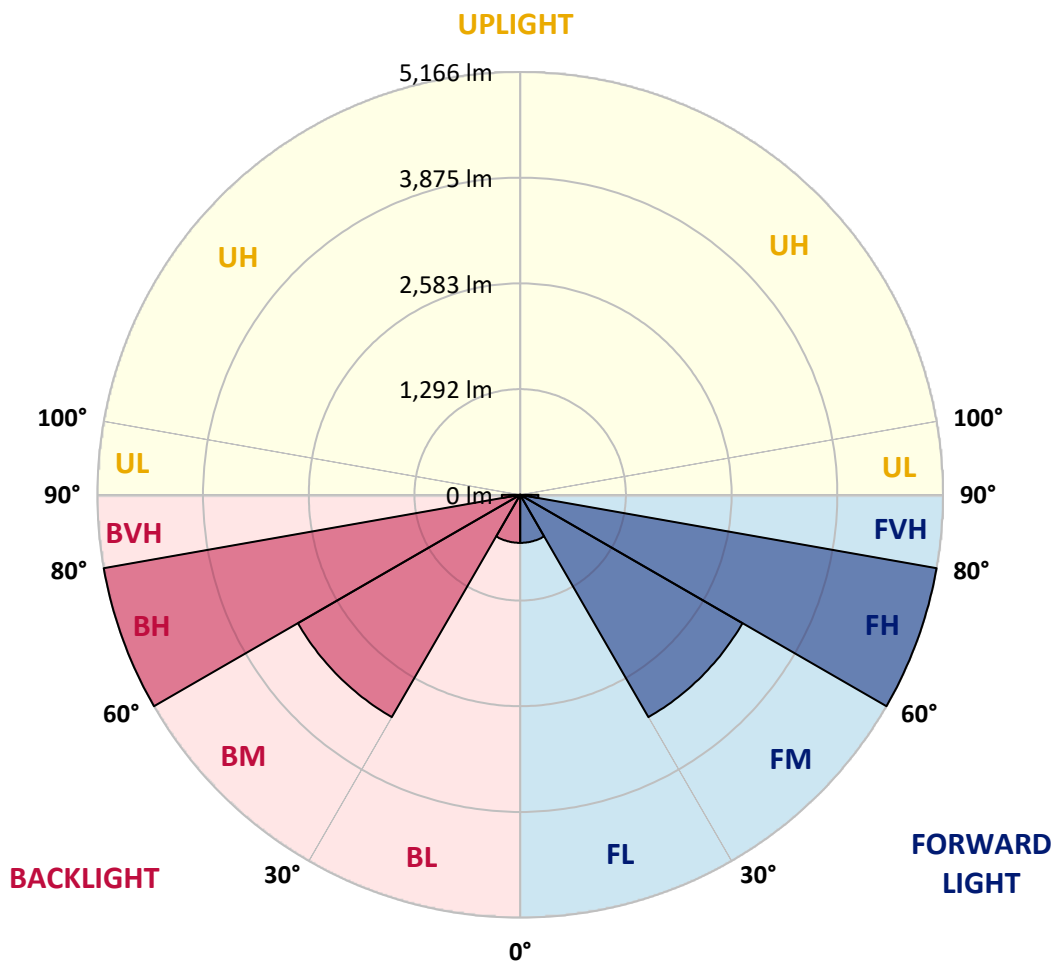
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	586.9	3.2			
FM	(30°-60°)	3136.5	17.2			
FH	(60°-80°)	5166.3	28.3			G3/7500
FVH	(80°-90°)	223.6	1.2			G2/225
BL	(0°-30°)	586.9	3.2	B2/1000		
BM	(30°-60°)	3136.5	17.2	B3/5000		
BH	(60°-80°)	5166.3	28.3	B5		G3/7500
BVH	(80°-90°)	223.6	1.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9
2.5°	1305.8	1305.8	1307.0	1305.8	1303.7	1302.5	1299.1	1296.9	1294.6	1293.5	1291.3
5°	1307.0	1307.0	1308.2	1307.0	1304.8	1302.5	1300.3	1296.9	1294.6	1292.4	1291.3
7.5°	1311.4	1312.6	1313.8	1312.6	1308.2	1305.8	1302.5	1299.1	1294.6	1292.4	1290.2
10°	1320.5	1320.5	1320.5	1319.3	1315.9	1311.4	1307.0	1303.7	1298.0	1292.4	1289.0
12.5°	1327.2	1328.3	1328.3	1326.1	1321.6	1315.9	1311.4	1308.2	1303.7	1299.1	1295.9
15°	1337.4	1337.4	1336.1	1331.7	1325.0	1320.5	1318.2	1317.1	1315.9	1313.8	1310.3
17.5°	1357.4	1356.4	1352.9	1346.3	1338.4	1335.0	1332.8	1332.8	1332.8	1331.7	1329.4
20°	1386.6	1386.6	1382.1	1370.9	1364.2	1360.9	1357.4	1357.4	1357.4	1354.2	1350.8
22.5°	1433.8	1434.9	1428.1	1414.7	1405.7	1398.9	1394.4	1391.1	1387.8	1385.5	1380.0
25°	1497.7	1496.7	1488.7	1471.9	1465.1	1458.5	1449.5	1443.9	1439.4	1436.0	1429.3
27.5°	1565.0	1563.9	1555.0	1540.3	1535.8	1525.8	1519.0	1511.2	1505.6	1499.9	1493.2
30°	1651.5	1645.8	1639.1	1627.9	1625.6	1617.8	1608.8	1597.6	1588.6	1579.6	1571.8
32.5°	1728.8	1728.8	1718.7	1713.0	1717.5	1714.3	1715.4	1708.6	1703.1	1699.6	1691.8
35°	1836.5	1836.5	1832.1	1825.2	1826.4	1818.6	1817.4	1818.6	1823.1	1823.1	1814.1
37.5°	1980.1	1982.4	1967.8	1965.6	1959.9	1948.7	1943.0	1945.4	1955.4	1961.1	1948.7
40°	2158.5	2163.0	2158.5	2143.8	2137.2	2118.1	2106.8	2106.8	2114.7	2120.4	2116.0
42.5°	2334.7	2342.5	2334.7	2323.4	2317.8	2303.1	2297.6	2302.1	2312.3	2318.9	2312.3
45°	2531.0	2536.6	2526.5	2513.1	2506.3	2498.4	2495.1	2498.4	2509.6	2516.3	2514.2
47.5°	2724.0	2731.8	2719.5	2713.9	2713.9	2706.1	2715.0	2724.0	2734.0	2749.7	2743.0
50°	2912.5	2922.4	2914.7	2915.8	2924.8	2939.3	2956.1	2974.1	2992.1	3008.9	3011.1
52.5°	3080.7	3096.4	3097.5	3117.7	3145.8	3168.2	3215.3	3254.7	3297.2	3311.7	3305.1
55°	3258.0	3279.3	3307.3	3338.8	3383.6	3429.6	3509.3	3579.9	3636.0	3670.8	3665.2
57.5°	3511.5	3532.8	3562.0	3613.6	3681.0	3743.8	3852.6	3962.5	4047.7	4100.5	4074.8
60°	3840.3	3862.7	3900.8	3955.7	4043.2	4128.6	4277.7	4435.9	4568.3	4628.9	4581.8
62.5°	4275.6	4296.8	4321.5	4394.4	4491.9	4602.0	4789.3	4992.4	5160.7	5219.0	5152.7
65°	4895.9	4921.7	4929.6	4989.0	5084.4	5186.4	5388.4	5617.2	5809.1	5904.5	5772.0
67.5°	5594.8	5604.9	5636.3	5705.9	5803.6	5895.5	6054.8	6271.4	6455.4	6508.0	6366.6
70°	6004.4	6024.5	6079.5	6176.0	6292.7	6437.3	6611.3	6844.6	7053.3	7078.0	6898.5
72.5°	5634.1	5675.6	5773.3	5923.6	6168.1	6425.0	6724.6	7069.0	7368.6	7403.3	7115.0
75°	4519.0	4566.1	4682.8	4847.7	5137.2	5518.5	5951.6	6468.8	6917.5	6974.8	6593.4
77.5°	2408.7	2467.1	2636.4	2858.5	3271.4	3776.2	4297.9	4888.0	5269.5	5398.5	5123.6
80°	606.9	638.4	720.2	850.4	1129.7	1537.0	1986.9	2621.9	3095.4	3296.2	3095.4
82.5°	235.6	259.2	281.6	297.3	324.2	380.3	525.0	856.0	1153.3	1420.3	1229.6
85°	90.9	96.4	139.1	158.2	158.2	173.9	199.7	235.6	291.7	318.6	267.0
87.5°	35.9	39.3	48.3	74.1	76.3	67.3	71.8	80.8	61.7	51.6	58.4
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°	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9	1295.9
2.5°	1290.2	1289.0	1286.8	1287.9	1286.8	1286.8	1286.8	1286.8
5°	1289.0	1289.0	1286.8	1286.8	1286.8	1287.9	1286.8	1286.8
7.5°	1287.9	1286.8	1284.6	1283.5	1283.5	1282.2	1282.2	1282.2
10°	1285.7	1283.5	1281.2	1280.1	1280.1	1277.8	1277.8	1277.8
12.5°	1291.3	1287.9	1285.7	1284.6	1284.6	1284.6	1285.7	1285.7
15°	1307.0	1300.3	1296.9	1295.9	1296.9	1299.1	1300.3	1301.4
17.5°	1323.7	1317.1	1311.4	1309.3	1310.3	1313.8	1317.1	1319.3
20°	1345.1	1339.5	1332.8	1330.6	1330.6	1335.0	1337.4	1340.6
22.5°	1375.5	1370.9	1365.3	1361.9	1359.7	1365.3	1368.7	1370.9
25°	1423.6	1419.2	1414.7	1411.3	1410.2	1415.8	1418.0	1419.2
27.5°	1487.6	1483.0	1480.9	1479.8	1476.4	1478.6	1482.0	1480.9
30°	1570.6	1574.0	1570.6	1570.6	1565.0	1567.4	1565.0	1562.7
32.5°	1681.7	1678.3	1668.3	1661.5	1653.6	1653.6	1650.3	1647.0
35°	1792.7	1781.6	1775.9	1779.3	1775.9	1778.2	1772.6	1766.9
37.5°	1924.0	1917.3	1916.2	1926.2	1924.0	1926.2	1926.2	1918.4
40°	2097.9	2093.4	2101.3	2118.1	2124.9	2123.8	2125.9	2116.0
42.5°	2297.6	2289.7	2293.2	2307.7	2315.5	2317.8	2316.8	2307.7
45°	2497.3	2499.6	2499.6	2515.2	2523.2	2527.6	2519.7	2516.3
47.5°	2722.8	2726.1	2718.4	2728.4	2730.7	2738.5	2731.8	2726.1
50°	2983.1	2970.8	2952.8	2956.1	2956.1	2954.0	2946.0	2939.3
52.5°	3273.6	3245.6	3212.0	3200.7	3188.4	3176.0	3160.4	3148.0
55°	3604.6	3556.4	3495.7	3467.8	3444.2	3416.1	3380.3	3367.9
57.5°	3988.3	3905.3	3824.5	3774.1	3713.4	3676.5	3630.4	3628.2
60°	4443.8	4331.6	4189.1	4113.9	4053.4	4009.6	3974.9	3961.4
62.5°	4969.9	4777.1	4623.3	4542.6	4471.9	4444.8	4401.2	4406.8
65°	5509.6	5313.3	5164.0	5098.9	5032.8	5014.8	4974.5	4989.0
67.5°	6094.1	5932.6	5768.8	5708.1	5647.6	5629.6	5588.1	5600.4
70°	6618.0	6412.7	6226.4	6107.6	6004.4	5921.3	5868.6	5847.2
72.5°	6722.2	6366.6	6073.8	5776.5	5604.9	5454.6	5392.9	5369.3
75°	6040.2	5488.3	5070.9	4721.9	4529.1	4310.3	4286.7	4254.2
77.5°	4698.4	4070.2	3565.3	3116.6	2857.4	2590.4	2498.4	2428.9
80°	2802.5	2154.0	1669.4	1170.1	954.7	768.5	722.5	674.2
82.5°	1003.0	642.9	433.0	337.7	301.8	278.2	260.2	236.8
85°	242.3	204.2	193.0	175.1	172.7	147.0	104.4	93.1
87.5°	77.3	70.7	71.8	68.4	71.8	53.9	43.7	39.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)