

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: P196526

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196526
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-RW-7030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12038.2 lumens
Efficiency: N/A
Efficacy: 106.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

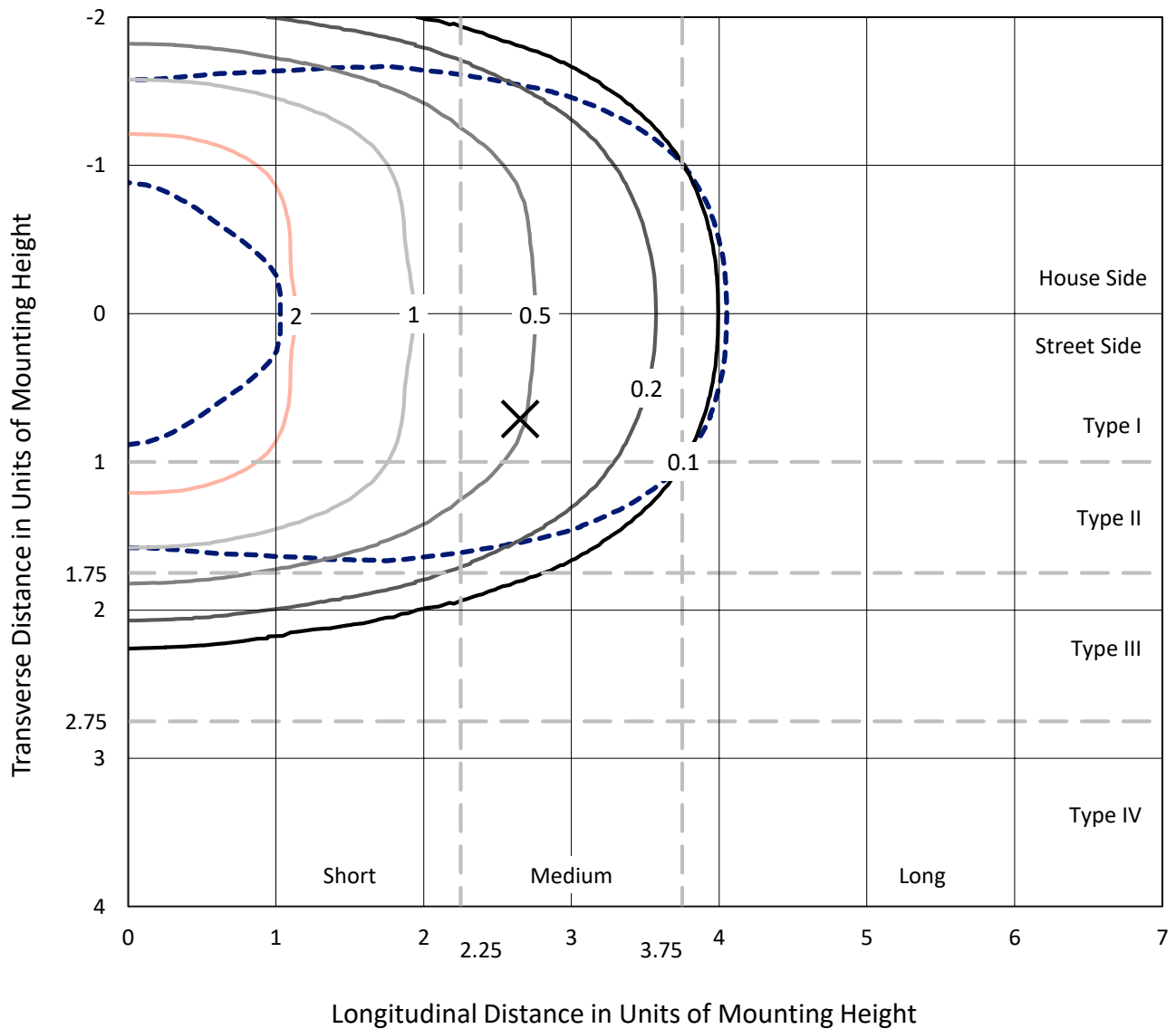
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

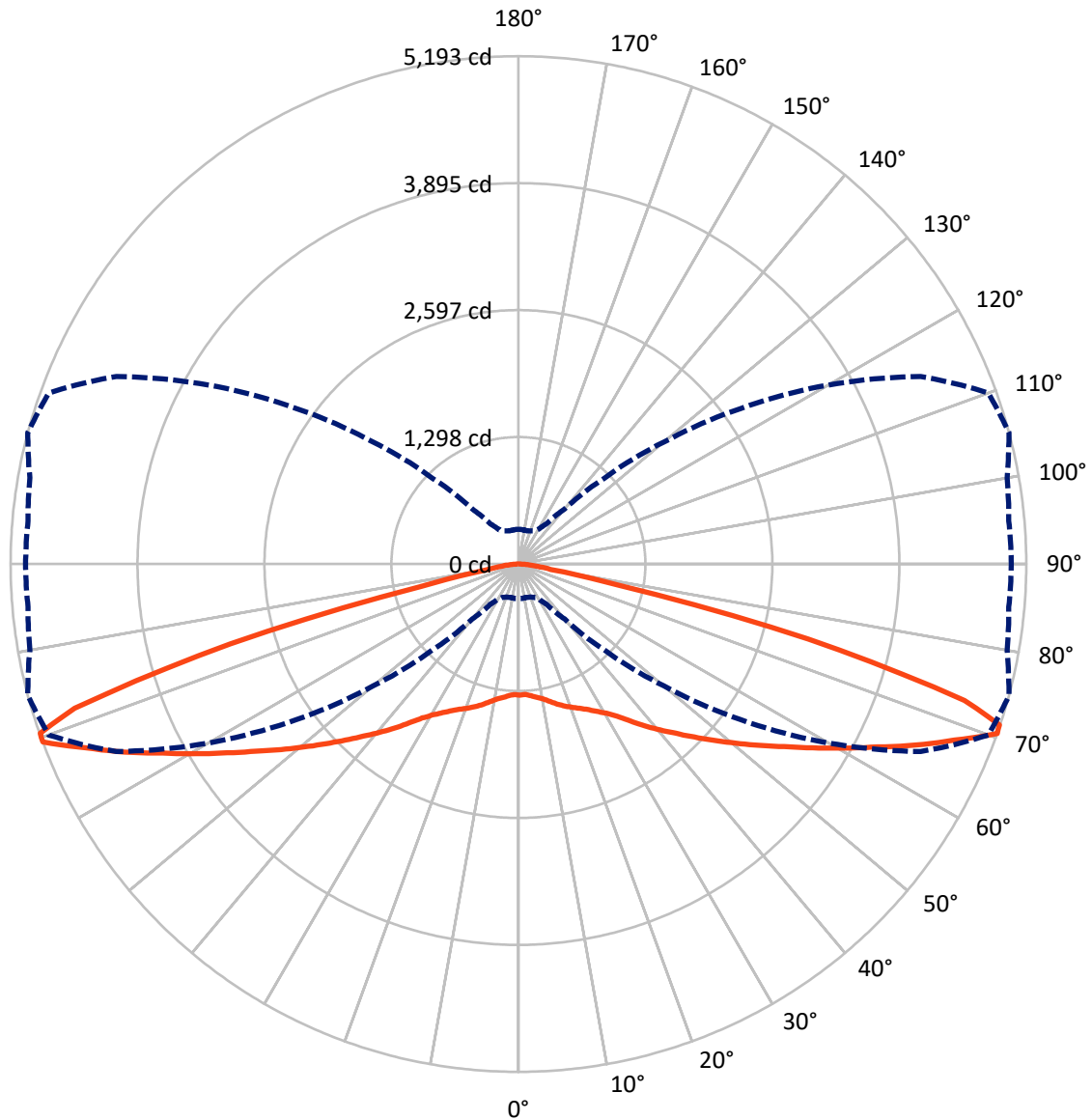
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6019.1	0.0	6019.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6019.1	0.0	6019.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	12038.2	0.0	12038.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.6	1.1
10°-20°	398.8	3.3
20°-30°	749.0	6.2
30°-40°	1319.4	11.0
40°-50°	2186.6	18.2
50°-60°	3041.9	25.3
60°-70°	2871.6	23.9
70°-80°	1226.5	10.2
80°-90°	115.9	1.0
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°	12038.2	100.0
0°-180°	12038.2	100.0



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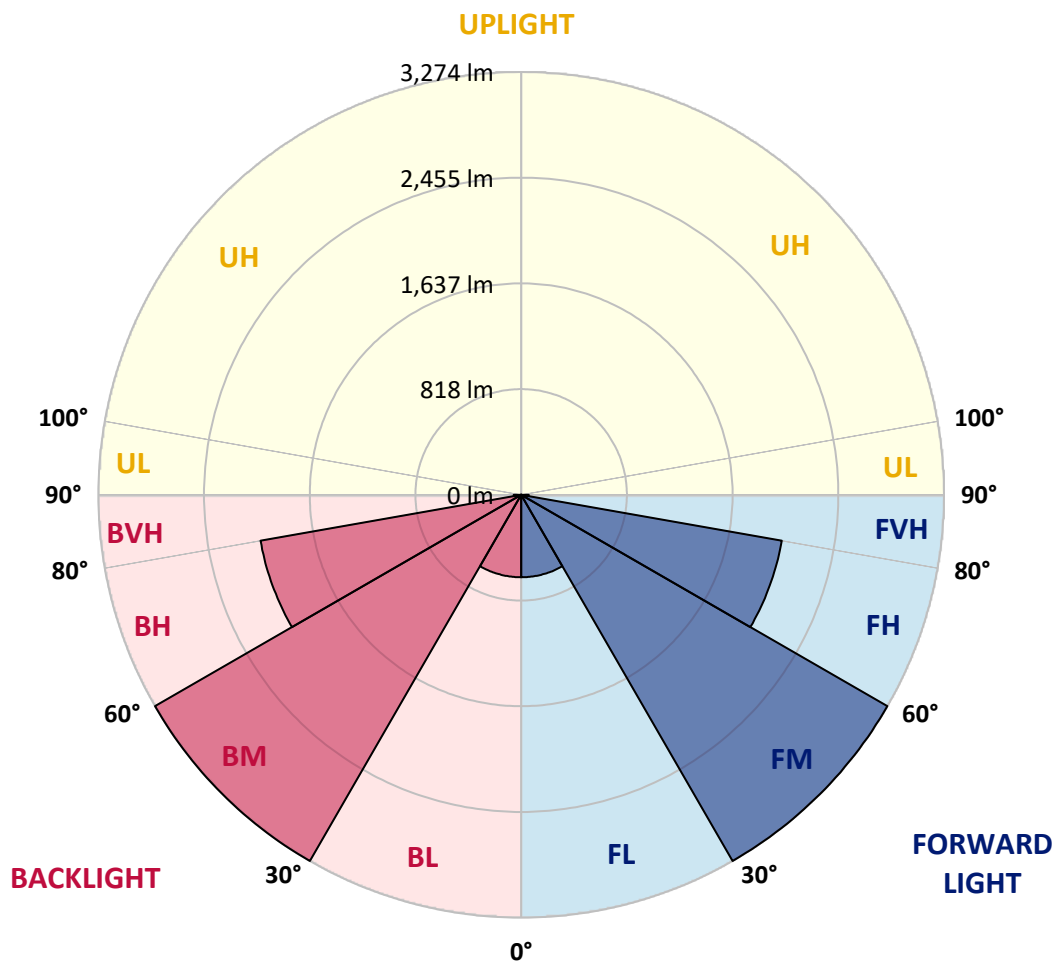
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	638.2	5.3			
FM	(30°-60°)	3273.9	27.2			
FH	(60°-80°)	2049.0	17.0			G2/5000
FVH	(80°-90°)	57.9	0.5			G1/100
BL	(0°-30°)	638.2	5.3	B2/1000		
BM	(30°-60°)	3273.9	27.2	B3/5000		
BH	(60°-80°)	2049.0	17.0	B3/2500		G3/2500
BVH	(80°-90°)	57.9	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1349.0	1348.1	1349.0	1346.6	1347.3	1346.6	1346.6	1343.6	1343.6	1342.0	1339.8
5°	1333.7	1335.2	1335.2	1335.2	1337.6	1337.6	1340.6	1341.3	1343.6	1345.8	1347.3
7.5°	1308.9	1309.7	1311.8	1313.4	1317.8	1324.0	1330.0	1336.8	1342.8	1350.3	1358.6
10°	1287.7	1289.3	1293.1	1296.8	1305.1	1312.6	1323.2	1333.7	1344.3	1357.2	1370.0
12.5°	1276.4	1278.7	1284.8	1290.8	1303.6	1313.4	1327.7	1344.3	1358.6	1370.7	1385.1
15°	1278.0	1278.7	1287.0	1295.3	1313.4	1327.0	1347.3	1367.0	1384.4	1397.9	1414.5
17.5°	1299.8	1301.4	1309.7	1321.7	1339.1	1356.5	1378.3	1398.6	1422.0	1437.9	1457.5
20°	1342.8	1345.1	1354.2	1367.0	1385.9	1404.0	1426.6	1447.6	1471.8	1490.8	1510.3
22.5°	1398.6	1402.5	1412.2	1428.1	1446.9	1468.8	1492.2	1514.2	1536.7	1555.6	1572.1
25°	1473.4	1477.8	1488.4	1504.3	1523.2	1546.6	1570.7	1593.3	1616.7	1631.0	1644.6
27.5°	1573.7	1581.2	1592.6	1605.3	1622.0	1646.9	1669.5	1688.4	1711.0	1726.9	1735.9
30°	1708.7	1719.3	1728.4	1741.9	1753.9	1780.4	1798.5	1813.6	1830.9	1840.0	1842.2
32.5°	1873.9	1883.7	1892.8	1902.6	1919.2	1943.2	1960.6	1969.0	1978.0	1976.5	1968.2
35°	2060.3	2067.8	2073.0	2090.4	2117.6	2133.4	2146.3	2149.2	2150.8	2134.9	2119.1
37.5°	2256.4	2265.5	2270.0	2297.1	2322.9	2340.9	2346.9	2353.8	2349.2	2322.9	2294.1
40°	2468.3	2478.2	2491.7	2515.1	2545.3	2562.6	2570.3	2569.4	2565.7	2534.9	2488.1
42.5°	2676.7	2688.7	2700.1	2740.8	2765.7	2795.1	2798.7	2798.0	2789.8	2754.3	2700.1
45°	2853.2	2867.5	2890.9	2936.2	2976.1	3011.5	3025.9	3031.2	3022.8	2985.2	2923.3
47.5°	2998.7	3008.6	3038.0	3093.0	3144.4	3196.4	3225.2	3245.4	3244.7	3217.4	3151.9
50°	3098.4	3109.6	3145.9	3207.8	3271.9	3333.0	3389.6	3435.5	3457.4	3437.9	3376.6
52.5°	3127.0	3141.3	3188.8	3262.8	3337.5	3419.7	3504.2	3585.7	3634.7	3646.7	3599.2
55°	3006.3	3022.1	3091.5	3194.0	3317.1	3438.6	3566.8	3683.0	3784.0	3830.8	3811.9
57.5°	2654.8	2666.0	2754.3	2887.0	3062.9	3276.3	3492.2	3704.9	3878.3	3999.9	4021.0
60°	2099.5	2113.8	2210.5	2350.7	2550.6	2820.7	3122.4	3470.9	3811.2	4089.6	4227.7
62.5°	1416.8	1426.6	1519.4	1647.6	1866.3	2126.6	2463.1	2904.4	3389.6	3886.7	4276.0
65°	743.8	743.8	806.5	896.3	1070.5	1303.6	1648.4	2101.0	2678.2	3299.0	3950.0
67.5°	431.5	430.8	445.1	465.5	520.5	614.8	804.9	1137.6	1683.8	2406.6	3147.3
70°	356.0	353.8	351.6	351.6	359.9	374.2	410.4	501.7	734.0	1240.9	1936.5
71°	340.3	338.7	332.7	330.4	334.3	341.8	357.6	399.8	521.2	846.4	1446.1
72.5°	321.3	317.6	308.5	304.8	305.5	308.5	313.0	329.6	366.7	481.3	824.6
75°	292.7	283.6	272.4	267.0	264.9	264.1	264.1	268.6	276.9	290.4	337.9
77.5°	259.5	246.7	234.6	229.3	225.5	223.3	221.8	218.7	217.3	223.3	240.7
80°	219.5	206.0	196.1	193.2	190.8	186.3	180.3	174.3	170.5	173.5	184.1
82.5°	169.8	156.1	157.7	158.4	154.6	147.1	141.1	134.3	127.5	125.9	131.2
85°	135.1	128.3	123.7	133.6	125.2	116.2	107.8	96.5	80.8	66.4	72.4
87.5°	58.1	58.9	84.4	127.5	111.7	89.8	74.8	60.3	38.5	28.6	29.4
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°	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6	1340.6
2.5°	1339.1	1339.1	1336.8	1335.2	1335.2	1335.2	1333.7	1334.5
5°	1348.1	1349.6	1351.1	1350.3	1352.6	1355.0	1354.2	1353.4
7.5°	1363.2	1367.7	1372.3	1374.5	1377.5	1380.6	1381.2	1379.1
10°	1378.3	1387.4	1394.1	1400.1	1404.0	1406.9	1409.2	1408.5
12.5°	1397.1	1410.0	1422.0	1434.1	1442.4	1446.9	1451.5	1450.0
15°	1428.1	1442.4	1457.5	1473.4	1486.2	1492.9	1499.8	1498.3
17.5°	1470.3	1483.2	1495.2	1511.0	1526.9	1534.4	1541.9	1541.2
20°	1523.2	1532.9	1539.7	1548.7	1563.8	1572.1	1578.9	1576.7
22.5°	1583.5	1586.6	1587.2	1590.3	1602.4	1612.1	1621.2	1623.5
25°	1649.2	1646.9	1642.2	1640.1	1648.4	1658.9	1670.2	1673.3
27.5°	1730.5	1723.0	1711.8	1702.7	1705.0	1718.5	1731.3	1734.4
30°	1833.2	1815.9	1791.8	1774.4	1771.3	1785.7	1799.3	1803.8
32.5°	1950.2	1926.8	1893.6	1867.1	1855.9	1868.7	1880.7	1887.6
35°	2088.9	2063.3	2023.3	1989.4	1971.2	1979.6	2000.6	2008.1
37.5°	2253.4	2218.0	2173.3	2130.4	2100.3	2101.7	2124.4	2133.4
40°	2435.2	2383.9	2327.3	2273.8	2230.0	2227.0	2247.4	2254.1
42.5°	2624.5	2559.0	2492.5	2422.4	2368.0	2358.3	2384.7	2385.4
45°	2828.2	2743.7	2661.5	2580.0	2523.5	2506.1	2531.7	2534.9
47.5°	3045.5	2939.9	2842.6	2754.3	2693.2	2666.0	2690.9	2695.4
50°	3271.9	3162.4	3049.3	2951.2	2879.5	2846.3	2875.8	2878.8
52.5°	3495.9	3392.5	3280.2	3167.8	3081.0	3043.2	3078.0	3088.5
55°	3721.5	3621.8	3516.3	3403.9	3294.5	3261.3	3299.0	3310.3
57.5°	3956.1	3860.2	3764.4	3651.3	3544.9	3494.3	3535.1	3550.9
60°	4214.7	4130.3	4039.9	3925.9	3821.1	3762.3	3796.9	3815.0
62.5°	4469.0	4451.8	4369.5	4251.1	4118.3	4059.4	4088.8	4101.7
65°	4490.2	4771.6	4767.8	4650.1	4464.6	4365.7	4373.9	4380.1
67.5°	3919.1	4564.9	4977.6	5014.5	4807.9	4653.2	4635.0	4638.8
70°	2774.6	3661.1	4537.0	5111.8	5193.3	5073.4	5034.1	5040.1
71°	2223.2	3141.3	4105.4	4878.8	5187.3	5152.5	5130.7	5146.5
72.5°	1419.1	2314.5	3252.9	4177.8	4770.0	4939.8	4964.7	4974.5
75°	515.2	995.8	1685.4	2414.8	3060.6	3504.9	3749.3	3769.0
77.5°	276.9	356.8	551.4	823.9	1035.0	1148.2	1161.8	1167.1
80°	203.7	236.1	270.1	308.5	332.7	337.2	328.9	311.6
82.5°	144.1	162.9	176.6	190.1	200.0	191.6	159.2	121.5
85°	83.7	92.0	99.5	106.4	107.8	101.8	67.2	55.0
87.5°	33.3	36.2	35.5	40.0	38.5	35.5	26.4	22.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)