

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: P195566

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195566
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-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12447 lumens
Efficiency: N/A
Efficacy: 110.2 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

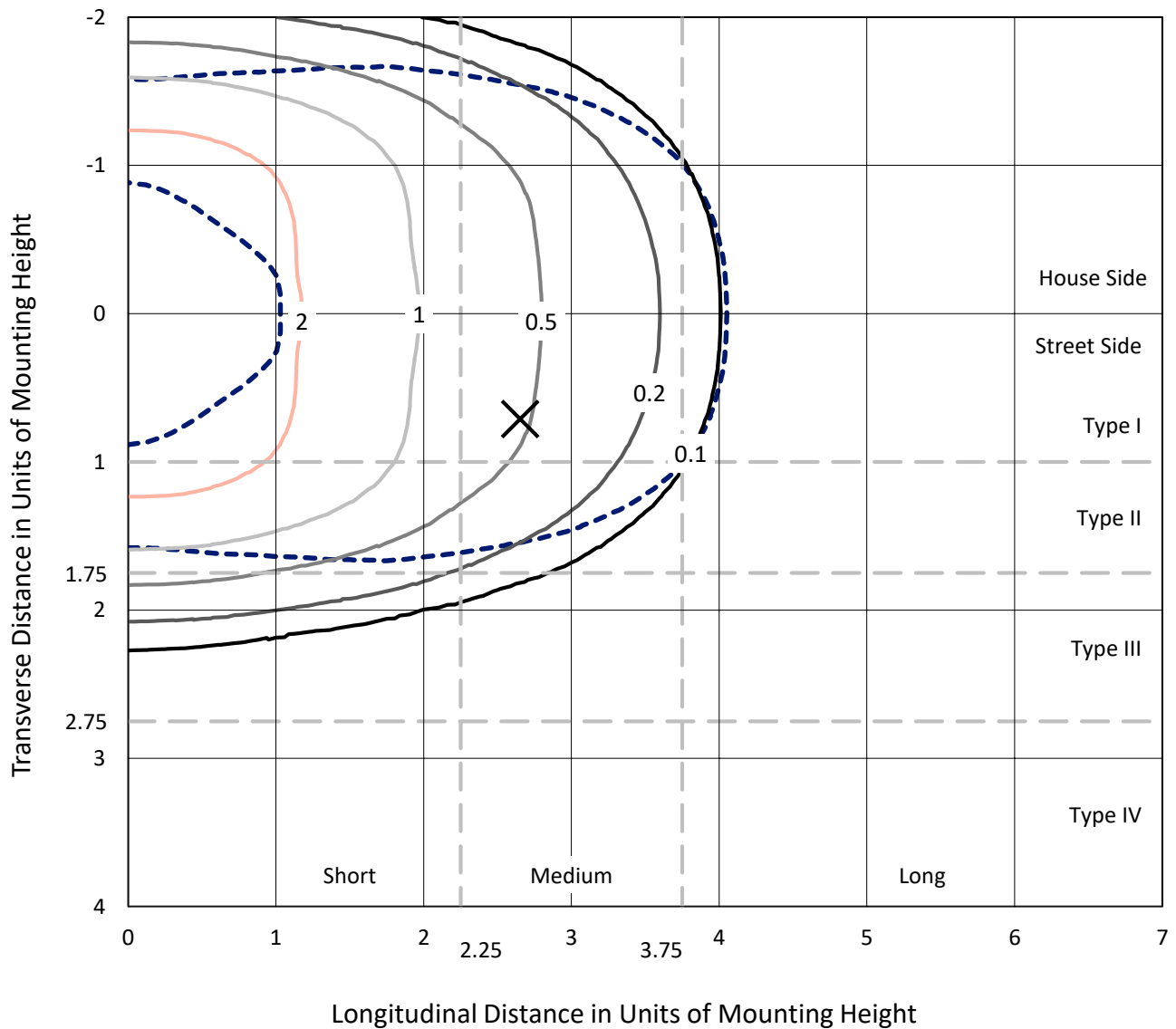
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

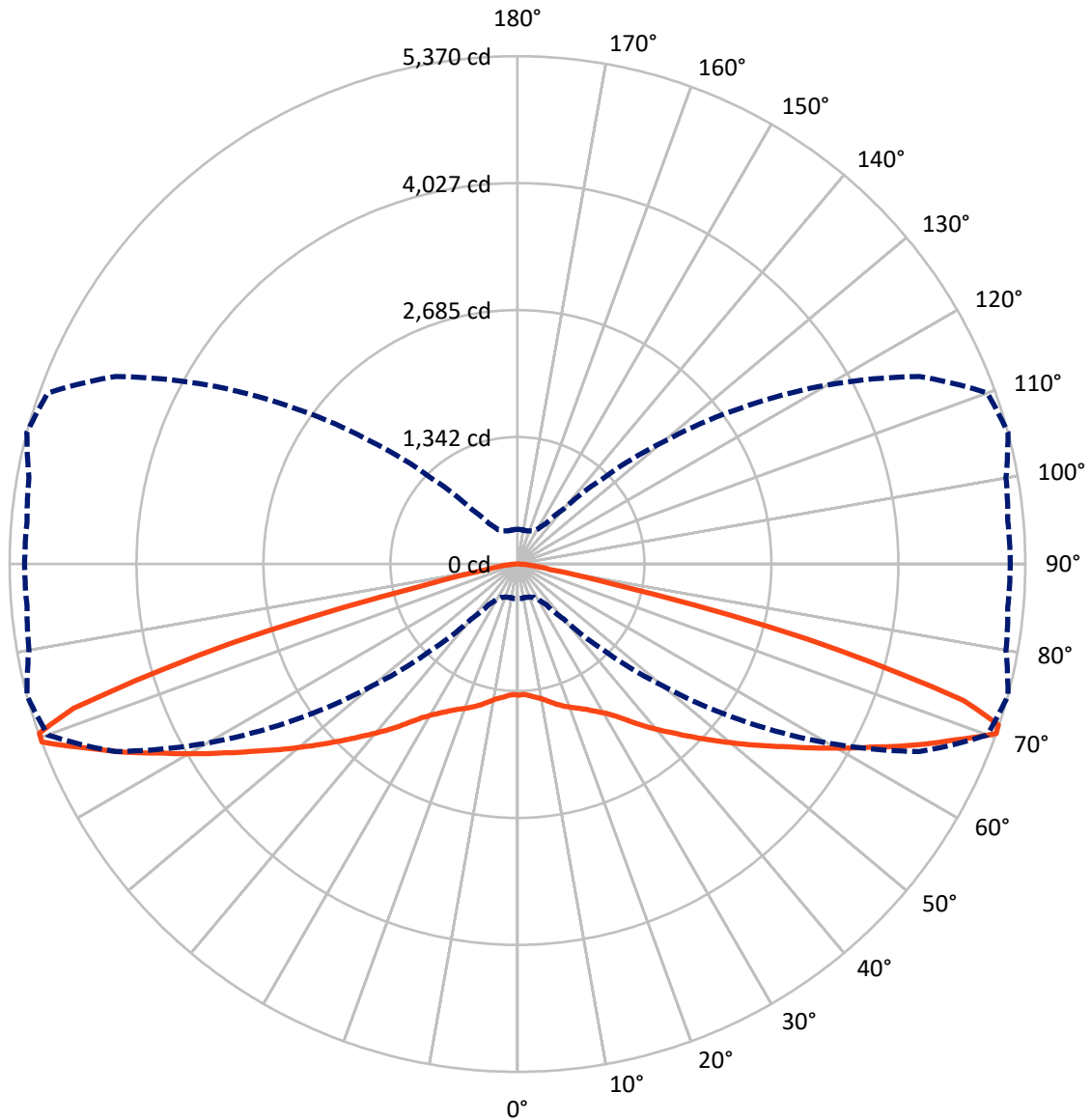
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.5 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	6223.5	0.0	6223.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6223.5	0.0	6223.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	12447.0	0.0	12447.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	1.1
10°-20°	412.3	3.3
20°-30°	774.4	6.2
30°-40°	1364.2	11.0
40°-50°	2260.9	18.2
50°-60°	3145.2	25.3
60°-70°	2969.1	23.9
70°-80°	1268.1	10.2
80°-90°	119.8	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°	12447.0	100.0
0°-180°	12447.0	100.0



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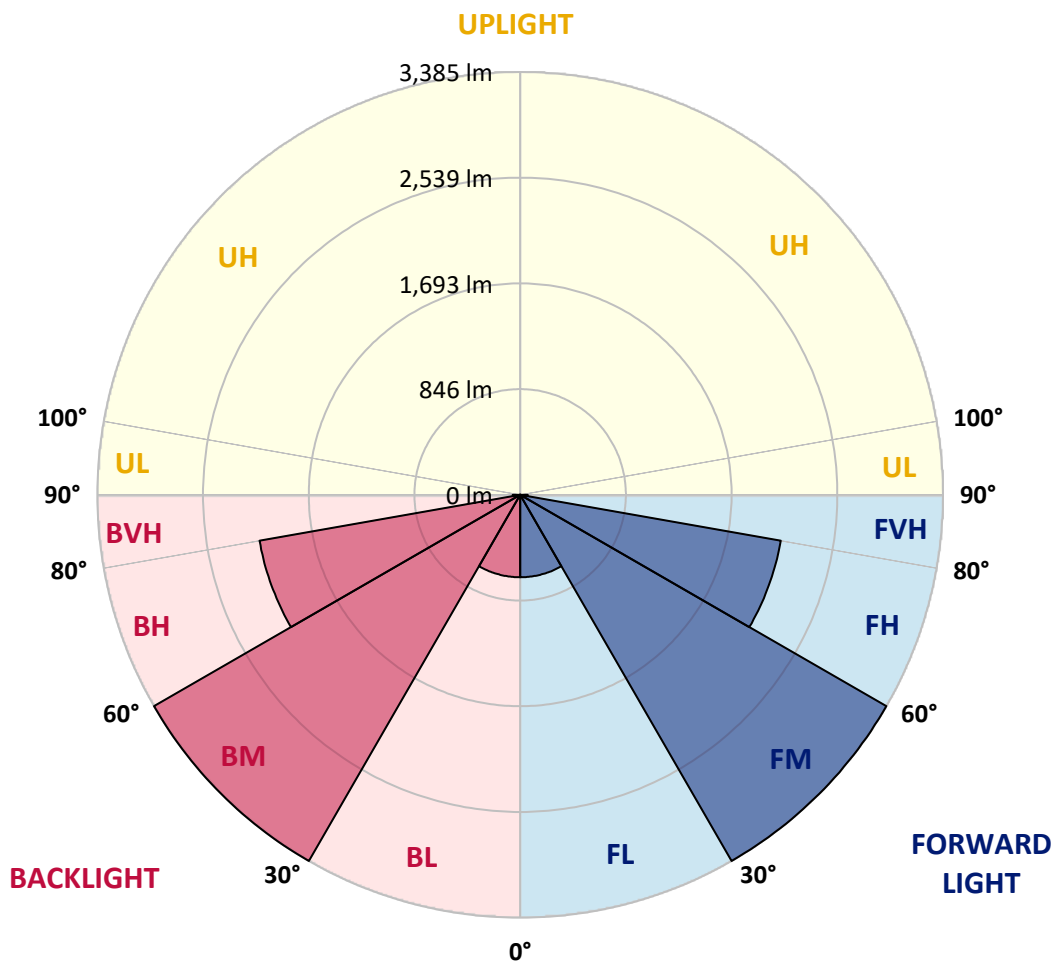
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	659.9	5.3			
FM (30°-60°)	3385.1	27.2			
FH (60°-80°)	2118.6	17.0			G2/5000
FVH (80°-90°)	59.9	0.5			G1/100
BL (0°-30°)	659.9	5.3	B2/1000		
BM (30°-60°)	3385.1	27.2	B3/5000		
BH (60°-80°)	2118.6	17.0	B3/2500		G3/2500
BVH (80°-90°)	59.9	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°	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1
2.5°	1394.7	1393.9	1394.7	1392.3	1393.1	1392.3	1392.3	1389.2	1389.2	1387.7	1385.3
5°	1379.1	1380.6	1380.6	1380.6	1383.0	1383.0	1386.1	1386.9	1389.2	1391.6	1393.1
7.5°	1353.3	1354.1	1356.5	1358.0	1362.7	1368.9	1375.2	1382.2	1388.4	1396.2	1404.8
10°	1331.5	1333.1	1337.0	1340.9	1349.4	1357.2	1368.2	1379.1	1390.0	1403.3	1416.5
12.5°	1319.8	1322.1	1328.4	1334.6	1347.9	1358.0	1372.8	1390.0	1404.8	1417.3	1432.1
15°	1321.4	1322.1	1330.7	1339.3	1358.0	1372.1	1393.1	1413.4	1431.3	1445.4	1462.5
17.5°	1344.0	1345.5	1354.1	1366.6	1384.5	1402.5	1425.1	1446.2	1470.3	1486.7	1507.0
20°	1388.4	1390.8	1400.1	1413.4	1432.9	1451.6	1475.0	1496.9	1521.8	1541.3	1561.6
22.5°	1446.2	1450.1	1460.2	1476.6	1496.1	1518.7	1542.9	1565.5	1588.9	1608.4	1625.6
25°	1523.4	1528.1	1539.0	1555.4	1574.9	1599.0	1624.0	1647.4	1671.6	1686.4	1700.4
27.5°	1627.1	1634.9	1646.6	1659.9	1677.0	1702.8	1726.2	1745.7	1769.1	1785.5	1794.8
30°	1766.7	1777.7	1787.0	1801.1	1813.5	1840.8	1859.6	1875.2	1893.1	1902.5	1904.8
32.5°	1937.6	1947.7	1957.1	1967.2	1984.4	2009.3	2027.3	2035.9	2045.2	2043.7	2035.1
35°	2130.2	2138.0	2143.5	2161.4	2189.5	2205.9	2219.2	2222.3	2223.8	2207.5	2191.1
37.5°	2333.0	2342.4	2347.1	2375.2	2401.7	2420.4	2426.6	2433.7	2429.0	2401.7	2372.0
40°	2552.2	2562.4	2576.4	2600.6	2631.8	2649.7	2657.5	2656.7	2652.8	2620.9	2572.5
42.5°	2767.5	2780.0	2791.7	2833.8	2859.6	2890.0	2893.9	2893.1	2884.5	2847.9	2791.7
45°	2950.0	2964.9	2989.0	3035.8	3077.2	3113.8	3128.7	3134.1	3125.5	3086.5	3022.6
47.5°	3100.6	3110.7	3141.1	3198.1	3251.1	3304.9	3334.6	3355.6	3354.9	3326.8	3258.9
50°	3203.5	3215.2	3252.7	3316.6	3382.9	3446.1	3504.6	3552.2	3574.8	3554.5	3491.4
52.5°	3233.2	3248.0	3297.1	3373.6	3450.8	3535.8	3623.2	3707.4	3758.1	3770.6	3721.5
55°	3108.4	3124.8	3196.5	3302.6	3429.7	3555.3	3687.9	3808.1	3912.6	3960.9	3941.4
57.5°	2744.9	2756.6	2847.9	2985.1	3166.9	3387.6	3610.7	3830.7	4010.1	4135.7	4157.5
60°	2170.8	2185.6	2285.5	2430.5	2637.2	2916.5	3228.5	3588.9	3940.7	4228.5	4371.2
62.5°	1464.9	1475.0	1571.0	1703.6	1929.8	2198.9	2546.8	3003.1	3504.6	4018.7	4421.2
65°	769.1	769.1	833.8	926.7	1106.8	1347.9	1704.3	2172.4	2769.1	3411.0	4084.2
67.5°	446.2	445.4	460.2	481.3	538.2	635.7	832.3	1176.3	1741.0	2488.3	3254.2
70°	368.2	365.8	363.5	363.5	372.1	386.9	424.3	518.7	759.0	1283.1	2002.3
71°	351.8	350.2	344.0	341.6	345.5	353.3	369.7	413.4	539.0	875.2	1495.3
72.5°	332.3	328.4	319.0	315.1	315.9	319.0	323.7	340.9	379.1	497.7	852.6
75°	302.6	293.3	281.6	276.1	273.8	273.0	273.0	277.7	286.3	300.3	349.4
77.5°	268.3	255.1	242.6	237.1	233.2	230.9	229.3	226.2	224.6	230.9	248.8
80°	227.0	212.9	202.8	199.7	197.3	192.7	186.4	180.2	176.3	179.4	190.3
82.5°	175.5	161.5	163.0	163.8	159.9	152.1	145.9	138.8	131.8	130.3	135.7
85°	139.6	132.6	127.9	138.1	129.5	120.1	111.5	99.8	83.5	68.6	74.9
87.5°	60.1	60.8	87.4	131.8	115.4	92.8	77.2	62.4	39.8	29.6	30.4
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°	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1	1386.1
2.5°	1384.5	1384.5	1382.2	1380.6	1380.6	1380.6	1379.1	1379.9
5°	1393.9	1395.5	1397.0	1396.2	1398.6	1400.9	1400.1	1399.4
7.5°	1409.5	1414.2	1418.9	1421.2	1424.3	1427.4	1428.2	1425.9
10°	1425.1	1434.5	1441.5	1447.7	1451.6	1454.7	1457.1	1456.3
12.5°	1444.6	1457.9	1470.3	1482.8	1491.4	1496.1	1500.8	1499.2
15°	1476.6	1491.4	1507.0	1523.4	1536.6	1543.7	1550.7	1549.1
17.5°	1520.3	1533.5	1546.0	1562.4	1578.8	1586.6	1594.4	1593.6
20°	1574.9	1585.0	1592.0	1601.4	1617.0	1625.6	1632.6	1630.2
22.5°	1637.3	1640.4	1641.2	1644.3	1656.8	1666.9	1676.3	1678.6
25°	1705.1	1702.8	1698.1	1695.8	1704.3	1715.3	1727.0	1730.1
27.5°	1789.4	1781.6	1769.9	1760.5	1762.8	1776.9	1790.1	1793.3
30°	1895.4	1877.5	1852.5	1834.6	1831.5	1846.3	1860.3	1865.0
32.5°	2016.4	1992.2	1957.8	1930.5	1918.8	1932.1	1944.6	1951.6
35°	2159.9	2133.4	2092.0	2056.9	2038.2	2046.8	2068.6	2076.4
37.5°	2329.9	2293.3	2247.2	2202.8	2171.6	2173.1	2196.5	2205.9
40°	2517.9	2464.9	2406.4	2351.0	2305.7	2302.6	2323.7	2330.7
42.5°	2713.7	2645.8	2577.2	2504.6	2448.5	2438.3	2465.6	2466.4
45°	2924.3	2836.9	2751.9	2667.7	2609.2	2591.2	2617.7	2620.9
47.5°	3148.9	3039.7	2939.1	2847.9	2784.7	2756.6	2782.3	2787.0
50°	3382.9	3269.8	3152.8	3051.4	2977.3	2943.0	2973.4	2976.6
52.5°	3614.6	3507.7	3391.5	3275.3	3185.6	3146.6	3182.5	3193.4
55°	3847.8	3744.9	3635.7	3519.4	3406.3	3372.0	3411.0	3422.7
57.5°	4090.4	3991.4	3892.3	3775.3	3665.3	3613.1	3655.2	3671.6
60°	4358.0	4270.6	4177.0	4059.2	3950.8	3890.0	3925.8	3944.6
62.5°	4620.8	4602.9	4517.9	4395.4	4258.1	4197.3	4227.7	4241.0
65°	4642.7	4933.6	4929.7	4808.0	4616.2	4514.0	4522.6	4528.8
67.5°	4052.2	4719.9	5146.6	5184.8	4971.1	4811.2	4792.4	4796.3
70°	2868.9	3785.4	4691.0	5285.4	5369.7	5245.6	5205.1	5211.3
71°	2298.7	3248.0	4244.9	5044.4	5363.4	5327.5	5304.9	5321.3
72.5°	1467.2	2393.1	3363.4	4319.7	4932.1	5107.6	5133.3	5143.4
75°	532.8	1029.6	1742.6	2496.8	3164.5	3624.0	3876.7	3897.0
77.5°	286.3	368.9	570.2	851.8	1070.2	1187.2	1201.2	1206.7
80°	210.6	244.1	279.2	319.0	344.0	348.7	340.1	322.1
82.5°	149.0	168.5	182.5	196.6	206.7	198.1	164.6	125.6
85°	86.6	95.2	103.0	110.0	111.5	105.3	69.4	56.9
87.5°	34.3	37.4	36.7	41.3	39.8	36.7	27.3	23.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)