

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: P196401

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-7030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196401  
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-7030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 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: 15074.5 lumens  
Efficiency: N/A  
Efficacy: 121.6 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

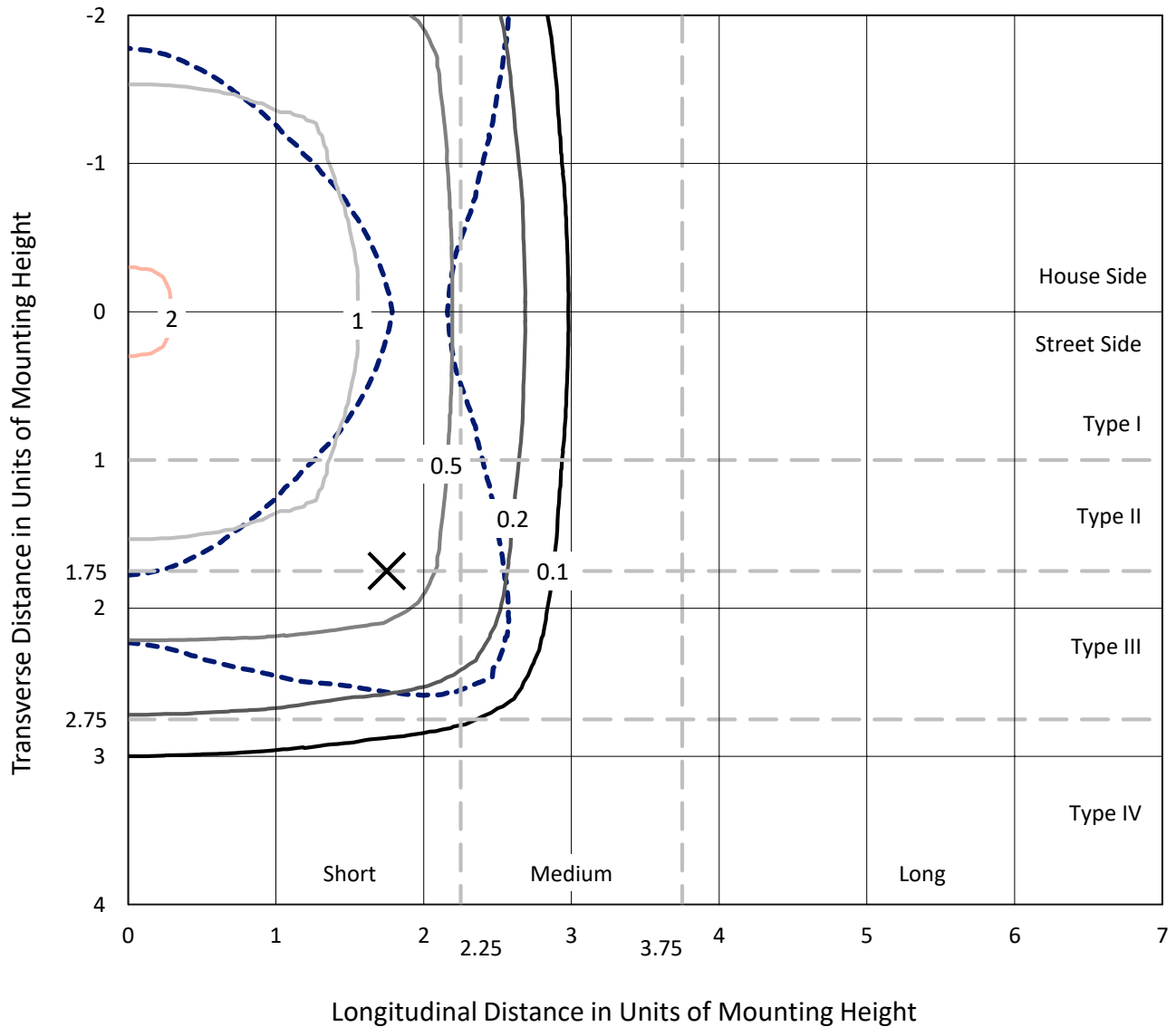
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196401  
 CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7030-800

### Iso-Footcandle Lines of Horizontal Illumination

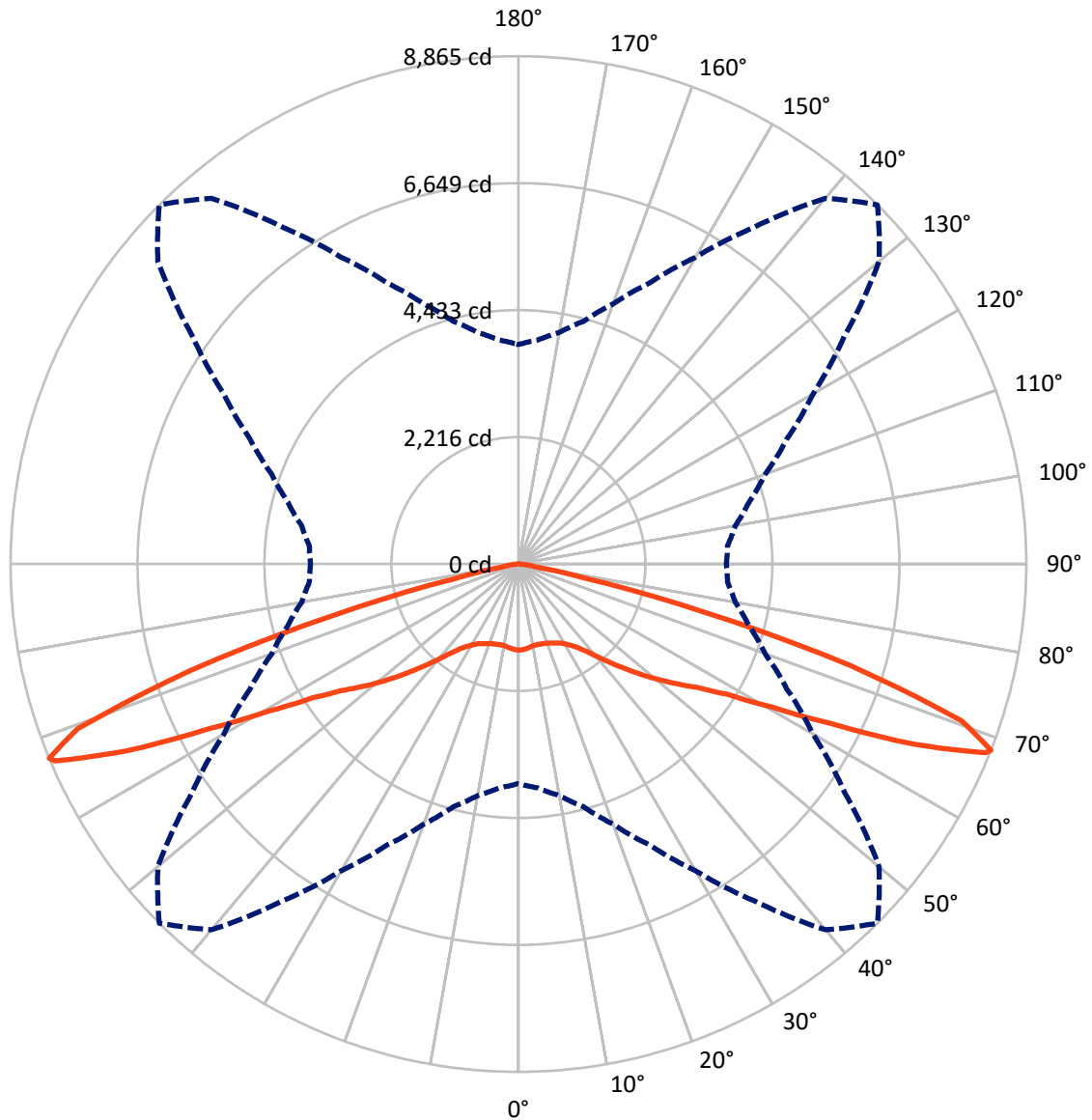
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type V - Short - Full Cutoff

REPORT NUMBER: P196401  
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7030-800

### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P196401

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7030-800

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7537.2	0.0	7537.2
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	7537.2	0.0	7537.2
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	15074.5	0.0	15074.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.7	0.9
10°-20°	408.1	2.7
20°-30°	693.8	4.6
30°-40°	1135.3	7.5
40°-50°	2029.0	13.5
50°-60°	3426.7	22.7
60°-70°	5313.5	35.2
70°-80°	1826.9	12.1
80°-90°	100.4	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°	15074.5	100.0
0°-180°	15074.5	100.0



REPORT NUMBER: P196401

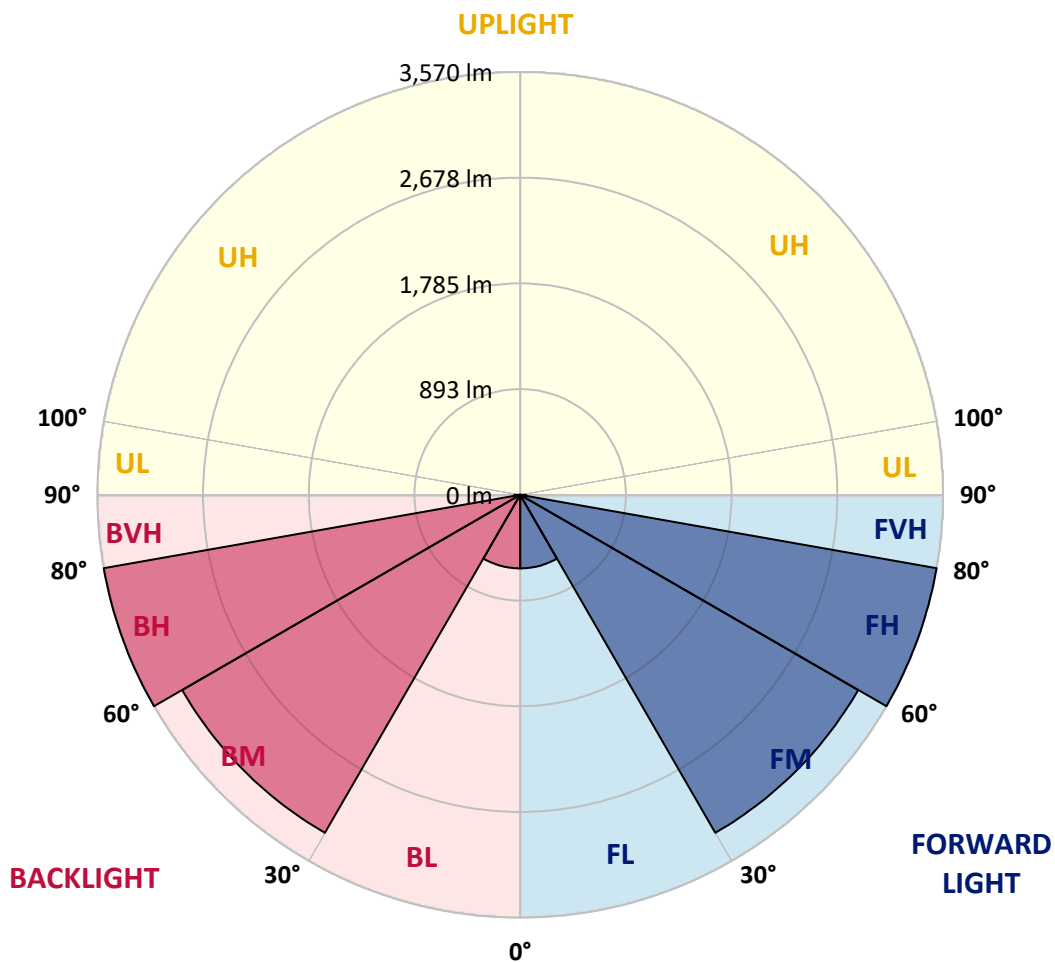
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7030-800

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	621.3	4.1			
FM	(30°-60°)	3295.5	21.9			
FH	(60°-80°)	3570.2	23.7			G2/5000
FVH	(80°-90°)	50.2	0.3			G1/100
BL	(0°-30°)	621.3	4.1	B2/1000		
BM	(30°-60°)	3295.5	21.9	B3/5000		
BH	(60°-80°)	3570.2	23.7	B4/5000		G2/5000
BVH	(80°-90°)	50.2	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





REPORT NUMBER: P196401

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7030-800

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7
2.5°	1510.2	1510.2	1512.0	1511.2	1508.4	1505.6	1502.8	1500.0	1498.2	1496.3	1494.4
5°	1494.4	1494.4	1497.3	1495.4	1493.6	1490.9	1488.9	1486.2	1484.3	1482.5	1483.4
7.5°	1474.2	1476.0	1477.8	1476.9	1473.3	1472.4	1469.5	1468.7	1466.8	1464.1	1464.9
10°	1456.7	1457.5	1459.3	1458.5	1457.5	1454.8	1453.9	1452.9	1452.0	1448.3	1447.4
12.5°	1439.2	1440.9	1442.8	1443.8	1442.8	1443.8	1444.6	1445.6	1444.6	1442.8	1442.8
15°	1425.3	1427.2	1429.8	1432.6	1433.6	1439.2	1442.8	1446.5	1449.3	1450.2	1447.4
17.5°	1417.8	1420.7	1424.3	1429.8	1434.5	1440.9	1447.4	1452.9	1457.5	1458.5	1455.8
20°	1417.0	1419.8	1425.3	1431.8	1440.0	1448.3	1458.5	1466.8	1471.4	1474.2	1471.4
22.5°	1423.4	1427.2	1434.5	1442.8	1452.9	1464.1	1476.9	1486.2	1495.4	1499.1	1496.3
25°	1441.9	1445.6	1453.9	1464.1	1475.1	1488.9	1501.9	1513.9	1523.1	1527.8	1524.0
27.5°	1480.7	1481.5	1490.9	1501.9	1514.8	1526.8	1543.4	1549.0	1556.3	1561.0	1556.3
30°	1535.1	1537.0	1545.3	1562.9	1574.8	1590.5	1599.8	1605.2	1613.5	1618.2	1612.6
32.5°	1618.2	1620.0	1627.4	1644.1	1655.2	1667.1	1678.2	1681.9	1690.2	1695.7	1689.2
35°	1735.5	1739.1	1745.5	1756.7	1765.8	1775.1	1783.4	1780.7	1786.2	1793.6	1787.2
37.5°	1896.0	1895.1	1897.0	1905.3	1914.5	1920.0	1933.1	1926.5	1932.0	1938.5	1934.8
40°	2083.5	2083.5	2082.5	2097.2	2100.9	2106.5	2120.4	2112.1	2119.4	2126.8	2120.4
42.5°	2296.6	2300.4	2305.0	2317.0	2327.1	2329.0	2335.4	2331.7	2341.0	2347.4	2341.0
45°	2542.3	2547.7	2553.3	2581.0	2585.6	2589.3	2594.0	2581.9	2592.0	2597.6	2595.8
47.5°	2797.0	2807.1	2819.1	2847.8	2866.2	2874.5	2878.2	2864.3	2865.4	2873.6	2874.5
50°	3085.1	3096.1	3108.1	3140.3	3157.9	3172.7	3177.3	3161.6	3163.5	3169.9	3171.8
52.5°	3350.9	3363.8	3389.7	3433.0	3457.9	3483.7	3485.6	3466.2	3474.6	3479.2	3475.4
55°	3600.9	3617.6	3651.8	3709.9	3755.1	3805.9	3829.0	3807.8	3807.8	3804.1	3802.2
57.5°	3892.7	3911.2	3946.2	4013.6	4076.4	4149.3	4212.1	4233.4	4272.1	4285.0	4264.7
60°	4332.1	4351.5	4387.6	4476.2	4555.4	4661.6	4765.1	4849.0	4985.6	5059.5	4993.0
62.5°	4733.6	4763.1	4848.2	5003.2	5174.8	5371.5	5599.5	5762.0	6010.3	6134.1	5966.8
65°	4642.2	4702.3	4868.4	5112.1	5466.6	5893.0	6357.4	6803.2	7316.4	7579.6	7239.8
67.5°	4055.1	4106.0	4285.0	4568.4	5010.5	5598.6	6320.4	7243.6	8302.4	8795.3	8194.3
68°	3830.8	3925.9	4104.1	4385.6	4831.5	5409.3	6180.1	7177.1	8332.7	8865.4	8216.6
70°	2937.3	2971.5	3142.2	3395.1	3876.1	4442.9	5221.1	6357.4	7663.6	8211.9	7544.5
72.5°	1395.7	1416.0	1526.8	1776.0	2081.6	2543.1	3229.9	4301.6	5478.6	6049.0	5383.5
75°	511.5	516.0	541.8	600.9	715.4	889.0	1218.5	1884.9	2790.5	3327.8	2801.6
77.5°	276.0	277.0	287.2	301.9	322.2	345.3	395.1	529.9	854.7	1163.1	902.8
80°	173.5	172.6	182.8	194.8	208.5	219.7	224.3	240.1	270.4	316.7	290.7
82.5°	88.6	96.9	119.9	133.0	153.2	156.9	152.3	151.5	160.6	173.5	179.0
85°	48.9	43.3	63.7	84.9	92.4	95.0	96.0	90.4	88.6	86.8	91.3
87.5°	24.9	23.1	27.7	42.5	45.3	36.9	37.8	32.3	22.2	22.2	23.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196401

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-7030-800

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7	1503.7
2.5°	1492.7	1493.6	1491.7	1491.7	1491.7	1492.7	1491.7	1490.9
5°	1480.7	1482.5	1482.5	1483.4	1484.3	1484.3	1484.3	1484.3
7.5°	1463.1	1464.1	1465.9	1465.9	1465.9	1465.9	1465.9	1465.9
10°	1446.5	1444.6	1443.8	1441.9	1441.9	1439.2	1440.0	1440.9
12.5°	1438.2	1434.5	1432.6	1429.8	1428.0	1425.3	1425.3	1426.2
15°	1441.9	1436.3	1430.8	1429.0	1427.2	1425.3	1423.4	1424.3
17.5°	1449.3	1442.8	1436.3	1432.6	1429.0	1426.2	1425.3	1426.2
20°	1464.9	1455.8	1445.6	1439.2	1431.8	1429.8	1427.2	1429.8
22.5°	1486.2	1475.1	1462.2	1450.2	1441.9	1438.2	1434.5	1437.3
25°	1512.0	1500.0	1487.1	1473.3	1464.1	1461.3	1456.7	1456.7
27.5°	1547.9	1538.0	1526.8	1513.9	1504.6	1501.9	1494.4	1494.4
30°	1605.2	1595.0	1585.0	1573.9	1564.7	1561.9	1552.7	1552.7
32.5°	1681.0	1669.9	1663.5	1654.1	1646.7	1642.1	1631.1	1630.1
35°	1782.4	1772.3	1771.4	1765.0	1757.6	1758.5	1747.4	1745.5
37.5°	1928.3	1920.0	1922.9	1917.3	1910.8	1916.3	1909.9	1909.9
40°	2114.8	2112.1	2114.8	2111.1	2112.1	2113.0	2107.4	2109.2
42.5°	2340.0	2332.6	2349.3	2347.4	2344.7	2352.1	2339.1	2329.9
45°	2599.5	2596.6	2613.3	2616.1	2610.5	2615.1	2592.0	2591.1
47.5°	2880.9	2880.9	2895.8	2894.0	2888.4	2889.3	2861.6	2844.0
50°	3174.5	3172.7	3187.4	3183.9	3176.3	3175.4	3146.8	3129.3
52.5°	3480.1	3480.1	3501.3	3491.2	3473.6	3465.2	3430.2	3407.1
55°	3817.9	3813.3	3819.8	3786.6	3752.4	3727.5	3684.1	3666.5
57.5°	4245.4	4191.8	4145.7	4103.1	4055.1	4025.6	3974.9	3956.4
60°	4851.7	4708.7	4646.9	4561.9	4482.6	4442.9	4375.5	4339.4
62.5°	5691.9	5454.6	5286.6	5099.2	4918.3	4790.9	4688.5	4643.2
65°	6662.9	6146.0	5718.6	5317.0	4976.4	4705.9	4555.4	4508.4
67.5°	7032.2	6083.2	5345.6	4769.6	4356.0	4034.0	3853.9	3816.1
68°	6953.7	5939.3	5173.0	4583.2	4167.8	3842.8	3663.8	3629.6
70°	6134.1	5010.5	4201.9	3614.9	3227.2	2917.9	2791.5	2737.0
72.5°	4181.7	3217.9	2468.3	1974.6	1684.7	1488.9	1372.7	1333.0
75°	1924.7	1300.6	868.6	648.9	551.1	504.0	467.9	458.8
77.5°	561.3	408.0	350.8	324.9	305.6	288.9	277.0	276.0
80°	266.8	250.2	242.8	226.1	208.5	193.0	181.8	183.7
82.5°	179.0	174.5	174.5	157.9	130.1	111.7	92.4	83.0
85°	95.0	98.8	104.4	98.8	85.9	63.7	41.5	45.3
87.5°	32.3	36.9	38.8	37.8	34.2	25.9	19.3	19.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)