

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: P196887

Luminaire Tested: **NAV-AF-03-D-UNV-5MQ-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196887
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-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15741 lumens
Efficiency: N/A
Efficacy: 94.8 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

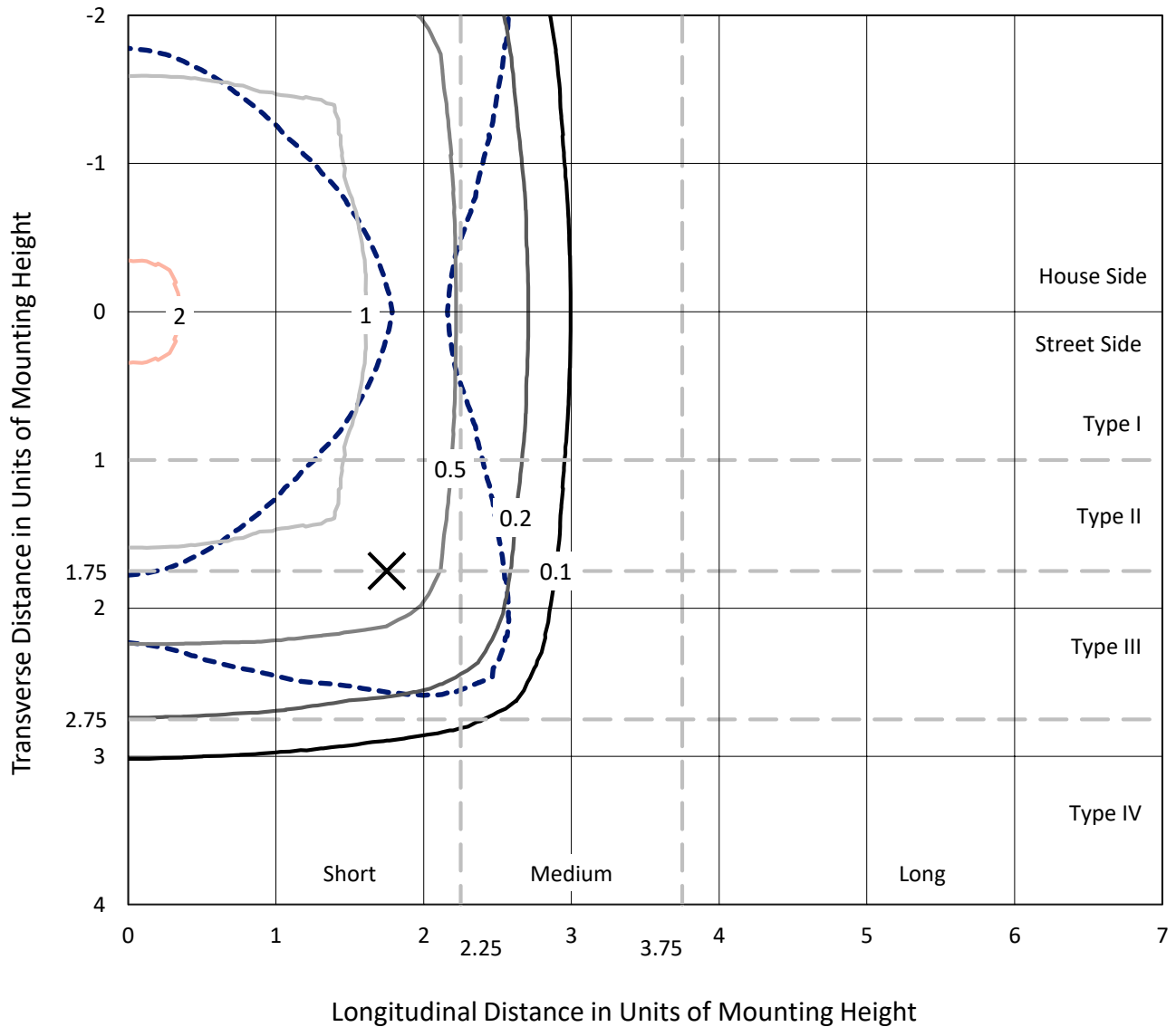
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196887
 CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030

Iso-Footcandle Lines of Horizontal Illumination

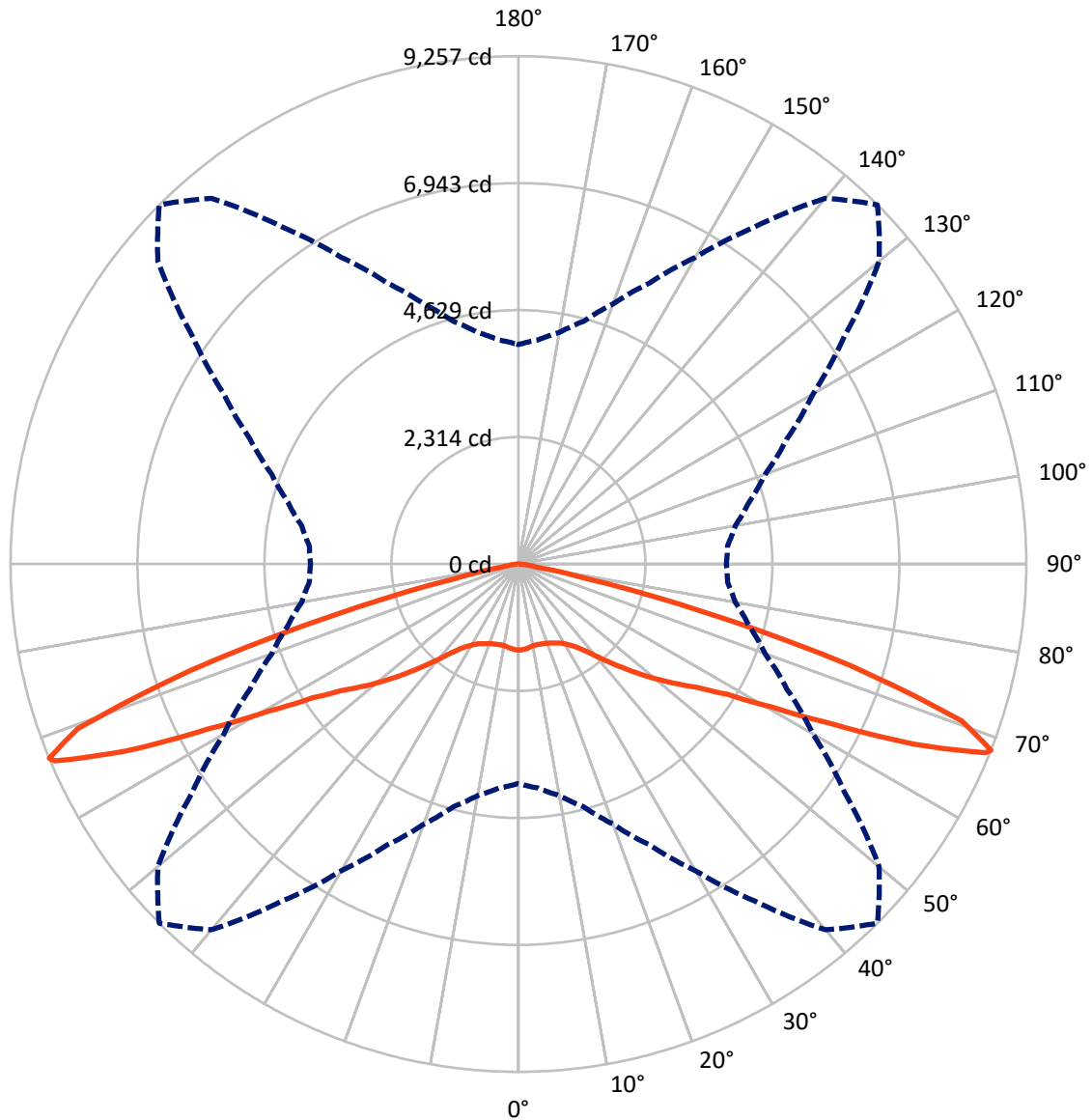
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P196887
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196887

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030

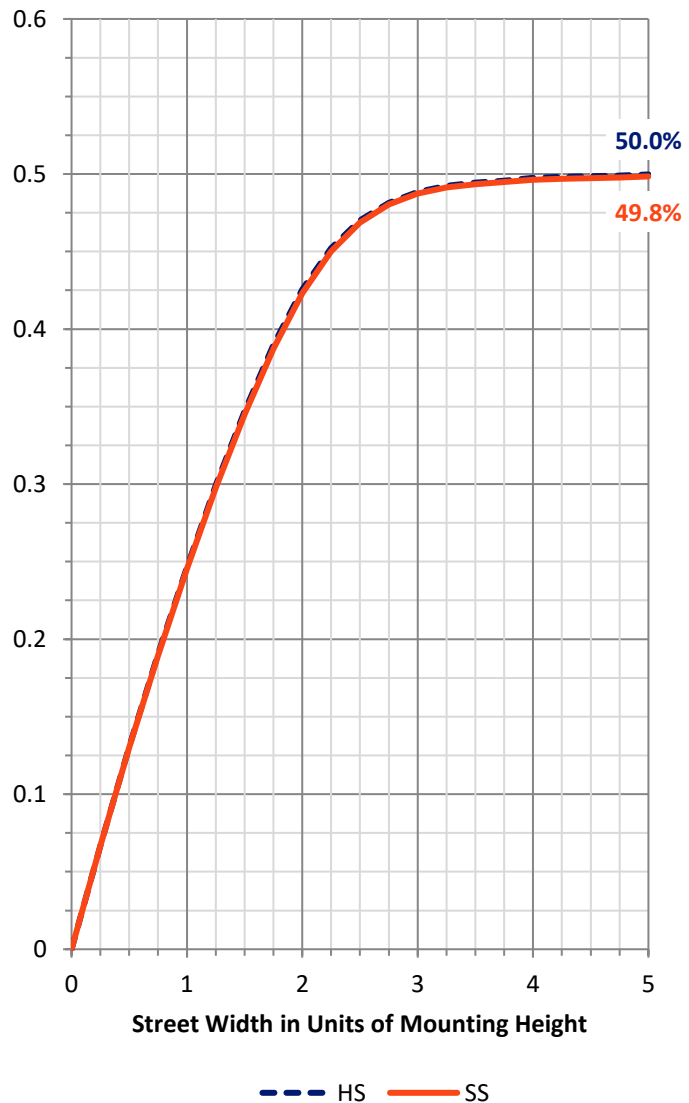
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7870.5	0.0	7870.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7870.5	0.0	7870.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	15741.0	0.0	15741.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.9	0.9
10°-20°	426.1	2.7
20°-30°	724.5	4.6
30°-40°	1185.5	7.5
40°-50°	2118.7	13.5
50°-60°	3578.2	22.7
60°-70°	5548.5	35.2
70°-80°	1907.7	12.1
80°-90°	104.8	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°	15741.0	100.0
0°-180°	15741.0	100.0

Coefficient of Utilization



REPORT NUMBER: P196887

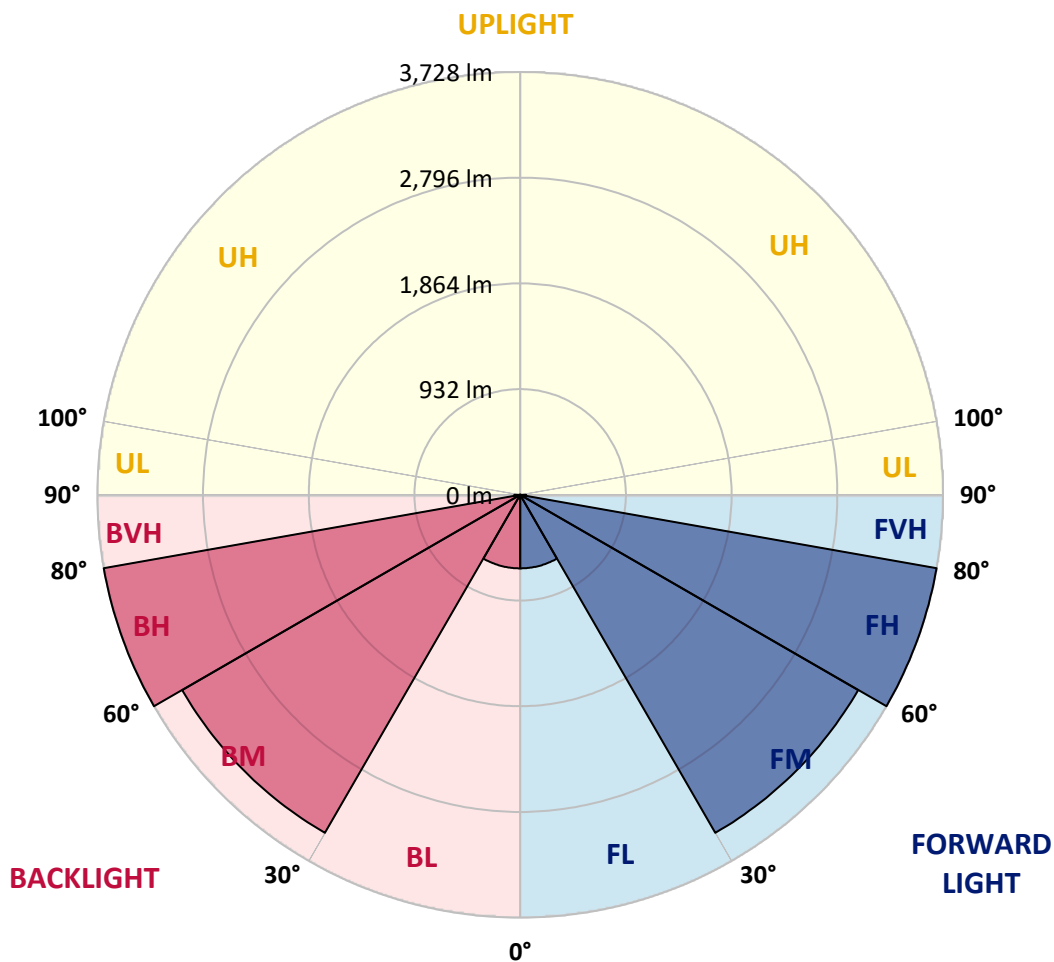
CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	648.8	4.1			
FM	(30°-60°)	3441.2	21.9			
FH	(60°-80°)	3728.1	23.7			G2/5000
FVH	(80°-90°)	52.4	0.3			G1/100
BL	(0°-30°)	648.8	4.1	B2/1000		
BM	(30°-60°)	3441.2	21.9	B3/5000		
BH	(60°-80°)	3728.1	23.7	B4/5000		G2/5000
BVH	(80°-90°)	52.4	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: P196887

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2
2.5°	1577.0	1577.0	1578.9	1577.9	1575.0	1572.1	1569.2	1566.4	1564.4	1562.5	1560.6
5°	1560.6	1560.6	1563.5	1561.5	1559.6	1556.7	1554.8	1551.9	1550.0	1548.0	1549.0
7.5°	1539.4	1541.3	1543.2	1542.3	1538.4	1537.4	1534.5	1533.6	1531.7	1528.8	1529.7
10°	1521.1	1522.0	1523.9	1523.0	1522.0	1519.1	1518.2	1517.2	1516.2	1512.4	1511.4
12.5°	1502.7	1504.7	1506.6	1507.6	1506.6	1507.6	1508.5	1509.5	1508.5	1506.6	1506.6
15°	1488.3	1490.2	1493.1	1496.0	1497.0	1502.7	1506.6	1510.4	1513.3	1514.3	1511.4
17.5°	1480.6	1483.5	1487.3	1493.1	1497.9	1504.7	1511.4	1517.2	1522.0	1523.0	1520.1
20°	1479.6	1482.5	1488.3	1495.0	1503.7	1512.4	1523.0	1531.7	1536.5	1539.4	1536.5
22.5°	1486.4	1490.2	1497.9	1506.6	1517.2	1528.8	1542.3	1551.9	1561.5	1565.4	1562.5
25°	1505.6	1509.5	1518.2	1528.8	1540.3	1554.8	1568.3	1580.8	1590.5	1595.3	1591.4
27.5°	1546.1	1547.1	1556.7	1568.3	1581.8	1594.3	1611.7	1617.4	1625.2	1630.0	1625.2
30°	1603.0	1604.9	1613.6	1631.9	1644.4	1660.8	1670.5	1676.2	1684.9	1689.7	1684.0
32.5°	1689.7	1691.7	1699.4	1716.7	1728.3	1740.8	1752.4	1756.2	1764.9	1770.7	1764.0
35°	1812.2	1816.0	1822.8	1834.3	1844.0	1853.6	1862.3	1859.4	1865.2	1872.9	1866.1
37.5°	1979.9	1978.9	1980.8	1989.5	1999.2	2004.9	2018.4	2011.7	2017.5	2024.2	2020.4
40°	2175.5	2175.5	2174.6	2190.0	2193.9	2199.6	2214.1	2205.4	2213.1	2220.9	2214.1
42.5°	2398.2	2402.1	2406.9	2419.4	2430.0	2431.9	2438.7	2434.8	2444.5	2451.2	2444.5
45°	2654.6	2660.4	2666.2	2695.1	2699.9	2703.8	2708.6	2696.1	2706.7	2712.4	2710.5
47.5°	2920.7	2931.3	2943.8	2973.7	2992.9	3001.6	3005.5	2991.0	2992.0	3000.7	3001.6
50°	3221.4	3233.0	3245.5	3279.2	3297.5	3313.0	3317.8	3301.4	3303.3	3310.1	3312.0
52.5°	3499.0	3512.5	3539.5	3584.8	3610.8	3637.8	3639.7	3619.5	3628.2	3633.0	3629.1
55°	3760.2	3777.6	3813.2	3874.0	3921.2	3974.2	3998.3	3976.1	3976.1	3972.3	3970.4
57.5°	4064.8	4084.1	4120.7	4191.1	4256.6	4332.8	4398.3	4420.5	4461.0	4474.5	4453.3
60°	4523.6	4543.9	4581.5	4674.0	4756.9	4867.8	4975.7	5063.4	5206.1	5283.2	5213.8
62.5°	4942.9	4973.8	5062.5	5224.4	5403.7	5609.0	5847.1	6016.7	6276.0	6405.2	6230.7
65°	4847.5	4910.2	5083.7	5338.1	5708.3	6153.6	6638.5	7104.0	7640.0	7914.7	7560.0
67.5°	4234.5	4287.5	4474.5	4770.4	5232.1	5846.1	6599.9	7563.8	8669.4	9184.1	8556.6
68°	4000.2	4099.5	4285.5	4579.5	5045.1	5648.5	6453.4	7494.4	8701.2	9257.4	8579.8
70°	3067.2	3102.8	3281.2	3545.3	4047.5	4639.3	5451.9	6638.5	8002.4	8575.0	7878.0
72.5°	1457.4	1478.6	1594.3	1854.6	2173.6	2655.6	3372.7	4491.8	5720.8	6316.5	5621.5
75°	534.0	538.8	565.8	627.5	747.0	928.2	1272.4	1968.3	2913.9	3474.9	2925.5
77.5°	288.2	289.2	299.8	315.2	336.4	360.5	412.6	553.3	892.6	1214.5	942.7
80°	181.2	180.3	190.9	203.4	217.8	229.4	234.2	250.6	282.4	330.6	303.6
82.5°	92.5	101.2	125.3	138.8	160.0	163.9	159.0	158.1	167.7	181.2	187.0
85°	51.1	45.3	66.5	88.7	96.4	99.3	100.2	94.5	92.5	90.6	95.4
87.5°	26.0	24.1	28.9	44.3	47.2	38.6	39.5	33.7	23.1	23.1	24.1
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: P196887

CATALOG NUMBER: NAV-AF-03-D-UNV-5MQ-8030

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2	1570.2
2.5°	1558.6	1559.6	1557.7	1557.7	1557.7	1558.6	1557.7	1556.7
5°	1546.1	1548.0	1548.0	1549.0	1550.0	1550.0	1550.0	1550.0
7.5°	1527.8	1528.8	1530.7	1530.7	1530.7	1530.7	1530.7	1530.7
10°	1510.4	1508.5	1507.6	1505.6	1505.6	1502.7	1503.7	1504.7
12.5°	1501.8	1497.9	1496.0	1493.1	1491.2	1488.3	1488.3	1489.2
15°	1505.6	1499.8	1494.1	1492.1	1490.2	1488.3	1486.4	1487.3
17.5°	1513.3	1506.6	1499.8	1496.0	1492.1	1489.2	1488.3	1489.2
20°	1529.7	1520.1	1509.5	1502.7	1495.0	1493.1	1490.2	1493.1
22.5°	1551.9	1540.3	1526.8	1514.3	1505.6	1501.8	1497.9	1500.8
25°	1578.9	1566.4	1552.9	1538.4	1528.8	1525.9	1521.1	1521.1
27.5°	1616.5	1605.9	1594.3	1580.8	1571.2	1568.3	1560.6	1560.6
30°	1676.2	1665.6	1655.0	1643.5	1633.8	1630.9	1621.3	1621.3
32.5°	1755.3	1743.7	1737.0	1727.3	1719.6	1714.8	1703.2	1702.3
35°	1861.3	1850.7	1849.7	1843.0	1835.3	1836.3	1824.7	1822.8
37.5°	2013.6	2004.9	2007.8	2002.0	1995.3	2001.1	1994.3	1994.3
40°	2208.3	2205.4	2208.3	2204.5	2205.4	2206.4	2200.6	2202.5
42.5°	2443.5	2435.8	2453.2	2451.2	2448.3	2456.0	2442.6	2432.9
45°	2714.4	2711.5	2728.8	2731.7	2725.9	2730.8	2706.7	2705.7
47.5°	3008.4	3008.4	3023.8	3021.9	3016.1	3017.0	2988.1	2969.8
50°	3314.9	3313.0	3328.4	3324.5	3316.8	3315.9	3286.0	3267.7
52.5°	3633.9	3633.9	3656.1	3645.5	3627.2	3618.5	3581.9	3557.8
55°	3986.7	3981.9	3988.7	3954.0	3918.3	3892.3	3847.0	3828.7
57.5°	4433.0	4377.1	4328.9	4284.6	4234.5	4203.6	4150.6	4131.3
60°	5066.3	4916.9	4852.3	4763.6	4680.8	4639.3	4568.9	4531.3
62.5°	5943.5	5695.8	5520.3	5324.6	5135.7	5002.7	4895.7	4848.5
65°	6957.5	6417.7	5971.4	5552.1	5196.4	4914.0	4756.9	4707.7
67.5°	7343.1	6352.2	5582.0	4980.5	4548.7	4212.3	4024.3	3984.8
68°	7261.1	6201.8	5401.8	4785.8	4352.1	4012.8	3825.8	3790.1
70°	6405.2	5232.1	4387.7	3774.7	3369.8	3046.9	2914.9	2858.0
72.5°	4366.5	3360.2	2577.5	2061.8	1759.1	1554.8	1433.3	1391.9
75°	2009.8	1358.2	907.0	677.6	575.5	526.3	488.7	479.1
77.5°	586.1	426.0	366.3	339.3	319.1	301.7	289.2	288.2
80°	278.6	261.2	253.5	236.2	217.8	201.5	189.9	191.8
82.5°	187.0	182.2	182.2	164.8	135.9	116.6	96.4	86.8
85°	99.3	103.1	108.9	103.1	89.6	66.5	43.4	47.2
87.5°	33.7	38.6	40.5	39.5	35.7	27.0	20.2	20.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)