

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: P195932

Luminaire Tested: **NAV-AF-02-D-UNV-5MQ-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195932
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-02-D-UNV-5MQ-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14556.6 lumens
Efficiency: N/A
Efficacy: 112.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

Input Watts (W): 129
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

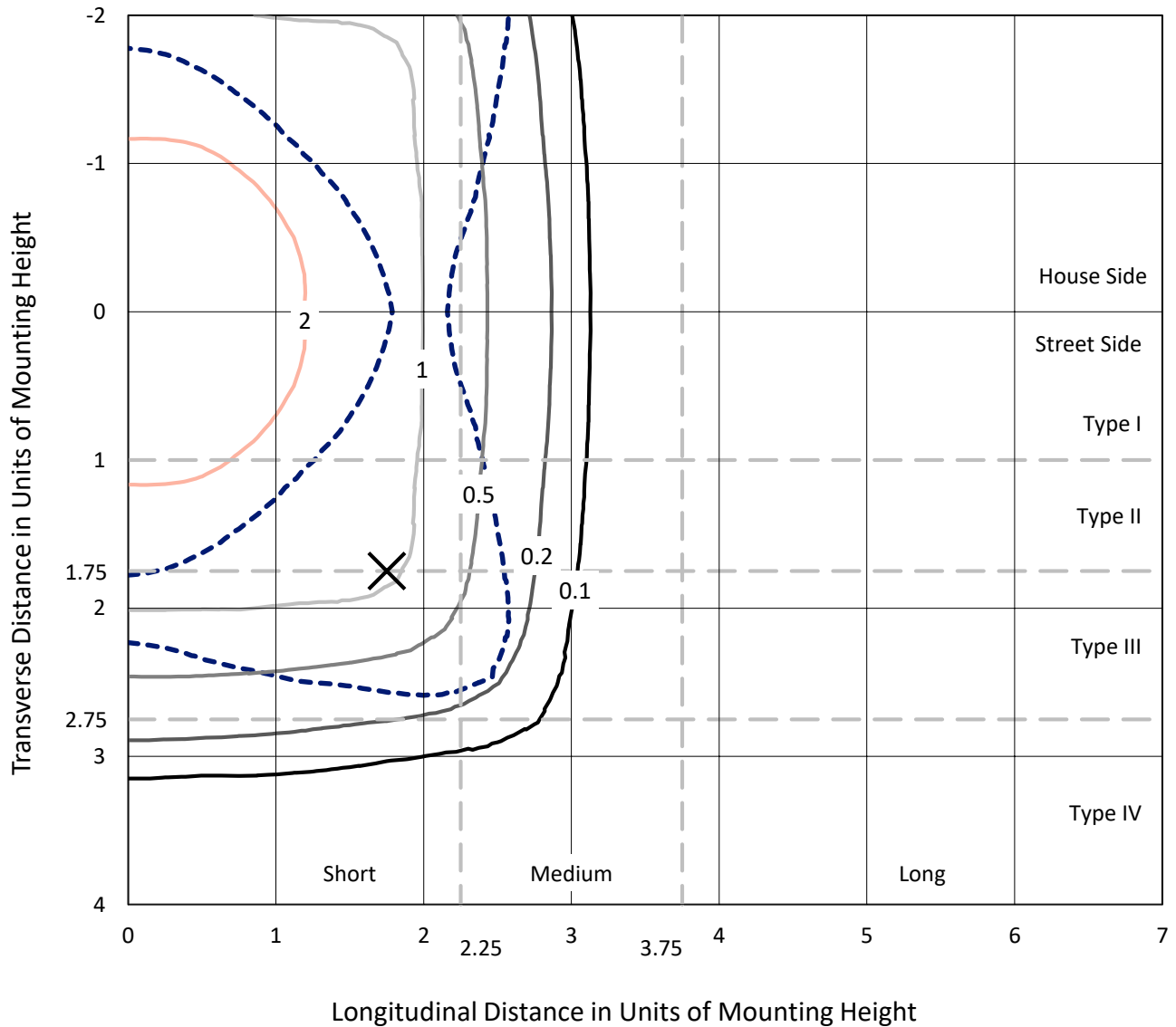


REPORT NUMBER: P195932

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-1200

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

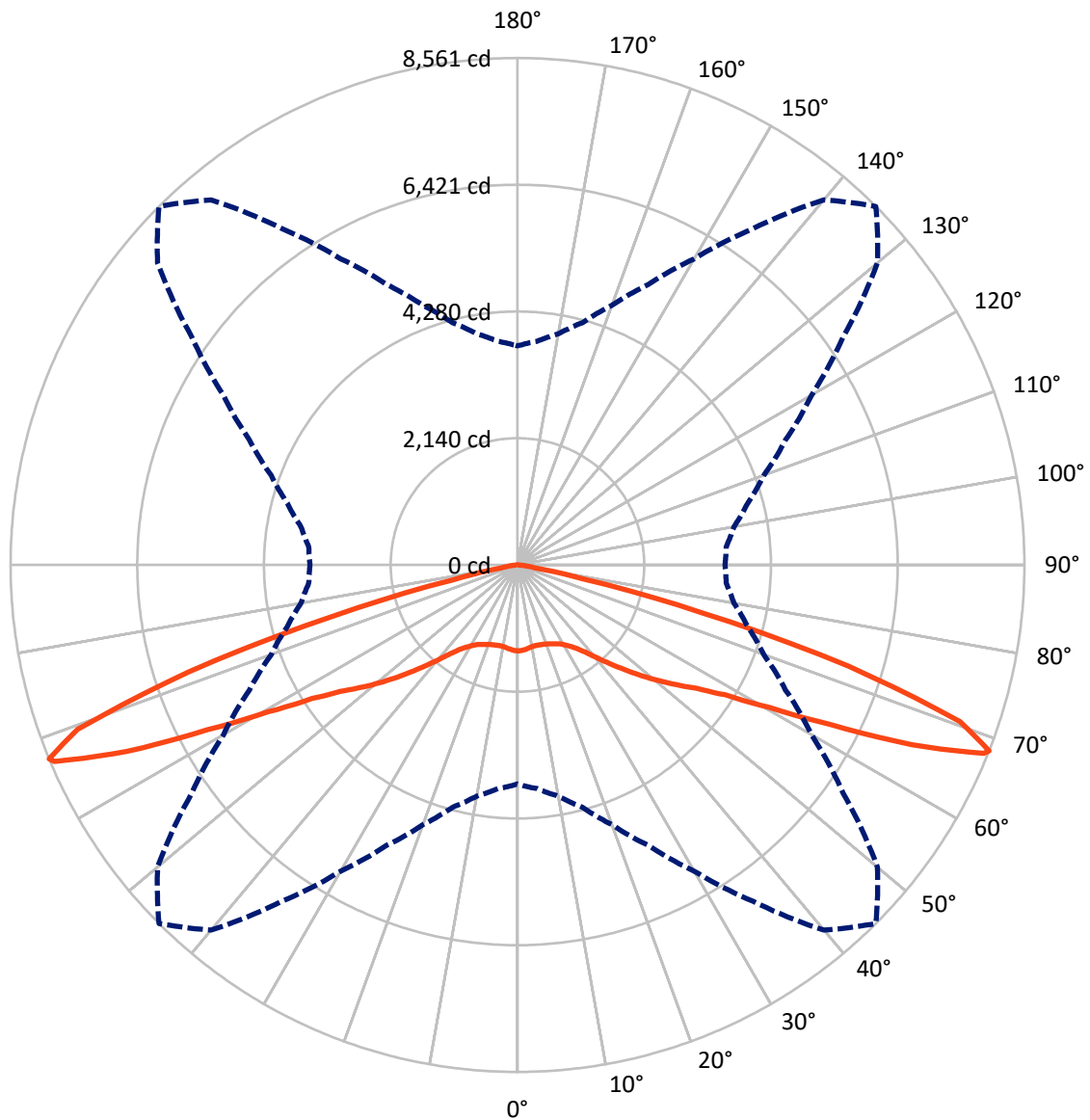


Based on 20 foot mounting height. Maximum calculated value = 3.6 fc
 Type V - Short - Full Cutoff

REPORT NUMBER: P195932

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P195932

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7278.3	0.0	7278.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7278.3	0.0	7278.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	14556.6	0.0	14556.6
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.9	0.9
10°-20°	394.1	2.7
20°-30°	669.9	4.6
30°-40°	1096.3	7.5
40°-50°	1959.3	13.5
50°-60°	3309.0	22.7
60°-70°	5131.0	35.2
70°-80°	1764.2	12.1
80°-90°	96.9	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°	14556.6	100.0
0°-180°	14556.6	100.0



REPORT NUMBER: P195932

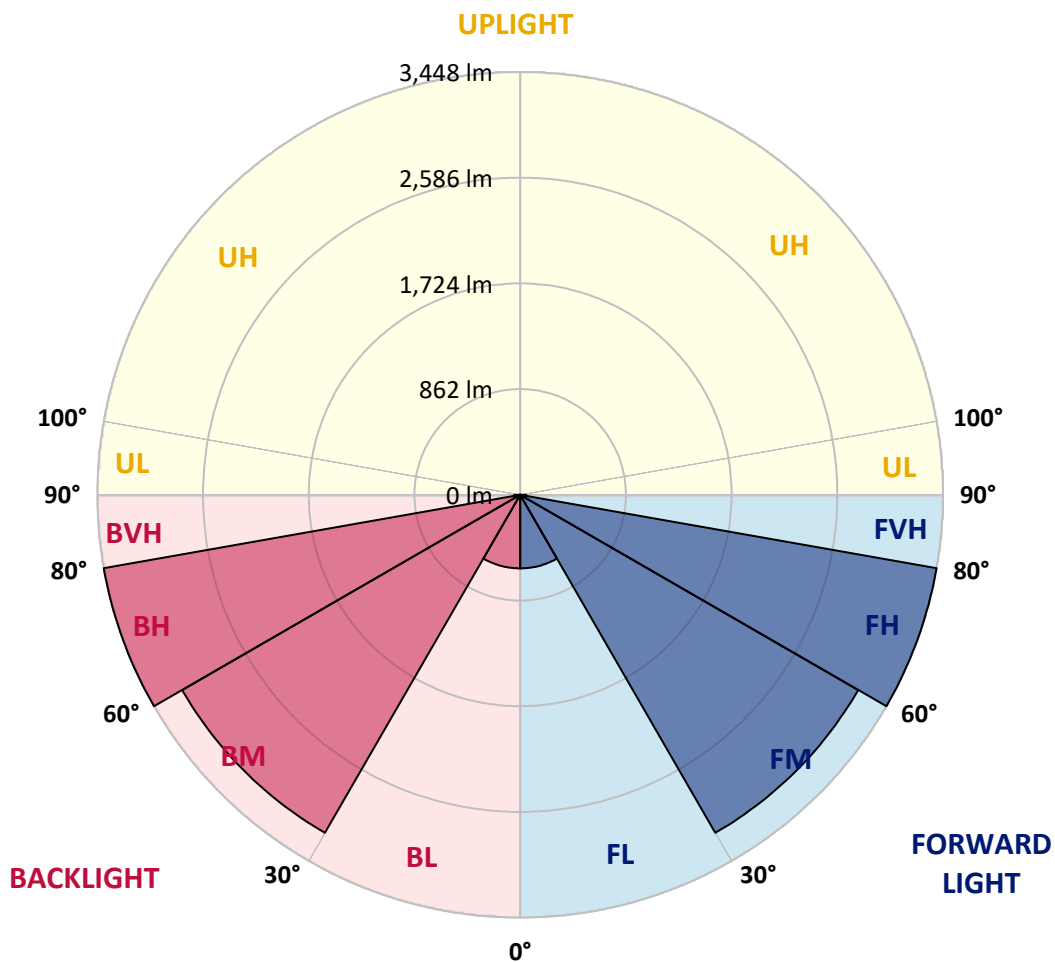
CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	599.9	4.1			
FM	(30°-60°)	3182.3	21.9			
FH	(60°-80°)	3447.6	23.7			G2/5000
FVH	(80°-90°)	48.5	0.3			G1/100
BL	(0°-30°)	599.9	4.1	B2/1000		
BM	(30°-60°)	3182.3	21.9	B3/5000		
BH	(60°-80°)	3447.6	23.7	B4/5000		G2/5000
BVH	(80°-90°)	48.5	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: P195932

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1
2.5°	1458.3	1458.3	1460.1	1459.2	1456.5	1453.8	1451.2	1448.5	1446.8	1444.9	1443.2
5°	1443.2	1443.2	1445.8	1444.0	1442.3	1439.6	1437.8	1435.1	1433.4	1431.5	1432.4
7.5°	1423.5	1425.3	1427.1	1426.2	1422.6	1421.8	1419.0	1418.2	1416.4	1413.7	1414.6
10°	1406.6	1407.5	1409.3	1408.4	1407.5	1404.8	1403.9	1403.1	1402.2	1398.6	1397.7
12.5°	1389.7	1391.4	1393.3	1394.1	1393.3	1394.1	1395.0	1395.9	1395.0	1393.3	1393.3
15°	1376.3	1378.1	1380.8	1383.4	1384.4	1389.7	1393.3	1396.8	1399.5	1400.3	1397.7
17.5°	1369.1	1371.9	1375.4	1380.8	1385.2	1391.4	1397.7	1403.1	1407.5	1408.4	1405.7
20°	1368.3	1371.0	1376.3	1382.5	1390.6	1398.6	1408.4	1416.4	1420.9	1423.5	1420.9
22.5°	1374.5	1378.1	1385.2	1393.3	1403.1	1413.7	1426.2	1435.1	1444.0	1447.6	1444.9
25°	1392.3	1395.9	1403.9	1413.7	1424.5	1437.8	1450.2	1461.9	1470.8	1475.2	1471.7
27.5°	1429.8	1430.7	1439.6	1450.2	1462.7	1474.4	1490.4	1495.8	1502.9	1507.3	1502.9
30°	1482.4	1484.2	1492.2	1509.2	1520.7	1535.9	1544.8	1550.1	1558.2	1562.6	1557.2
32.5°	1562.6	1564.4	1571.6	1587.5	1598.3	1609.8	1620.6	1624.1	1632.1	1637.4	1631.2
35°	1675.8	1679.4	1685.6	1696.3	1705.3	1714.2	1722.1	1719.5	1724.8	1732.0	1725.7
37.5°	1830.9	1830.1	1831.8	1839.8	1848.8	1854.1	1866.6	1860.3	1865.7	1871.9	1868.3
40°	2011.8	2011.8	2010.9	2025.2	2028.8	2034.1	2047.5	2039.5	2046.6	2053.8	2047.5
42.5°	2217.8	2221.3	2225.7	2237.4	2247.2	2249.0	2255.2	2251.6	2260.5	2266.8	2260.5
45°	2454.9	2460.2	2465.5	2492.3	2496.7	2500.3	2504.8	2493.2	2503.0	2508.4	2506.5
47.5°	2700.9	2710.7	2722.3	2749.9	2767.7	2775.8	2779.4	2766.0	2766.9	2774.9	2775.8
50°	2979.0	2989.7	3001.3	3032.4	3049.4	3063.6	3068.1	3053.0	3054.7	3061.0	3062.8
52.5°	3235.7	3248.2	3273.1	3315.1	3339.1	3364.1	3365.8	3347.1	3355.2	3359.6	3356.1
55°	3477.3	3493.4	3526.3	3582.5	3626.2	3675.2	3697.5	3677.0	3677.0	3673.4	3671.6
57.5°	3758.9	3776.8	3810.7	3875.8	3936.3	4006.8	4067.4	4087.9	4125.4	4137.8	4118.2
60°	4183.3	4202.0	4236.8	4322.3	4399.0	4501.5	4601.3	4682.5	4814.3	4885.7	4821.5
62.5°	4571.1	4599.5	4681.5	4831.3	4997.1	5187.0	5407.1	5564.0	5803.8	5923.2	5761.9
65°	4482.8	4540.7	4701.2	4936.5	5278.7	5690.6	6138.9	6569.5	7065.1	7319.1	6991.2
67.5°	3915.9	3964.9	4137.8	4411.5	4838.5	5406.2	6103.3	6994.7	8017.1	8493.0	7912.8
68°	3699.2	3791.1	3963.1	4234.9	4665.5	5223.5	5967.8	6930.5	8046.5	8560.9	7934.2
70°	2836.3	2869.4	3034.3	3278.6	3742.9	4290.3	5041.6	6138.9	7400.2	7929.7	7285.3
72.5°	1347.7	1367.4	1474.4	1715.0	2010.1	2455.8	3119.0	4153.9	5290.4	5841.3	5198.5
75°	493.8	498.3	523.2	580.3	690.8	858.4	1176.6	1820.2	2694.7	3213.4	2705.4
77.5°	266.5	267.4	277.2	291.4	311.1	333.4	381.6	511.7	825.4	1123.1	871.8
80°	167.6	166.6	176.5	188.1	201.4	212.2	216.6	231.8	261.2	305.8	280.8
82.5°	85.6	93.6	115.9	128.4	147.9	151.5	147.1	146.2	155.1	167.6	172.9
85°	47.3	41.9	61.5	82.0	89.1	91.9	92.7	87.4	85.6	83.8	88.3
87.5°	24.0	22.3	26.7	41.0	43.7	35.7	36.5	31.2	21.4	21.4	22.3
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: P195932

CATALOG NUMBER: NAV-AF-02-D-UNV-5MQ-1200

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1	1452.1
2.5°	1441.3	1442.3	1440.5	1440.5	1440.5	1441.3	1440.5	1439.6
5°	1429.8	1431.5	1431.5	1432.4	1433.4	1433.4	1433.4	1433.4
7.5°	1412.8	1413.7	1415.6	1415.6	1415.6	1415.6	1415.6	1415.6
10°	1396.8	1395.0	1394.1	1392.3	1392.3	1389.7	1390.6	1391.4
12.5°	1388.8	1385.2	1383.4	1380.8	1378.9	1376.3	1376.3	1377.2
15°	1392.3	1387.0	1381.6	1379.9	1378.1	1376.3	1374.5	1375.4
17.5°	1399.5	1393.3	1387.0	1383.4	1379.9	1377.2	1376.3	1377.2
20°	1414.6	1405.7	1395.9	1389.7	1382.5	1380.8	1378.1	1380.8
22.5°	1435.1	1424.5	1412.0	1400.3	1392.3	1388.8	1385.2	1387.8
25°	1460.1	1448.5	1436.0	1422.6	1413.7	1411.1	1406.6	1406.6
27.5°	1494.8	1485.0	1474.4	1461.9	1453.0	1450.2	1443.2	1443.2
30°	1550.1	1540.4	1530.5	1519.8	1510.9	1508.2	1499.3	1499.3
32.5°	1623.2	1612.5	1606.2	1597.3	1590.2	1585.8	1575.0	1574.2
35°	1721.2	1711.5	1710.6	1704.3	1697.2	1698.1	1687.4	1685.6
37.5°	1862.1	1854.1	1856.8	1851.4	1845.2	1850.5	1844.3	1844.3
40°	2042.1	2039.5	2042.1	2038.6	2039.5	2040.4	2035.1	2036.8
42.5°	2259.7	2252.5	2268.6	2266.8	2264.1	2271.3	2258.8	2249.9
45°	2510.1	2507.5	2523.5	2526.2	2520.9	2525.3	2503.0	2502.1
47.5°	2782.0	2782.0	2796.2	2794.5	2789.2	2790.0	2763.3	2746.3
50°	3065.5	3063.6	3078.0	3074.4	3067.2	3066.4	3038.7	3021.8
52.5°	3360.5	3360.5	3381.1	3371.2	3354.3	3346.3	3312.4	3290.1
55°	3686.7	3682.3	3688.6	3656.4	3623.5	3599.4	3557.5	3540.5
57.5°	4099.5	4047.8	4003.2	3962.2	3915.9	3887.3	3838.3	3820.5
60°	4685.1	4546.9	4487.2	4405.2	4328.5	4290.3	4225.2	4190.4
62.5°	5496.3	5267.2	5104.9	4924.0	4749.3	4626.3	4527.4	4483.7
65°	6434.1	5934.9	5522.1	5134.4	4805.4	4544.3	4399.0	4353.5
67.5°	6790.6	5874.2	5162.0	4605.7	4206.5	3895.3	3721.5	3685.0
68°	6714.8	5735.2	4995.3	4425.7	4024.6	3710.9	3537.9	3504.9
70°	5923.2	4838.5	4057.5	3490.6	3116.3	2817.6	2695.6	2643.0
72.5°	4038.0	3107.3	2383.6	1906.7	1626.8	1437.8	1325.4	1287.2
75°	1858.5	1256.0	838.8	626.7	532.1	486.7	451.9	443.0
77.5°	542.0	394.0	338.7	313.7	295.0	279.0	267.4	266.5
80°	257.6	241.5	234.5	218.4	201.4	186.3	175.6	177.4
82.5°	172.9	168.5	168.5	152.4	125.7	107.8	89.1	80.2
85°	91.9	95.3	100.8	95.3	82.9	61.5	40.1	43.7
87.5°	31.2	35.7	37.4	36.5	32.9	25.0	18.7	18.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)