

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: P195092

Luminaire Tested: **NAV-AF-02-D-UNV-RW-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195092
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-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13654 lumens
Efficiency: N/A
Efficacy: 105.8 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): 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

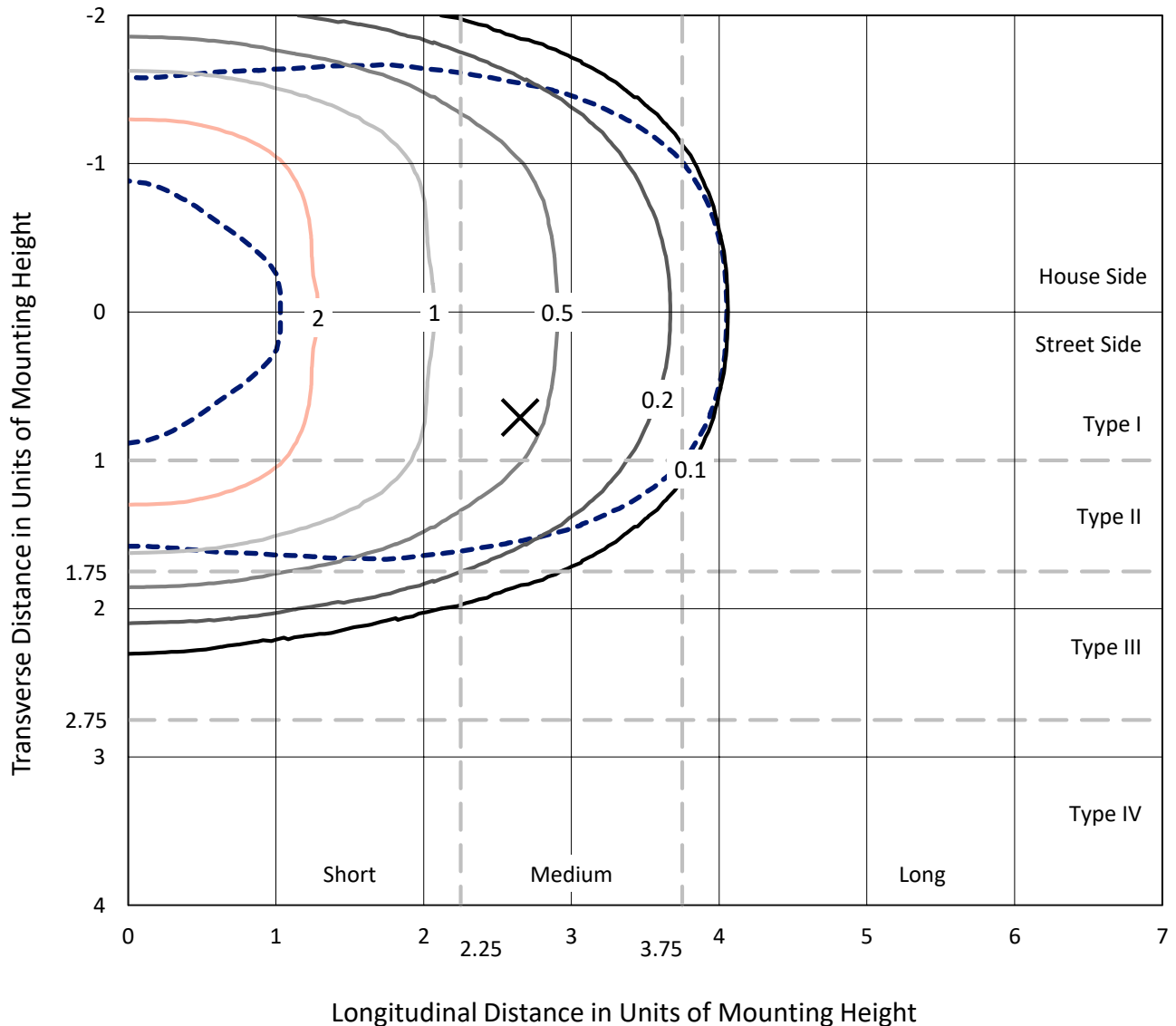


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Iso-Footcandle Lines of Horizontal Illumination

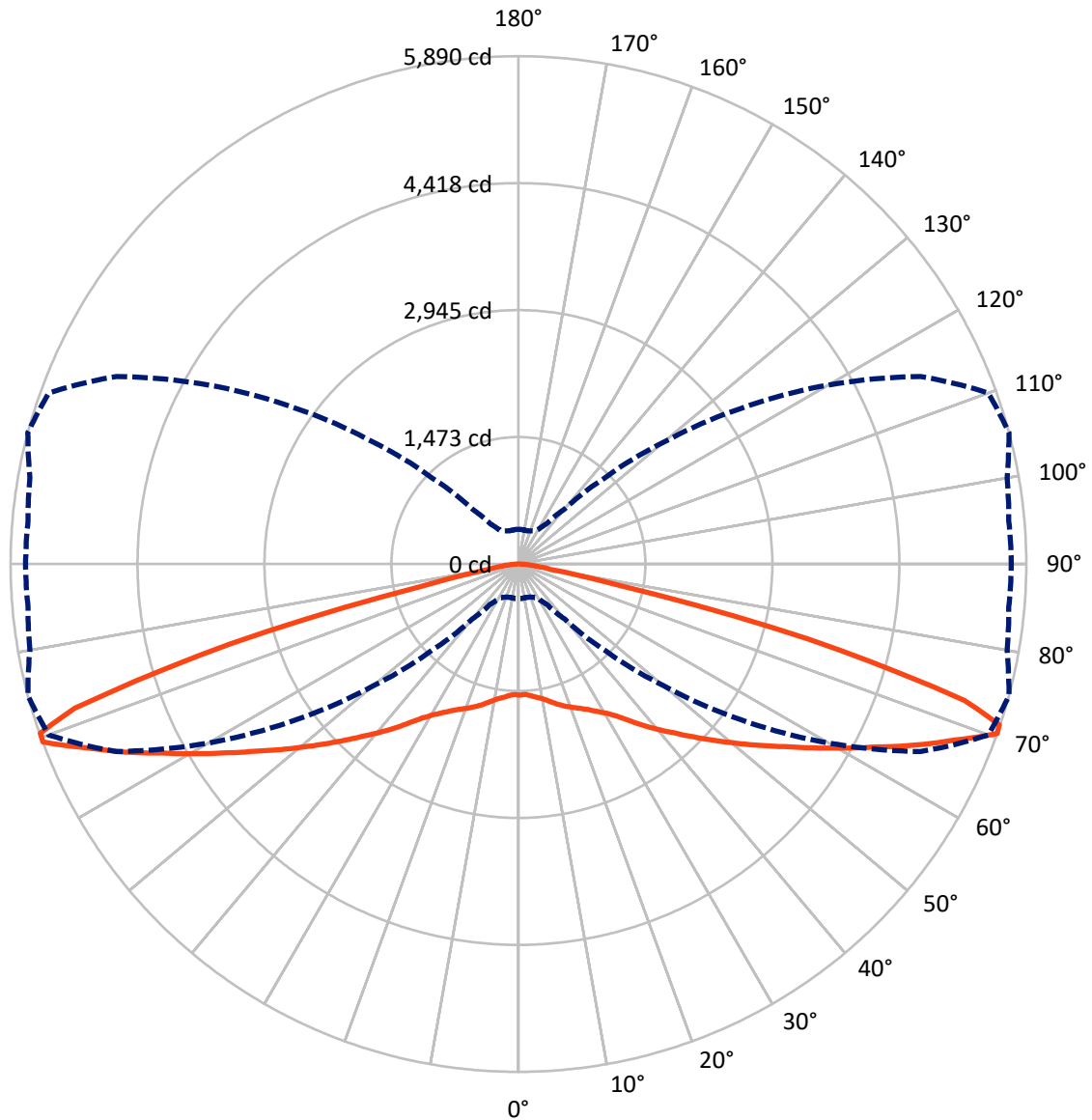
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 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	6827.0	0.0	6827.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6827.0	0.0	6827.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	13654.0	0.0	13654.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.8	1.1
10°-20°	452.3	3.3
20°-30°	849.5	6.2
30°-40°	1496.5	11.0
40°-50°	2480.1	18.2
50°-60°	3450.2	25.3
60°-70°	3257.0	23.9
70°-80°	1391.1	10.2
80°-90°	131.4	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°	13654.0	100.0
0°-180°	13654.0	100.0



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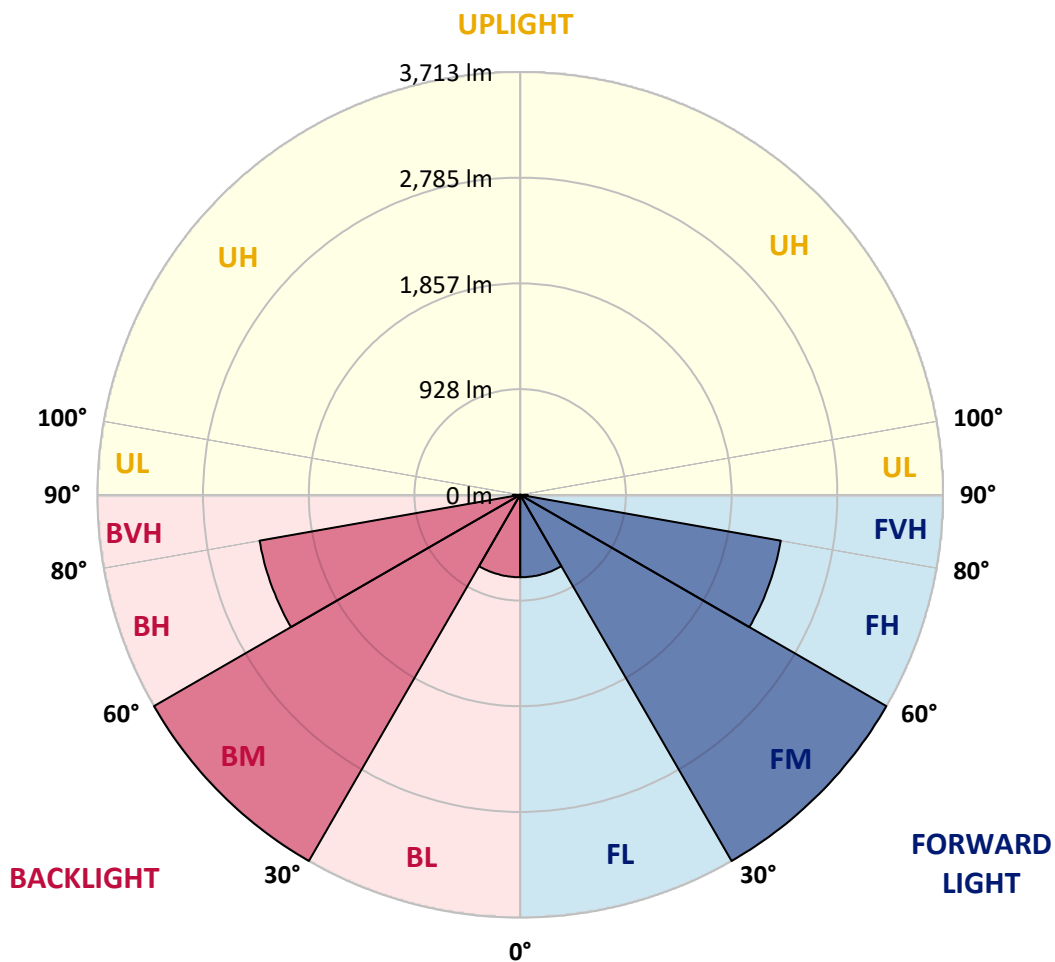
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	723.8	5.3			
FM	(30°-60°)	3713.4	27.2			
FH	(60°-80°)	2324.1	17.0			G2/5000
FVH	(80°-90°)	65.7	0.5			G1/100
BL	(0°-30°)	723.8	5.3	B2/1000		
BM	(30°-60°)	3713.4	27.2	B3/5000		
BH	(60°-80°)	2324.1	17.0	B3/2500		G3/2500
BVH	(80°-90°)	65.7	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°	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5
2.5°	1529.9	1529.1	1529.9	1527.4	1528.2	1527.4	1527.4	1523.9	1523.9	1522.2	1519.7
5°	1512.8	1514.5	1514.5	1514.5	1517.1	1517.1	1520.5	1521.4	1523.9	1526.5	1528.2
7.5°	1484.6	1485.4	1488.0	1489.7	1494.8	1501.7	1508.5	1516.2	1523.1	1531.6	1541.0
10°	1460.6	1462.3	1466.6	1470.9	1480.3	1488.8	1500.8	1512.8	1524.8	1539.3	1553.9
12.5°	1447.8	1450.3	1457.2	1464.0	1478.6	1489.7	1506.0	1524.8	1541.0	1554.7	1571.0
15°	1449.5	1450.3	1459.8	1469.2	1489.7	1505.1	1528.2	1550.5	1570.1	1585.5	1604.4
17.5°	1474.3	1476.0	1485.4	1499.1	1518.8	1538.5	1563.3	1586.4	1612.9	1630.9	1653.1
20°	1523.1	1525.6	1535.9	1550.5	1571.8	1592.4	1618.1	1642.0	1669.4	1690.8	1713.0
22.5°	1586.4	1590.7	1601.8	1619.8	1641.2	1666.0	1692.5	1717.3	1743.0	1764.4	1783.2
25°	1671.1	1676.2	1688.2	1706.2	1727.6	1754.1	1781.5	1807.2	1833.7	1849.9	1865.3
27.5°	1784.9	1793.5	1806.3	1820.8	1839.7	1867.9	1893.6	1915.0	1940.6	1958.6	1968.9
30°	1938.1	1950.0	1960.3	1975.7	1989.4	2019.4	2039.9	2057.0	2076.7	2087.0	2089.5
32.5°	2125.5	2136.6	2146.8	2158.0	2176.8	2204.2	2223.9	2233.3	2243.5	2241.8	2232.4
35°	2336.8	2345.4	2351.4	2371.0	2401.8	2419.8	2434.3	2437.8	2439.5	2421.5	2403.5
37.5°	2559.3	2569.5	2574.7	2605.5	2634.6	2655.1	2662.0	2669.7	2664.5	2634.6	2602.1
40°	2799.7	2810.8	2826.2	2852.8	2887.0	2906.7	2915.2	2914.4	2910.1	2875.0	2822.0
42.5°	3035.9	3049.6	3062.4	3108.6	3136.8	3170.2	3174.5	3173.6	3164.2	3124.0	3062.4
45°	3236.1	3252.4	3278.9	3330.2	3375.6	3415.8	3432.0	3438.0	3428.6	3385.8	3315.7
47.5°	3401.2	3412.4	3445.7	3508.2	3566.4	3625.4	3657.9	3681.0	3680.2	3649.4	3574.9
50°	3514.2	3527.0	3568.1	3638.3	3711.0	3780.3	3844.5	3896.7	3921.5	3899.2	3829.9
52.5°	3546.7	3563.0	3616.9	3700.7	3785.4	3878.7	3974.5	4066.9	4122.6	4136.3	4082.3
55°	3409.8	3427.8	3506.5	3622.9	3762.3	3900.1	4045.6	4177.3	4292.0	4345.0	4323.6
57.5°	3011.1	3023.9	3124.0	3274.6	3474.0	3716.1	3960.8	4202.1	4398.9	4536.7	4560.7
60°	2381.3	2397.6	2507.1	2666.2	2893.0	3199.3	3541.6	3936.9	4322.8	4638.5	4795.1
62.5°	1606.9	1618.1	1723.3	1868.8	2116.9	2412.1	2793.7	3294.3	3844.5	4408.4	4849.9
65°	843.7	843.7	914.7	1016.5	1214.2	1478.6	1869.6	2383.0	3037.6	3741.8	4480.2
67.5°	489.4	488.6	504.8	527.9	590.4	697.4	913.0	1290.3	1909.8	2729.6	3569.8
70°	403.9	401.3	398.7	398.7	408.1	424.4	465.5	569.0	832.6	1407.6	2196.5
71°	385.9	384.2	377.3	374.8	379.1	387.6	405.6	453.5	591.3	960.0	1640.3
72.5°	364.5	360.2	350.0	345.7	346.5	350.0	355.1	373.9	415.9	545.9	935.2
75°	332.0	321.7	308.9	302.9	300.3	299.5	299.5	304.6	314.0	329.4	383.3
77.5°	294.3	279.8	266.1	260.1	255.8	253.3	251.6	248.1	246.4	253.3	273.0
80°	249.0	233.6	222.5	219.0	216.5	211.3	204.5	197.7	193.4	196.8	208.8
82.5°	192.5	177.1	178.8	179.7	175.4	166.9	160.0	152.3	144.6	142.9	148.9
85°	153.2	145.5	140.3	151.5	142.0	131.8	122.4	109.5	91.6	75.3	82.1
87.5°	65.9	66.7	95.8	144.6	126.6	101.8	84.7	68.5	43.6	32.5	33.4
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°	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5	1520.5
2.5°	1518.8	1518.8	1516.2	1514.5	1514.5	1514.5	1512.8	1513.7
5°	1529.1	1530.8	1532.5	1531.6	1534.2	1536.8	1535.9	1535.1
7.5°	1546.2	1551.3	1556.4	1559.0	1562.4	1565.9	1566.7	1564.1
10°	1563.3	1573.6	1581.3	1588.1	1592.4	1595.8	1598.4	1597.5
12.5°	1584.7	1599.2	1612.9	1626.6	1636.0	1641.2	1646.3	1644.6
15°	1619.8	1636.0	1653.1	1671.1	1685.6	1693.3	1701.1	1699.3
17.5°	1667.7	1682.2	1695.9	1713.9	1731.9	1740.4	1749.0	1748.1
20°	1727.6	1738.7	1746.4	1756.7	1773.8	1783.2	1790.9	1788.3
22.5°	1796.0	1799.5	1800.3	1803.7	1817.4	1828.5	1838.8	1841.4
25°	1870.5	1867.9	1862.8	1860.2	1869.6	1881.6	1894.4	1897.9
27.5°	1962.9	1954.3	1941.5	1931.2	1933.8	1949.2	1963.7	1967.2
30°	2079.3	2059.6	2032.2	2012.5	2009.1	2025.3	2040.7	2045.9
32.5°	2211.9	2185.4	2147.7	2117.8	2104.9	2119.5	2133.2	2140.9
35°	2369.3	2340.2	2294.9	2256.4	2235.8	2245.2	2269.2	2277.8
37.5°	2555.9	2515.6	2465.2	2416.4	2382.2	2383.9	2409.5	2419.8
40°	2762.1	2703.9	2639.7	2579.0	2529.3	2525.9	2549.0	2556.7
42.5°	2976.8	2902.4	2827.1	2747.5	2685.9	2674.8	2704.7	2705.6
45°	3207.9	3112.0	3018.8	2926.4	2862.2	2842.5	2871.6	2875.0
47.5°	3454.3	3334.5	3224.1	3124.0	3054.7	3023.9	3052.1	3057.3
50°	3711.0	3586.9	3458.6	3347.3	3266.1	3228.4	3261.8	3265.2
52.5°	3965.1	3847.9	3720.4	3592.9	3494.5	3451.7	3491.1	3503.1
55°	4221.0	4108.0	3988.2	3860.7	3736.7	3699.0	3741.8	3754.6
57.5°	4487.1	4378.4	4269.7	4141.4	4020.7	3963.4	4009.6	4027.6
60°	4780.6	4684.7	4582.1	4452.8	4333.9	4267.2	4306.5	4327.1
62.5°	5068.9	5049.2	4956.0	4821.6	4671.0	4604.3	4637.7	4652.2
65°	5092.9	5412.0	5407.8	5274.3	5063.8	4951.7	4961.1	4968.0
67.5°	4445.1	5177.6	5645.6	5687.6	5453.1	5277.7	5257.2	5261.4
70°	3147.1	4152.5	5145.9	5797.9	5890.4	5754.3	5709.8	5716.7
71°	2521.6	3563.0	4656.5	5533.5	5883.5	5844.2	5819.3	5837.3
72.5°	1609.5	2625.2	3689.6	4738.6	5410.3	5602.9	5631.1	5642.2
75°	584.4	1129.5	1911.5	2739.0	3471.4	3975.4	4252.6	4274.9
77.5°	314.0	404.7	625.5	934.4	1174.0	1302.3	1317.7	1323.7
80°	231.0	267.8	306.3	350.0	377.3	382.5	373.1	353.4
82.5°	163.4	184.8	200.2	215.6	226.7	217.3	180.5	137.8
85°	95.0	104.4	112.9	120.6	122.4	115.5	76.2	62.5
87.5°	37.6	41.1	40.2	45.3	43.6	40.2	29.9	25.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)