

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: P270489

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270489
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-04-D-UNV-5WQ-7027
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 22052 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G3

Input Watts (W): 225
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

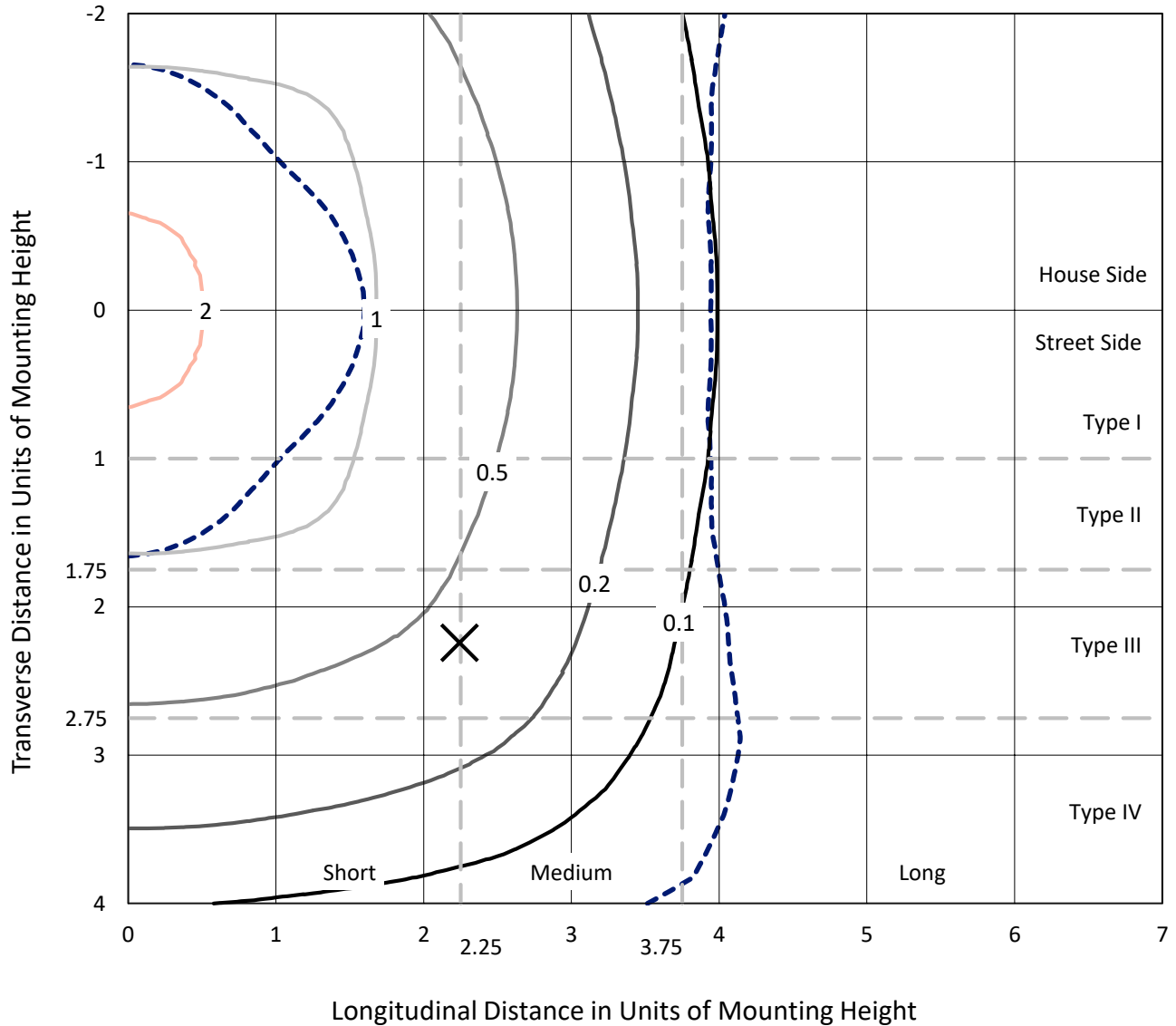


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

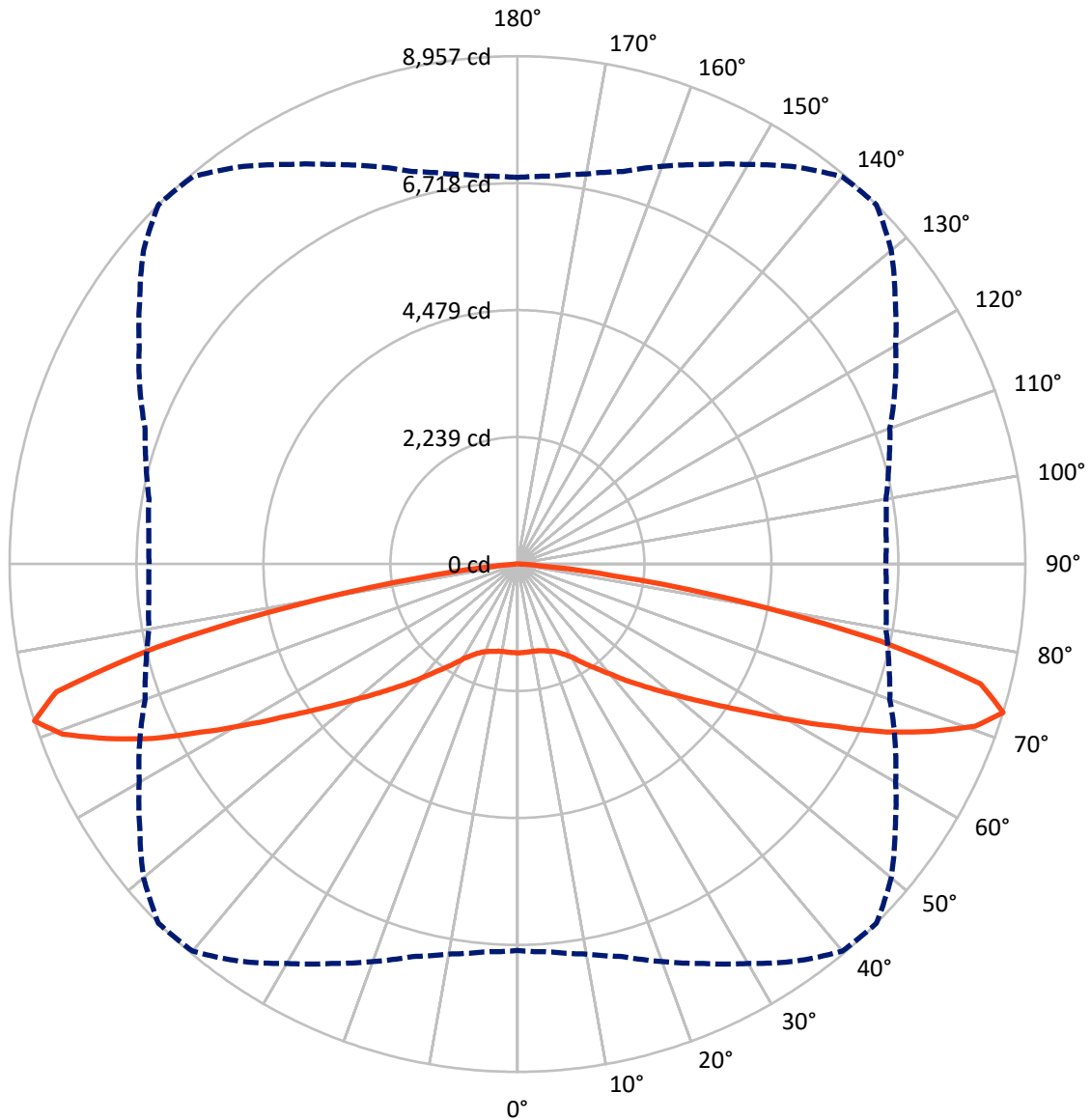


Based on 25 foot mounting height. Maximum calculated value = 2.5 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	11026.0	0.0	11026.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	11026.0	0.0	11026.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	22052.0	0.0	22052.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.6	0.7
10°-20°	452.9	2.1
20°-30°	817.6	3.7
30°-40°	1394.5	6.3
40°-50°	2374.2	10.8
50°-60°	3820.9	17.3
60°-70°	6354.3	28.8
70°-80°	6147.0	27.9
80°-90°	541.0	2.5
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°	22052.0	100.0
0°-180°	22052.0	100.0



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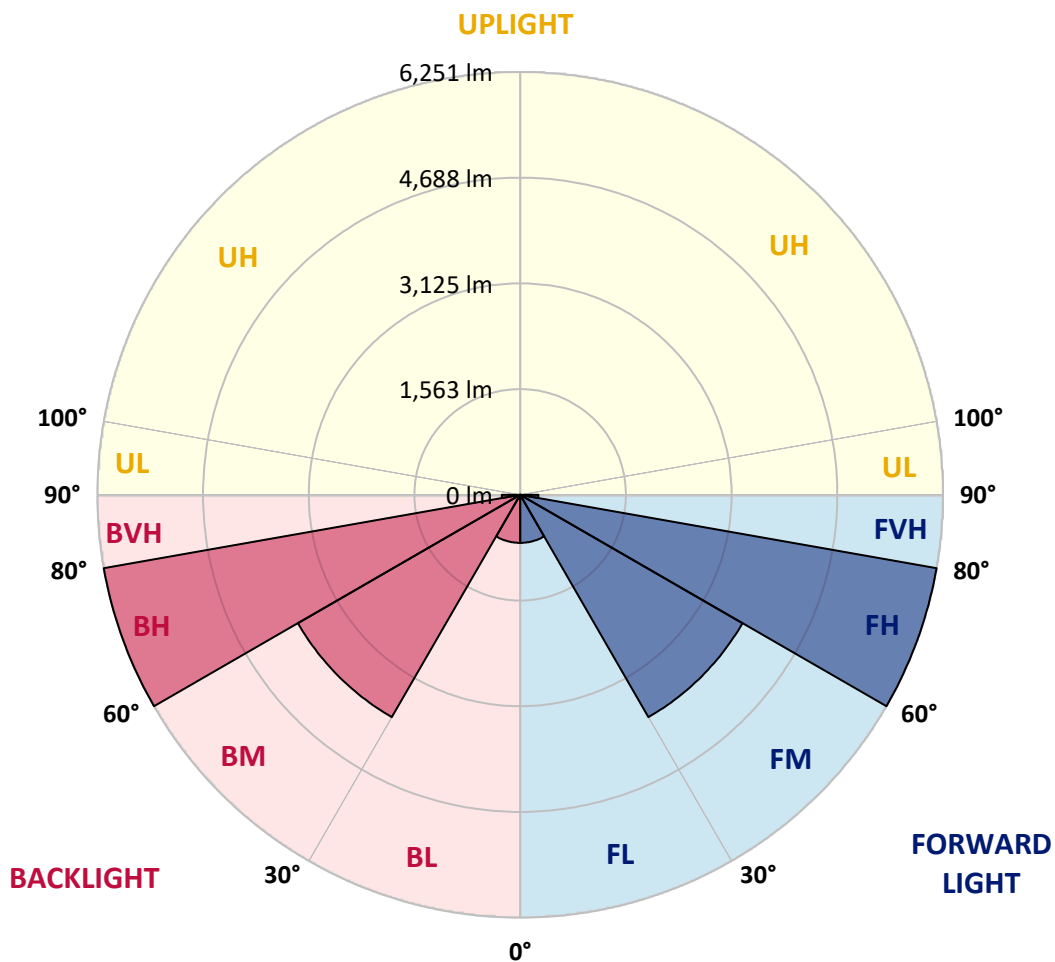
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	710.0	3.2			
FM	(30°-60°)	3794.8	17.2			
FH	(60°-80°)	6250.6	28.3			G3/7500
FVH	(80°-90°)	270.5	1.2			G3/500
BL	(0°-30°)	710.0	3.2	B2/1000		
BM	(30°-60°)	3794.8	17.2	B3/5000		
BH	(60°-80°)	6250.6	28.3	B5		G3/7500
BVH	(80°-90°)	270.5	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7
2.5°	1579.9	1579.9	1581.2	1579.9	1577.2	1575.8	1571.9	1569.1	1566.4	1564.9	1562.3
5°	1581.2	1581.2	1582.6	1581.2	1578.6	1575.8	1573.1	1569.1	1566.4	1563.7	1562.3
7.5°	1586.8	1588.2	1589.5	1588.2	1582.6	1579.9	1575.8	1571.9	1566.4	1563.7	1561.0
10°	1597.5	1597.5	1597.5	1596.2	1592.2	1586.8	1581.2	1577.2	1570.4	1563.7	1559.5
12.5°	1605.7	1607.1	1607.1	1604.4	1599.0	1592.2	1586.8	1582.6	1577.2	1571.9	1567.7
15°	1617.9	1617.9	1616.6	1611.2	1603.0	1597.5	1594.9	1593.6	1592.2	1589.5	1585.4
17.5°	1642.5	1641.1	1636.9	1628.7	1619.4	1615.2	1612.5	1612.5	1612.5	1611.2	1608.4
20°	1677.7	1677.7	1672.3	1658.7	1650.5	1646.5	1642.5	1642.5	1642.5	1638.2	1634.2
22.5°	1734.6	1736.1	1727.9	1711.6	1700.8	1692.5	1687.1	1683.2	1679.0	1676.2	1669.5
25°	1812.1	1810.8	1801.2	1780.8	1772.6	1764.5	1753.8	1746.9	1741.5	1737.4	1729.2
27.5°	1893.4	1892.1	1881.3	1863.7	1858.2	1845.9	1837.8	1828.3	1821.6	1814.8	1806.6
30°	1998.0	1991.3	1983.1	1969.5	1966.7	1957.2	1946.4	1932.9	1922.1	1911.1	1901.6
32.5°	2091.7	2091.7	2079.4	2072.7	2078.0	2073.9	2075.4	2067.2	2060.4	2056.4	2046.9
35°	2222.0	2222.0	2216.6	2208.5	2209.7	2200.3	2199.0	2200.3	2205.7	2205.7	2194.7
37.5°	2395.7	2398.5	2380.8	2378.1	2371.3	2357.7	2351.0	2353.6	2365.9	2372.7	2357.7
40°	2611.6	2616.9	2611.6	2593.9	2585.7	2562.7	2549.1	2549.1	2558.6	2565.4	2559.9
42.5°	2824.6	2834.2	2824.6	2811.1	2804.2	2786.6	2779.8	2785.3	2797.5	2805.6	2797.5
45°	3062.1	3068.9	3056.8	3040.5	3032.3	3022.7	3018.8	3022.7	3036.5	3044.5	3041.8
47.5°	3295.6	3305.1	3290.2	3283.5	3283.5	3274.0	3284.7	3295.6	3307.7	3326.9	3318.7
50°	3523.6	3535.9	3526.3	3527.7	3538.6	3556.2	3576.6	3598.3	3620.0	3640.4	3643.0
52.5°	3727.2	3746.2	3747.5	3772.1	3805.9	3833.1	3890.1	3937.6	3989.3	4006.9	3998.7
55°	3941.8	3967.5	4001.4	4039.5	4093.8	4149.5	4245.7	4331.3	4399.1	4441.2	4434.5
57.5°	4248.4	4274.2	4309.6	4372.1	4453.4	4529.4	4661.0	4794.2	4897.3	4961.1	4929.9
60°	4646.2	4673.3	4719.4	4786.0	4891.8	4995.0	5175.6	5367.0	5527.1	5600.4	5543.4
62.5°	5172.8	5198.6	5228.4	5316.7	5434.7	5567.9	5794.4	6040.2	6243.8	6314.4	6234.2
65°	5923.5	5954.7	5964.1	6036.2	6151.5	6275.0	6519.3	6796.1	7028.2	7143.7	6983.6
67.5°	6769.1	6781.2	6819.3	6903.5	7021.5	7132.8	7325.6	7587.5	7810.1	7874.0	7702.8
70°	7264.5	7288.8	7355.4	7472.1	7613.3	7788.5	7998.8	8281.1	8533.5	8563.5	8346.3
72.5°	6816.6	6866.7	6985.0	7166.8	7462.7	7773.5	8135.9	8552.7	8915.0	8957.1	8608.3
75°	5467.4	5524.3	5665.5	5865.0	6215.3	6676.7	7200.6	7826.5	8369.4	8438.6	7977.0
77.5°	2914.2	2984.8	3189.7	3458.6	3958.0	4568.8	5200.0	5913.9	6375.5	6531.5	6198.9
80°	734.4	772.4	871.4	1028.9	1366.9	1859.5	2403.9	3172.2	3744.9	3987.8	3744.9
82.5°	285.0	313.6	340.6	359.7	392.3	460.1	635.2	1035.7	1395.3	1718.4	1487.7
85°	110.0	116.7	168.3	191.3	191.3	210.5	241.6	285.0	352.9	385.6	323.0
87.5°	43.5	47.5	58.4	89.7	92.3	81.4	86.9	97.7	74.6	62.4	70.5
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°	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7	1567.7
2.5°	1561.0	1559.5	1556.9	1558.2	1556.9	1556.9	1556.9	1556.9
5°	1559.5	1559.5	1556.9	1556.9	1556.9	1558.2	1556.9	1556.9
7.5°	1558.2	1556.9	1554.2	1552.8	1552.8	1551.5	1551.5	1551.5
10°	1555.5	1552.8	1550.0	1548.7	1548.7	1546.1	1546.1	1546.1
12.5°	1562.3	1558.2	1555.5	1554.2	1554.2	1554.2	1555.5	1555.5
15°	1581.2	1573.1	1569.1	1567.7	1569.1	1571.9	1573.1	1574.5
17.5°	1601.7	1593.6	1586.8	1584.0	1585.4	1589.5	1593.6	1596.2
20°	1627.5	1620.6	1612.5	1609.9	1609.9	1615.2	1617.9	1622.0
22.5°	1664.1	1658.7	1651.9	1647.9	1645.1	1651.9	1655.9	1658.7
25°	1722.5	1717.0	1711.6	1707.5	1706.2	1713.0	1715.7	1717.0
27.5°	1799.8	1794.5	1791.7	1790.3	1786.3	1789.0	1793.0	1791.7
30°	1900.3	1904.3	1900.3	1900.3	1893.4	1896.2	1893.4	1890.8
32.5°	2034.7	2030.6	2018.3	2010.1	2000.7	2000.7	1996.7	1992.6
35°	2169.0	2155.5	2148.7	2152.8	2148.7	2151.4	2144.7	2137.7
37.5°	2327.9	2319.8	2318.3	2330.6	2327.9	2330.6	2330.6	2321.0
40°	2538.3	2532.9	2542.4	2562.7	2570.8	2569.4	2572.1	2559.9
42.5°	2779.8	2770.4	2774.3	2792.0	2801.5	2804.2	2802.9	2792.0
45°	3021.4	3024.1	3024.1	3043.2	3052.7	3058.1	3048.6	3044.5
47.5°	3294.3	3298.3	3288.9	3301.0	3303.7	3313.3	3305.1	3298.3
50°	3609.2	3594.2	3572.5	3576.6	3576.6	3573.8	3564.4	3556.2
52.5°	3960.6	3926.9	3886.1	3872.6	3857.5	3842.6	3823.6	3808.8
55°	4361.1	4302.7	4229.5	4195.5	4167.1	4133.1	4089.7	4074.7
57.5°	4825.3	4724.8	4627.2	4566.1	4492.9	4448.0	4392.4	4389.7
60°	5376.4	5240.7	5068.2	4977.4	4904.0	4851.1	4809.0	4792.7
62.5°	6013.1	5779.5	5593.6	5495.9	5410.3	5377.8	5324.9	5331.6
65°	6666.0	6428.4	6247.8	6169.1	6089.0	6067.3	6018.5	6036.2
67.5°	7373.1	7177.5	6979.4	6906.1	6832.9	6811.0	6761.0	6775.8
70°	8007.0	7758.5	7533.2	7389.4	7264.5	7164.1	7100.3	7074.4
72.5°	8133.2	7702.8	7348.7	6989.0	6781.2	6599.4	6524.7	6496.3
75°	7307.9	6640.1	6135.2	5713.0	5479.7	5214.9	5186.4	5147.0
77.5°	5684.6	4924.4	4313.7	3770.6	3457.1	3134.0	3022.7	2938.6
80°	3390.7	2606.2	2019.7	1415.6	1155.1	929.7	874.1	815.8
82.5°	1213.5	777.8	523.9	408.5	365.2	336.7	314.9	286.4
85°	293.1	247.0	233.5	211.7	209.0	177.9	126.2	112.6
87.5°	93.7	85.5	86.9	82.9	86.9	65.1	52.9	47.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)