

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: P270328

Luminaire Tested: **NAV-AF-02-D-UNV-5NQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270328
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11934.8 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - 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

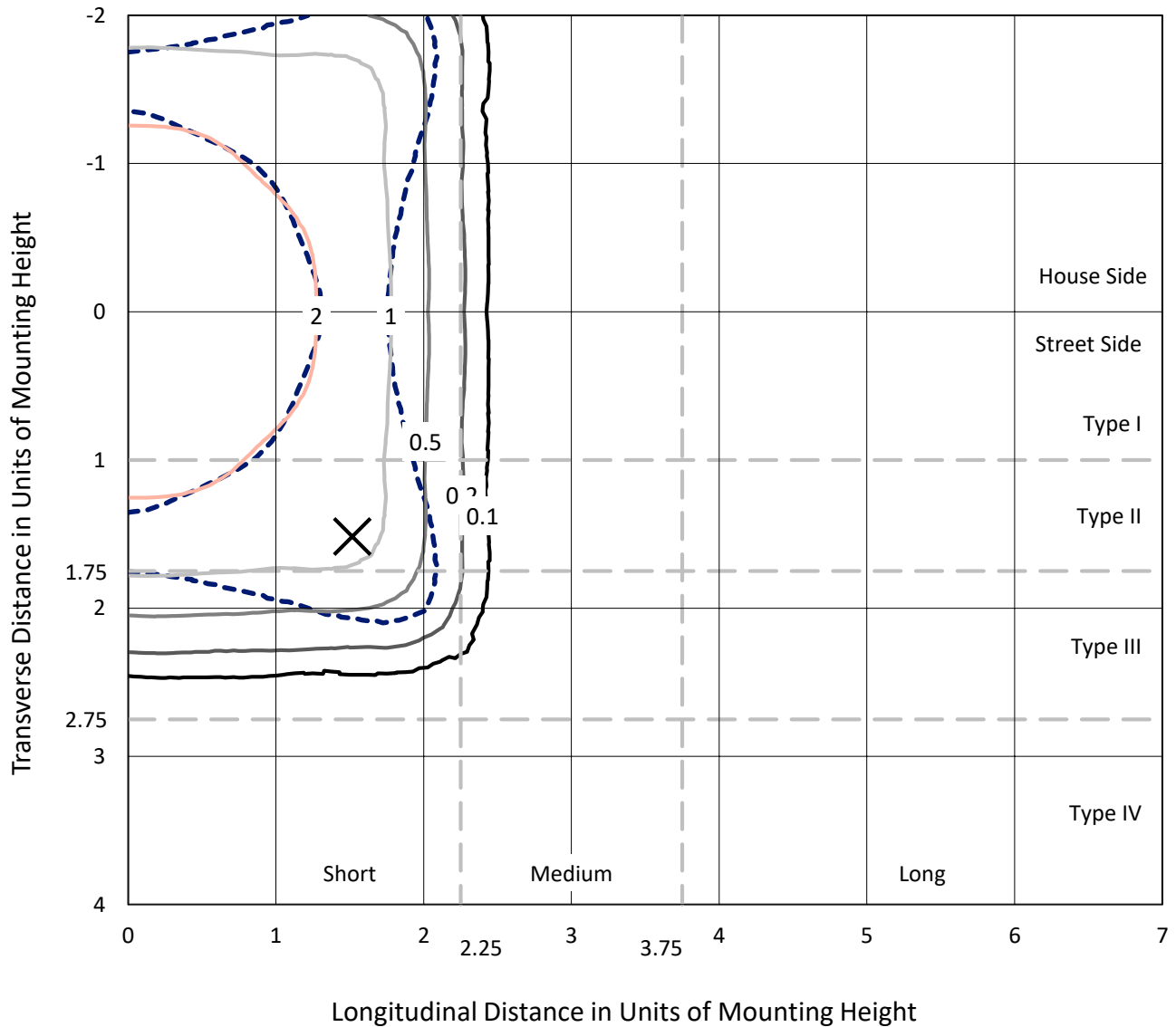


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Iso-Footcandle Lines of Horizontal Illumination

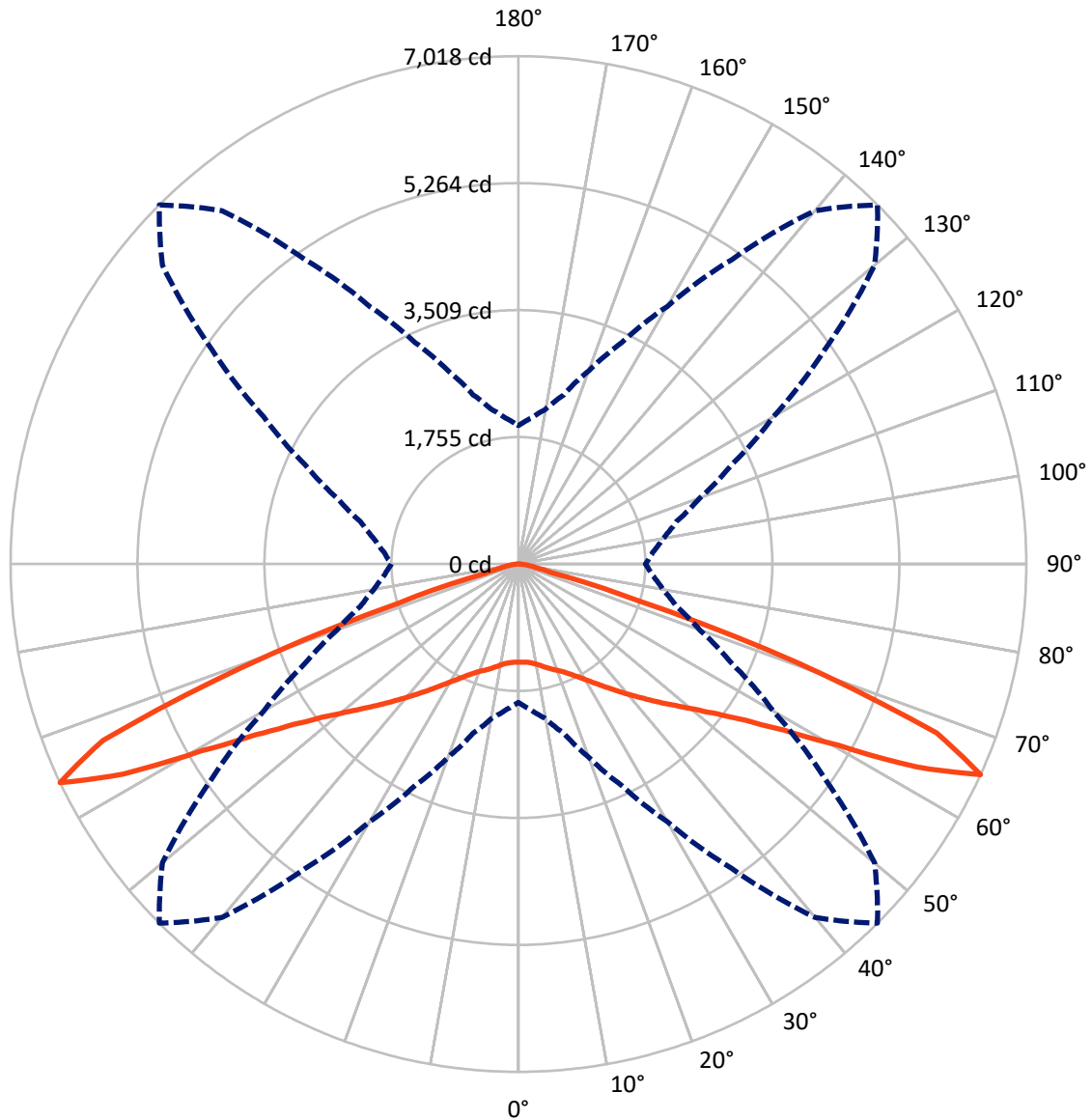
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5967.4	0.0	5967.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5967.4	0.0	5967.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	11934.8	0.0	11934.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.2	1.1
10°-20°	423.7	3.6
20°-30°	790.4	6.6
30°-40°	1332.8	11.2
40°-50°	2164.8	18.1
50°-60°	3391.9	28.4
60°-70°	3201.8	26.8
70°-80°	431.5	3.6
80°-90°	65.7	0.6
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°	11934.8	100.0
0°-180°	11934.8	100.0



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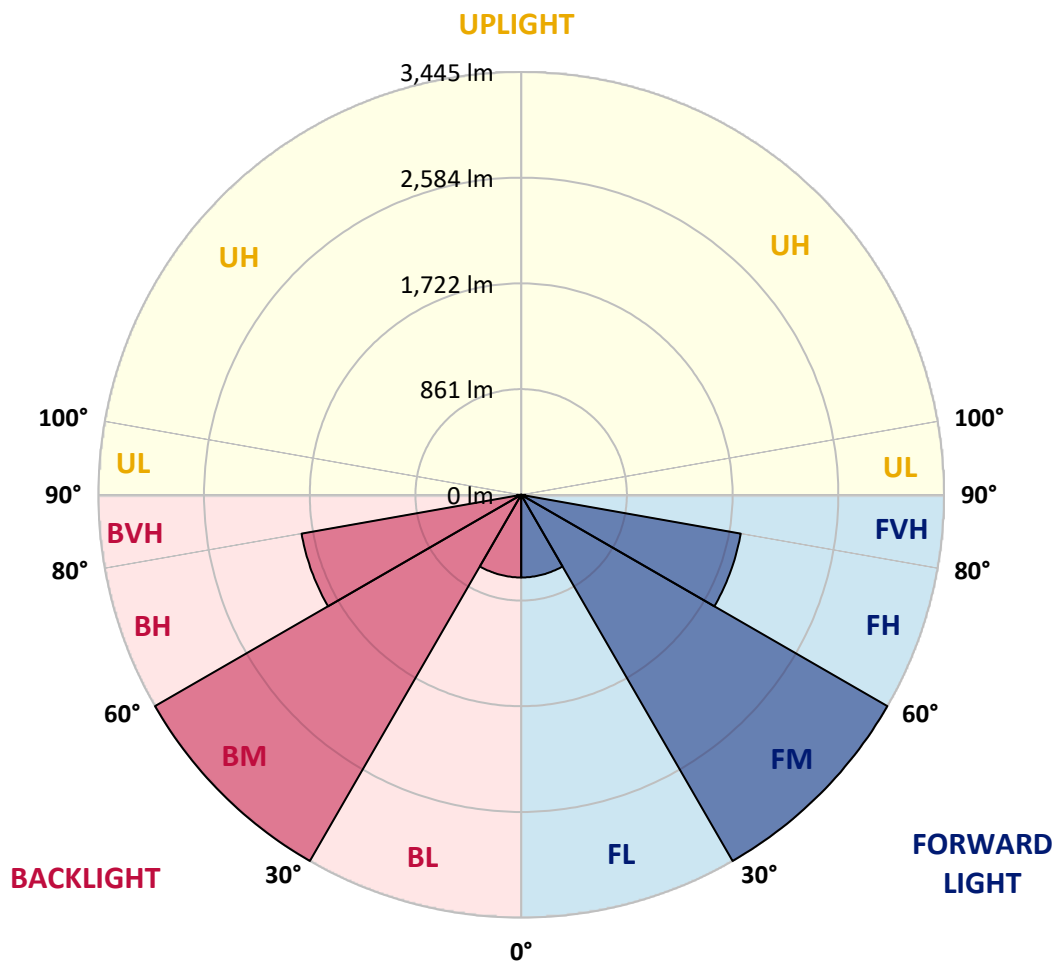
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	673.2	5.6			
FM	(30°-60°)	3444.7	28.9			
FH	(60°-80°)	1816.6	15.2			G2/5000
FVH	(80°-90°)	32.9	0.3			G1/100
BL	(0°-30°)	673.2	5.6	B2/1000		
BM	(30°-60°)	3444.7	28.9	B3/5000		
BH	(60°-80°)	1816.6	15.2	B3/2500		G2/5000
BVH	(80°-90°)	32.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6
2.5°	1368.7	1368.7	1371.0	1370.3	1367.2	1365.1	1362.8	1359.9	1358.2	1356.8	1356.1
5°	1376.2	1376.2	1378.4	1377.6	1375.5	1372.4	1371.0	1368.7	1366.5	1365.1	1365.8
7.5°	1394.8	1395.4	1396.2	1395.4	1393.2	1391.0	1388.1	1387.3	1384.4	1382.1	1383.6
10°	1422.9	1422.9	1423.8	1424.5	1422.9	1417.7	1417.7	1416.3	1413.4	1410.3	1411.1
12.5°	1454.3	1454.3	1455.0	1455.0	1455.0	1452.0	1452.6	1452.0	1448.2	1446.8	1448.2
15°	1484.7	1485.4	1485.4	1487.0	1487.0	1487.7	1490.6	1490.6	1489.2	1488.4	1488.4
17.5°	1520.4	1521.9	1522.5	1524.9	1525.6	1527.1	1530.1	1530.8	1531.5	1529.4	1530.1
20°	1568.0	1568.7	1571.0	1571.7	1574.6	1574.6	1576.2	1575.4	1573.9	1571.0	1571.0
22.5°	1621.5	1623.0	1627.5	1627.5	1631.1	1628.9	1629.6	1627.5	1623.7	1622.2	1620.7
25°	1691.4	1693.7	1697.3	1695.8	1697.3	1693.7	1693.7	1693.7	1691.4	1689.2	1688.5
27.5°	1779.8	1776.2	1779.8	1776.8	1776.2	1773.2	1774.0	1772.4	1770.2	1769.4	1766.4
30°	1872.1	1867.5	1869.8	1870.6	1869.1	1868.4	1865.4	1863.2	1859.4	1860.2	1858.0
32.5°	1977.6	1973.1	1975.5	1976.1	1974.7	1976.1	1975.5	1970.3	1965.8	1968.6	1968.6
35°	2103.3	2100.2	2106.3	2108.5	2104.0	2101.8	2098.8	2092.8	2086.1	2090.6	2091.3
37.5°	2254.1	2250.4	2254.9	2260.9	2252.7	2248.3	2236.3	2227.4	2222.9	2225.2	2228.2
40°	2411.1	2411.8	2424.4	2426.0	2417.0	2411.8	2399.9	2386.5	2374.0	2374.0	2377.6
42.5°	2576.1	2578.3	2593.1	2598.3	2595.5	2585.9	2569.4	2553.1	2536.8	2539.7	2544.1
45°	2762.7	2759.8	2775.4	2788.0	2785.7	2782.8	2767.1	2737.4	2722.6	2721.9	2729.3
47.5°	2958.9	2964.9	2981.4	3002.9	3002.1	2994.7	2974.6	2947.1	2919.6	2921.8	2930.7
50°	3187.9	3196.2	3223.7	3245.2	3248.2	3245.9	3222.2	3190.2	3151.6	3153.8	3165.6
52.5°	3393.2	3405.0	3437.1	3481.7	3509.1	3521.9	3506.2	3476.4	3437.1	3439.3	3451.8
55°	3579.0	3597.6	3645.2	3706.1	3761.3	3812.4	3835.6	3834.9	3805.8	3812.4	3828.8
57.5°	3695.7	3721.8	3793.9	3892.0	4001.3	4104.6	4193.8	4277.9	4296.6	4331.4	4331.4
60°	3539.0	3599.9	3695.7	3863.8	4078.7	4310.6	4562.0	4806.6	4964.2	5088.3	5021.3
62.5°	2955.2	3045.3	3179.8	3401.3	3736.0	4150.0	4654.8	5223.6	5816.9	6179.7	5913.5
65°	1912.2	2025.1	2171.7	2420.8	2842.2	3375.3	4110.6	5132.8	6374.6	7018.4	6423.6
67.5°	757.6	834.2	923.4	1100.3	1466.2	1989.6	2814.7	4075.7	5628.8	6236.3	5569.3
70°	362.0	374.8	391.8	429.7	521.1	703.4	1130.7	2008.2	3451.8	4092.0	3369.5
72.5°	261.6	263.9	272.0	284.8	311.5	348.7	423.8	614.1	1190.3	1730.8	1191.8
75°	198.5	201.5	205.9	212.5	226.7	244.6	272.8	327.2	407.4	469.9	406.7
77.5°	150.9	153.9	157.7	164.3	171.8	184.4	194.8	216.3	250.5	263.9	262.5
80°	110.0	115.3	121.2	127.1	132.3	138.2	139.1	149.5	168.8	181.4	177.7
82.5°	69.9	74.3	90.0	96.7	97.3	98.9	98.2	98.9	109.4	118.1	115.3
85°	44.6	47.6	55.8	63.2	61.8	64.7	64.7	63.2	58.7	50.6	60.2
87.5°	22.3	23.0	26.8	33.4	32.0	28.2	27.5	27.5	20.1	17.1	18.5
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°	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6	1357.6
2.5°	1353.8	1355.4	1353.0	1353.0	1352.4	1353.8	1351.6	1351.6
5°	1364.3	1366.5	1365.8	1365.8	1367.2	1368.7	1367.9	1367.2
7.5°	1382.9	1384.4	1385.8	1386.5	1388.1	1387.3	1388.8	1388.1
10°	1411.1	1409.6	1411.9	1409.6	1410.3	1408.9	1409.6	1409.6
12.5°	1446.8	1444.6	1443.0	1441.6	1441.6	1438.6	1438.6	1439.4
15°	1487.7	1484.0	1480.9	1479.5	1478.0	1478.0	1475.7	1477.3
17.5°	1527.8	1524.2	1518.9	1518.9	1516.7	1515.3	1513.7	1517.3
20°	1570.1	1566.5	1563.5	1562.8	1558.3	1556.9	1557.7	1562.1
22.5°	1619.3	1617.0	1617.0	1615.5	1612.5	1610.3	1610.3	1615.5
25°	1685.4	1681.0	1681.7	1682.4	1681.0	1681.0	1679.6	1683.2
27.5°	1766.4	1762.7	1765.0	1766.4	1765.0	1767.2	1765.0	1768.0
30°	1861.6	1859.4	1861.6	1863.9	1860.2	1860.2	1858.7	1860.8
32.5°	1975.5	1972.4	1973.8	1973.8	1968.6	1964.2	1958.2	1962.7
35°	2100.2	2096.6	2099.6	2101.8	2095.8	2091.3	2082.5	2086.1
37.5°	2237.9	2239.4	2243.1	2252.7	2251.2	2243.7	2237.0	2240.1
40°	2391.7	2399.2	2415.5	2422.2	2420.8	2413.2	2404.4	2405.9
42.5°	2565.6	2575.4	2592.5	2603.6	2598.3	2587.9	2576.9	2581.3
45°	2755.3	2770.2	2792.6	2803.6	2797.0	2785.7	2770.2	2778.4
47.5°	2956.1	2985.7	3015.5	3030.3	3028.1	3012.6	2992.4	2994.7
50°	3196.2	3235.5	3273.5	3288.3	3277.1	3253.4	3225.2	3224.5
52.5°	3495.0	3537.4	3568.6	3565.0	3537.4	3500.2	3468.3	3466.7
55°	3868.2	3882.4	3878.0	3846.0	3797.7	3739.6	3698.7	3692.0
57.5°	4319.5	4272.0	4202.1	4105.4	3996.9	3886.8	3812.4	3785.0
60°	4871.1	4656.4	4406.5	4143.3	3903.1	3723.3	3609.5	3540.4
62.5°	5326.9	4704.7	4146.2	3689.1	3315.1	3092.9	2937.5	2841.5
65°	5170.9	4064.6	3255.6	2666.1	2257.9	2028.2	1863.9	1754.6
67.5°	3994.7	2715.8	1889.9	1310.0	993.3	840.9	734.5	665.5
70°	2014.1	1041.7	631.1	445.3	380.6	353.9	336.1	325.6
72.5°	591.1	394.7	327.9	290.0	266.8	250.5	240.1	234.9
75°	327.2	266.8	235.6	214.2	199.2	188.0	181.4	177.0
77.5°	225.2	194.0	178.5	164.3	152.4	144.3	139.1	134.6
80°	157.7	142.0	135.4	127.9	118.9	112.3	104.8	101.9
82.5°	104.8	98.2	96.7	90.6	85.5	78.1	64.7	60.2
85°	61.8	60.9	60.9	58.7	55.1	48.2	38.6	38.6
87.5°	21.6	22.3	23.0	24.6	23.7	20.1	16.3	15.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)