

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: P195780

Luminaire Tested: **NAV-AF-06-D-UNV-T2-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195780
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-T2-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 28487 lumens
Efficiency: N/A
Efficacy: 114.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G4

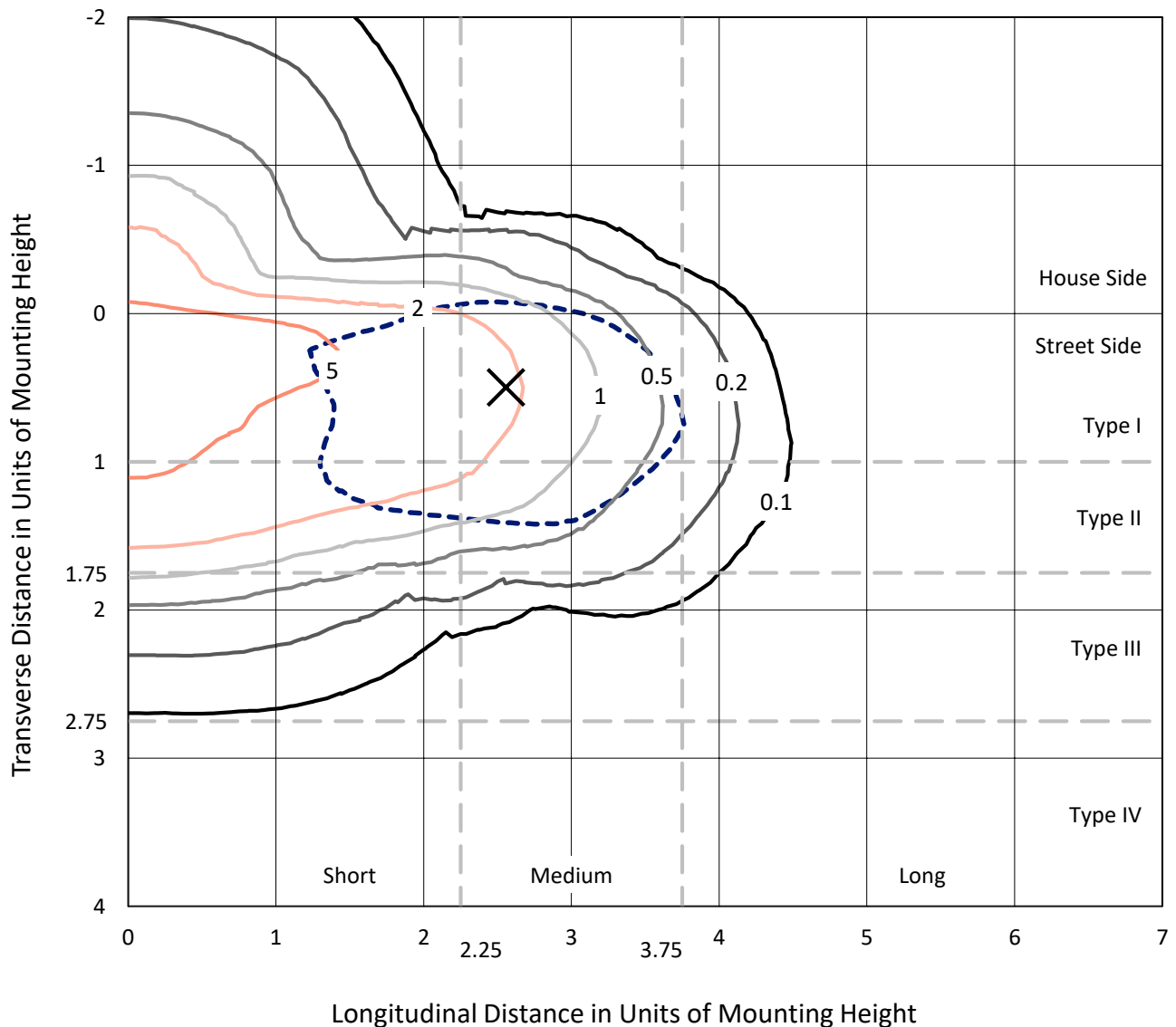
Input Watts (W): 249
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

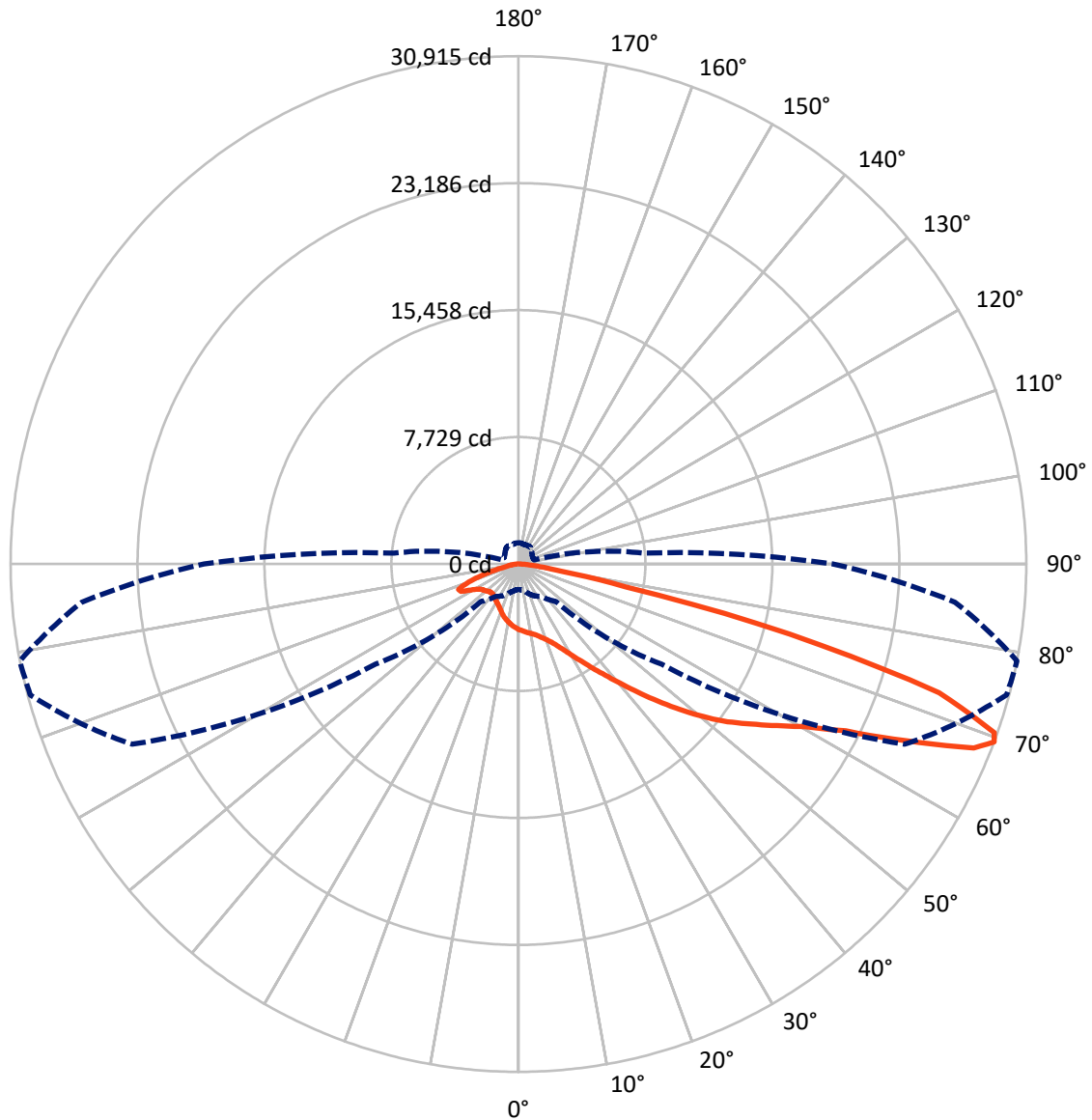
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.7 fc
 Type II - Medium - Full Cutoff

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CATALOG NUMBER: NAV-AF-06-D-UNV-T2-7050-800

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5358.9	0.0	5358.9
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	23128.1	0.0	23128.1
	% Fixture	81.2	0.0	81.2
Total	Lumens	28487.0	0.0	28487.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	370.6	1.3
10°-20°	1062.5	3.7
20°-30°	1755.7	6.2
30°-40°	2842.9	10.0
40°-50°	4541.6	15.9
50°-60°	6504.0	22.8
60°-70°	7246.4	25.4
70°-80°	3625.3	12.7
80°-90°	538.0	1.9
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°	28487.0	100.0
0°-180°	28487.0	100.0



REPORT NUMBER: P195780

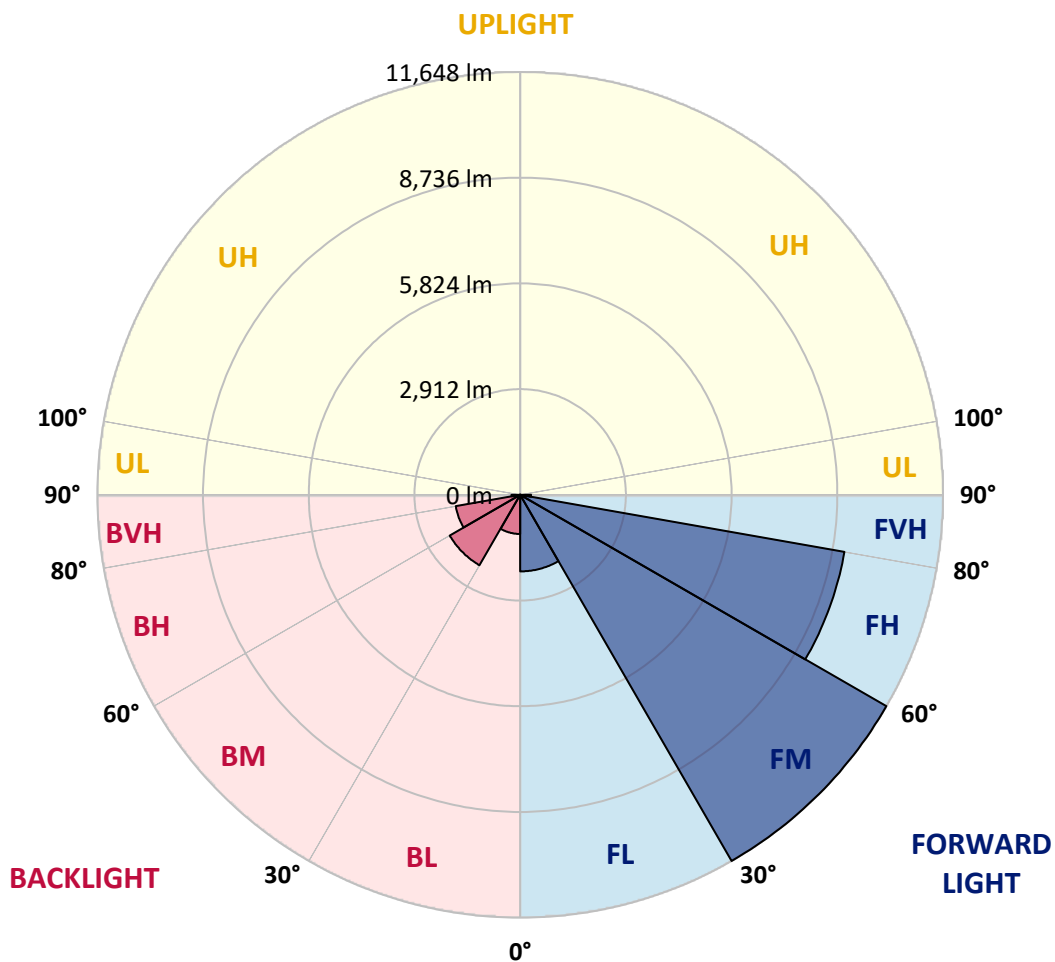
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2109.2	7.4			
FM (30°-60°)	11648.4	40.9			
FH (60°-80°)	9069.9	31.8			G4/12000
FVH (80°-90°)	300.6	1.1			G3/500
BL (0°-30°)	1079.6	3.8	B3/2500		
BM (30°-60°)	2240.1	7.9	B2/2500		
BH (60°-80°)	1801.9	6.3	B3/2500		G3/2500
BVH (80°-90°)	237.4	0.8			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6
2.5°	4389.0	4379.7	4377.8	4349.9	4335.0	4303.3	4228.7	4152.3	4081.5	4044.2	4005.1
5°	4756.2	4737.5	4728.2	4681.6	4640.6	4569.8	4452.4	4331.2	4204.5	4139.3	4061.0
7.5°	4977.9	4979.8	4979.8	4942.5	4901.5	4815.8	4666.7	4500.8	4312.6	4226.9	4103.9
10°	4996.6	4998.4	5026.4	5035.7	5045.0	5000.3	4862.4	4653.6	4411.4	4299.5	4139.3
12.5°	4812.1	4825.1	4871.7	4938.8	5033.8	5082.3	5022.7	4817.7	4538.1	4402.0	4206.4
15°	4564.2	4577.2	4636.9	4739.4	4892.2	5054.3	5138.2	5005.9	4704.0	4543.7	4305.1
17.5°	4443.0	4458.0	4499.0	4581.0	4730.1	4948.1	5199.7	5207.2	4899.7	4715.1	4422.5
20°	4385.3	4396.5	4448.6	4515.7	4629.4	4838.2	5205.3	5419.6	5132.6	4918.3	4566.1
22.5°	4517.6	4521.3	4547.4	4584.7	4661.1	4821.4	5201.6	5639.5	5423.4	5173.6	4750.6
25°	4905.2	4881.0	4862.4	4815.8	4834.4	4948.1	5261.2	5874.4	5796.1	5509.1	4996.6
27.5°	5363.7	5360.0	5311.5	5203.4	5134.5	5207.2	5430.8	6137.1	6252.7	5935.9	5319.0
30°	5874.4	5876.2	5825.9	5693.6	5553.8	5561.3	5701.0	6440.9	6798.8	6450.2	5716.0
32.5°	6409.2	6442.8	6349.6	6217.3	6047.7	5993.6	6088.7	6808.1	7430.6	7057.8	6176.3
35°	7048.5	7054.1	6951.6	6757.8	6588.2	6502.4	6590.0	7266.5	8159.3	7771.6	6737.3
37.5°	7712.0	7715.7	7609.5	7361.6	7147.3	7091.4	7188.3	7823.8	8930.8	8584.2	7397.0
40°	8254.3	8293.4	8209.6	7976.6	7760.4	7726.9	7866.7	8491.0	9916.7	9545.8	8181.6
42.5°	8869.3	8914.1	8813.4	8571.1	8399.7	8388.5	8606.5	9251.4	10897.0	10658.5	9070.6
45°	9562.6	9626.0	9486.2	9214.1	9068.7	9314.7	9327.8	10093.8	12026.4	11903.4	10071.4
47.5°	10319.3	10371.5	10257.8	9965.2	9806.8	10162.7	10034.1	11005.1	13247.1	13237.8	11154.2
50°	10902.6	10960.4	10971.6	10843.0	10677.1	10721.8	10809.4	11963.1	14464.1	14609.5	12274.3
52.5°	10796.4	10852.3	11103.9	11441.2	11707.7	11592.2	11698.4	12980.6	15640.1	15947.6	13338.5
55°	9939.1	9968.9	10440.4	11241.8	12376.8	12928.5	12935.9	14087.7	16758.3	17188.9	14348.6
57.5°	8394.1	8397.8	9011.0	10192.5	11987.3	13795.1	14889.1	15478.0	17925.0	18560.5	15601.0
60°	5939.6	5954.5	6668.3	8213.3	10591.4	13690.7	16989.4	17966.0	19276.2	20101.8	17215.0
62.5°	3526.1	3559.7	4098.3	5337.6	7866.7	12348.8	18230.7	22392.3	21266.6	22362.5	19798.0
65°	2294.2	2322.2	2644.6	3267.1	4648.1	8984.9	17822.5	26678.8	25033.2	25918.4	23510.5
67.5°	1766.8	1789.1	2042.6	2419.1	2851.5	4856.8	14249.8	27577.1	29617.8	29893.7	26643.4
69°	1552.5	1571.1	1757.5	2119.0	2400.4	3214.9	10619.3	25946.4	30764.0	30915.0	26682.5
70°	1438.8	1453.7	1628.9	1942.0	2204.8	2566.3	8127.6	24052.9	30344.7	30730.5	25912.8
72.5°	1185.3	1198.4	1323.2	1563.6	1802.2	1828.3	3600.7	17563.5	25551.3	26785.0	21928.2
75°	989.6	997.1	1079.1	1254.3	1459.3	1455.5	1839.5	9948.4	15591.7	17062.1	13539.7
77.5°	825.6	831.2	885.3	993.3	1151.8	1146.2	1295.3	4294.0	6884.5	6642.2	4661.1
80°	728.7	732.4	760.4	788.3	889.0	883.4	959.8	1971.8	2801.1	2588.7	1763.1
82.5°	553.5	561.0	702.6	715.7	689.6	665.3	669.1	1148.0	1435.0	1306.5	946.8
85°	313.1	315.0	451.0	527.4	600.1	451.0	434.2	592.7	708.2	620.6	413.7
87.5°	139.8	145.4	216.2	249.7	324.3	264.6	247.9	251.6	305.6	253.5	164.0
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6	3997.6
2.5°	3967.8	3936.1	3861.6	3785.2	3708.8	3660.3	3610.0	3563.4	3544.7	3542.9	3507.5
5°	3984.6	3910.0	3740.4	3554.1	3377.0	3239.1	3123.6	3049.0	2976.3	2963.3	2931.6
7.5°	3990.2	3869.0	3593.2	3295.0	3024.8	2834.7	2719.1	2668.8	2633.4	2624.1	2612.9
10°	3988.3	3816.8	3429.2	3021.1	2713.5	2570.0	2527.2	2538.4	2553.3	2560.7	2560.7
12.5°	4018.1	3792.6	3265.2	2763.9	2512.3	2443.3	2476.9	2534.6	2579.4	2598.0	2601.7
15°	4072.2	3777.7	3084.4	2540.2	2370.6	2387.4	2469.4	2553.3	2616.6	2644.6	2652.0
17.5°	4139.3	3757.2	2875.7	2355.7	2288.6	2346.4	2452.6	2558.9	2635.3	2670.7	2676.3
20°	4213.8	3727.4	2659.5	2217.8	2215.9	2288.6	2394.8	2514.1	2596.1	2635.3	2633.4
22.5°	4314.5	3699.4	2458.2	2117.2	2135.8	2202.9	2290.5	2398.6	2475.0	2510.4	2502.9
25°	4448.6	3673.3	2277.4	2027.7	2044.5	2089.2	2150.7	2232.7	2286.8	2305.4	2292.3
27.5°	4629.4	3652.8	2135.8	1945.7	1943.8	1964.3	2001.6	2046.3	2072.4	2066.8	2046.3
30°	4851.2	3632.3	2031.4	1873.0	1846.9	1845.1	1861.8	1887.9	1904.7	1871.2	1854.4
32.5°	5099.1	3596.9	1938.2	1809.6	1763.1	1746.3	1753.7	1789.1	1858.1	1824.6	1811.5
35°	5391.7	3555.9	1845.1	1740.7	1705.3	1673.6	1679.2	1755.6	1964.3	1940.1	1927.1
37.5°	5743.9	3518.7	1759.3	1666.1	1664.3	1625.1	1621.4	1712.7	1992.3	1940.1	1928.9
40°	6167.0	3511.2	1682.9	1584.1	1614.0	1599.1	1586.0	1641.9	1837.6	1731.4	1710.9
42.5°	6677.6	3544.7	1627.0	1505.9	1556.2	1591.6	1567.4	1580.4	1660.6	1565.5	1548.7
45°	7274.0	3636.1	1586.0	1436.9	1494.7	1586.0	1558.0	1546.9	1559.9	1507.7	1496.5
47.5°	7969.2	3798.2	1558.0	1379.1	1436.9	1571.1	1554.3	1532.0	1526.4	1496.5	1489.1
50°	8712.8	4016.3	1539.4	1327.0	1384.7	1545.0	1552.5	1520.8	1511.5	1498.4	1494.7
52.5°	9450.8	4253.0	1517.0	1282.2	1341.9	1513.3	1554.3	1509.6	1496.5	1489.1	1485.4
55°	10185.1	4499.0	1476.0	1243.1	1310.2	1476.0	1552.5	1494.7	1479.8	1479.8	1479.8
57.5°	11137.4	4873.6	1422.0	1211.4	1269.2	1427.6	1528.2	1477.9	1457.4	1459.3	1461.1
60°	12512.9	5501.6	1362.4	1176.0	1215.1	1371.7	1491.0	1448.1	1423.9	1431.3	1433.2
62.5°	14810.8	6599.3	1280.4	1125.7	1159.2	1312.0	1442.5	1407.1	1384.7	1397.8	1399.6
65°	17874.7	7928.2	1172.3	1062.3	1101.4	1244.9	1381.0	1358.6	1334.4	1366.1	1364.2
67.5°	19744.0	8317.7	1058.6	995.2	1045.5	1174.1	1304.6	1295.3	1278.5	1334.4	1330.7
69°	19130.8	7613.2	993.3	952.3	1006.4	1125.7	1256.1	1252.4	1239.4	1293.4	1289.7
70°	18178.5	6955.3	952.3	924.4	985.9	1095.9	1224.4	1224.4	1211.4	1258.0	1248.7
72.5°	14602.1	5158.7	857.3	853.6	915.1	1013.9	1138.7	1148.0	1140.6	1157.4	1148.0
75°	8573.0	3108.6	764.1	775.3	829.3	926.3	1043.7	1051.1	1043.7	1041.8	1043.7
77.5°	2972.6	1394.0	674.7	691.4	738.0	836.8	939.3	954.2	943.0	930.0	933.7
80°	1162.9	810.7	577.7	602.0	641.1	736.2	834.9	844.3	827.5	825.6	810.7
82.5°	698.9	493.9	449.2	488.3	536.7	639.2	721.3	717.5	704.5	780.9	684.0
85°	303.8	274.0	328.0	367.1	391.4	479.0	609.4	592.7	561.0	493.9	482.7
87.5°	123.0	141.6	180.8	218.1	234.8	309.4	417.5	402.6	408.1	335.5	333.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)