

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: P195786

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195786
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 35259 lumens
Efficiency: N/A
Efficacy: 105.9 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

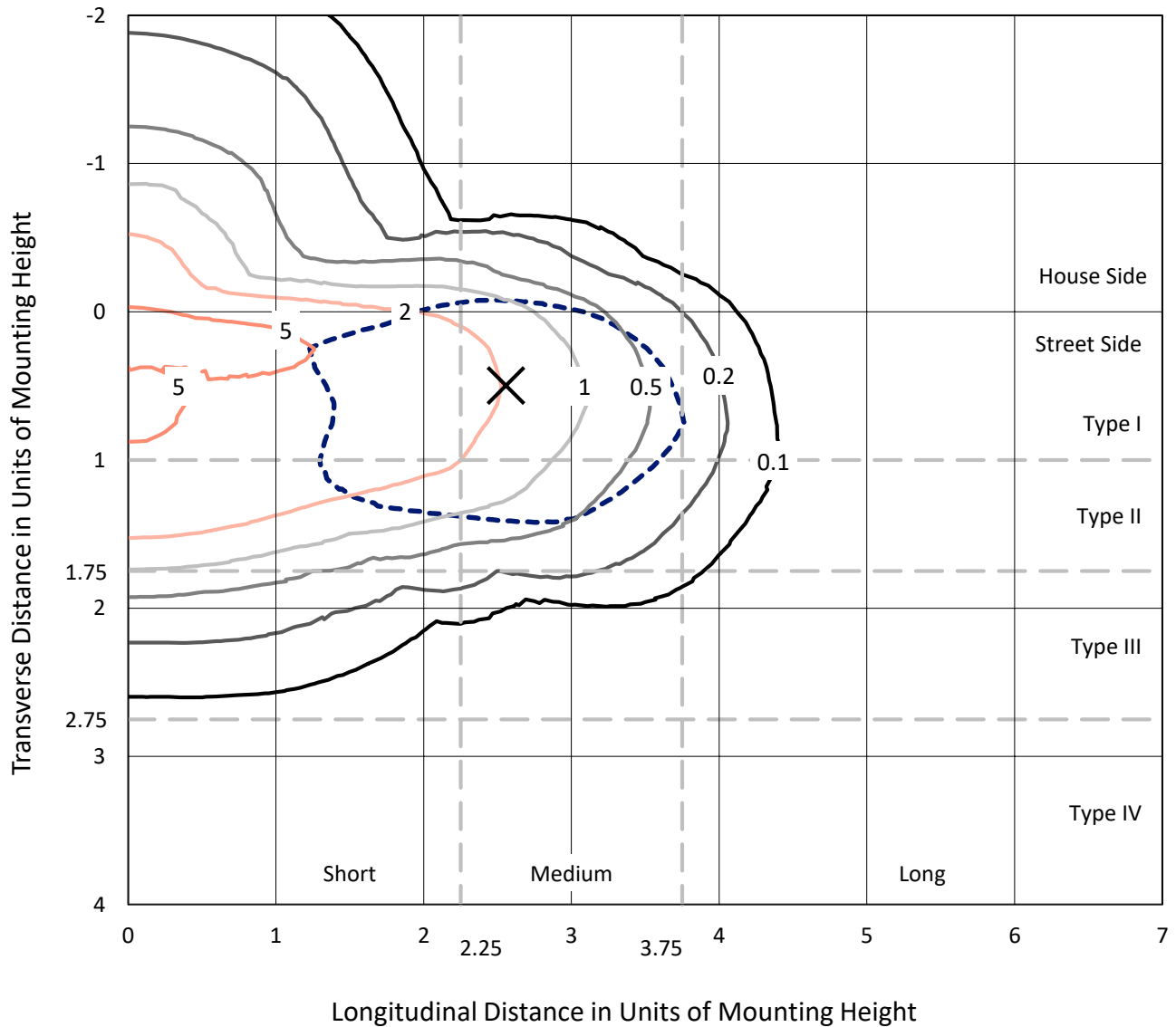
Input Watts (W): 333
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

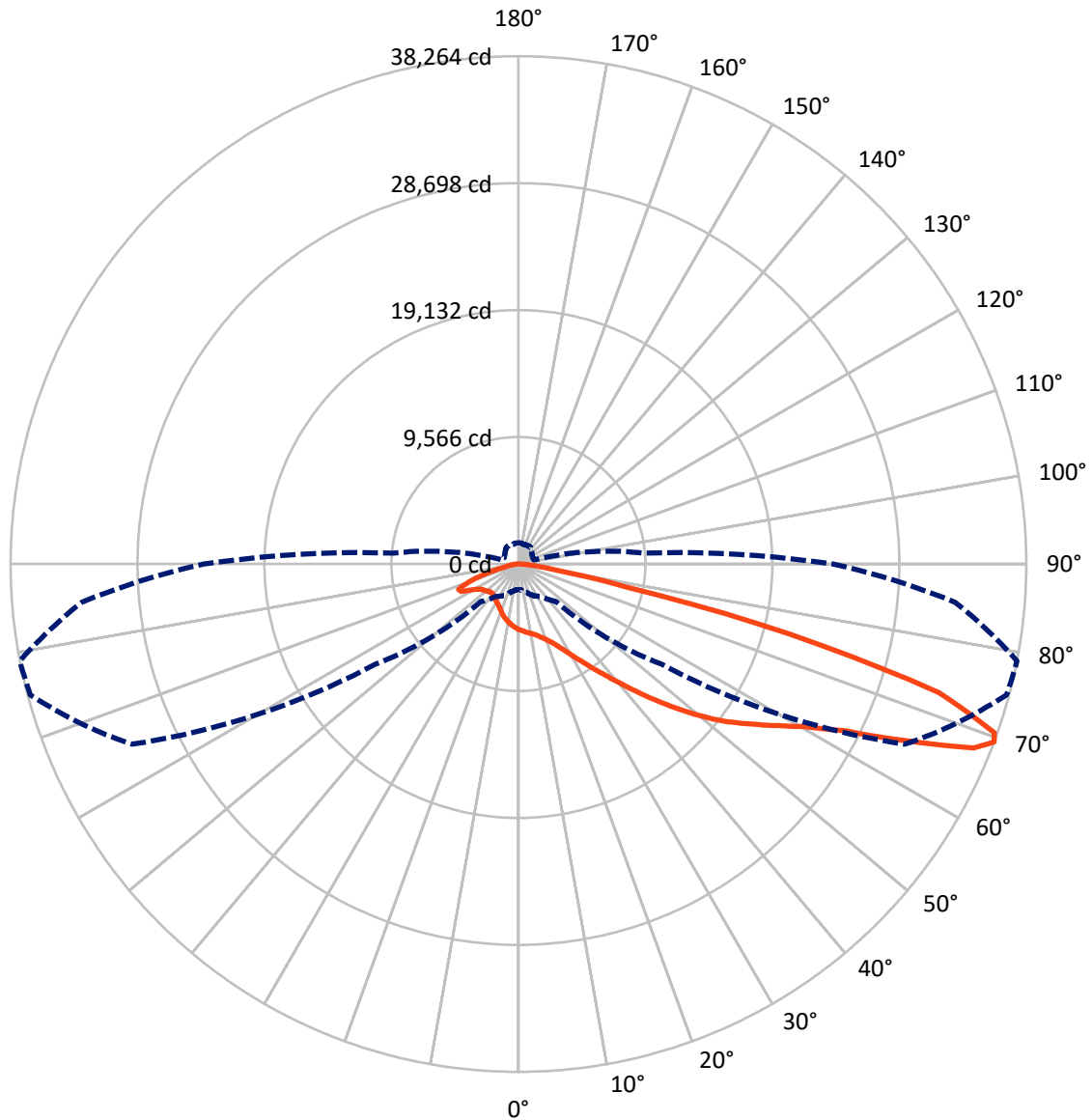
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.6 fc
 Type II - Medium - Full Cutoff

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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	6632.8	0.0	6632.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	28626.1	0.0	28626.1
	% Fixture	81.2	0.0	81.2
Total	Lumens	35259.0	0.0	35259.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	458.7	1.3
10°-20°	1315.1	3.7
20°-30°	2173.1	6.2
30°-40°	3518.8	10.0
40°-50°	5621.2	15.9
50°-60°	8050.1	22.8
60°-70°	8969.1	25.4
70°-80°	4487.1	12.7
80°-90°	665.9	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°	35259.0	100.0
0°-180°	35259.0	100.0

Coefficient of Utilization



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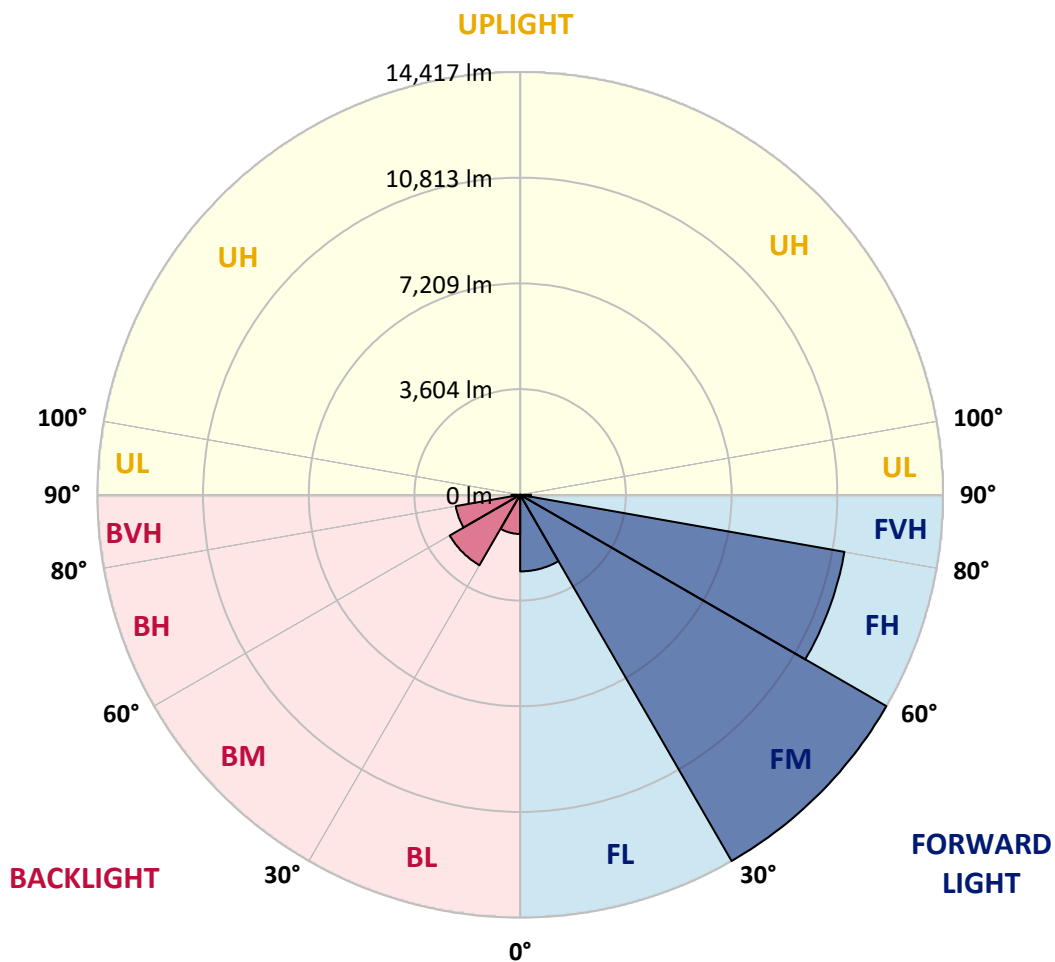
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2610.6	7.4			
FM (30°-60°)	14417.5	40.9			
FH (60°-80°)	11226.0	31.8			G4/12000
FVH (80°-90°)	372.1	1.1			G3/500
BL (0°-30°)	1336.2	3.8	B3/2500		
BM (30°-60°)	2772.6	7.9	B3/5000		
BH (60°-80°)	2230.2	6.3	B3/2500		G3/2500
BVH (80°-90°)	293.8	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°	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0
2.5°	5432.4	5420.8	5418.5	5383.9	5365.5	5326.3	5234.0	5139.4	5051.8	5005.6	4957.2
5°	5886.8	5863.7	5852.2	5794.5	5743.8	5656.1	5510.8	5360.9	5204.0	5123.3	5026.4
7.5°	6161.3	6163.6	6163.6	6117.5	6066.7	5960.6	5776.1	5570.8	5337.8	5231.7	5079.4
10°	6184.4	6186.7	6221.3	6232.8	6244.3	6189.0	6018.3	5759.9	5460.0	5321.6	5123.3
12.5°	5956.0	5972.1	6029.8	6112.9	6230.5	6290.5	6216.7	5962.9	5616.9	5448.5	5206.3
15°	5649.2	5665.3	5739.2	5866.0	6055.2	6255.9	6359.7	6195.9	5822.2	5623.8	5328.6
17.5°	5499.3	5517.7	5568.5	5670.0	5854.5	6124.4	6435.8	6445.0	6064.4	5836.0	5473.9
20°	5427.8	5441.6	5506.2	5589.2	5729.9	5988.3	6442.7	6708.0	6352.8	6087.5	5651.5
22.5°	5591.5	5596.1	5628.4	5674.6	5769.2	5967.5	6438.1	6980.2	6712.6	6403.5	5879.9
25°	6071.3	6041.3	6018.3	5960.6	5983.7	6124.4	6511.9	7270.8	7174.0	6818.7	6184.4
27.5°	6638.8	6634.2	6574.2	6440.4	6355.1	6445.0	6721.8	7596.1	7739.1	7347.0	6583.4
30°	7270.8	7273.1	7210.9	7047.1	6874.1	6883.3	7056.3	7972.1	8415.0	7983.6	7074.8
32.5°	7932.9	7974.4	7859.1	7695.3	7485.4	7418.5	7536.1	8426.5	9197.0	8735.6	7644.5
35°	8724.1	8731.0	8604.1	8364.2	8154.3	8048.2	8156.6	8994.0	10098.9	9619.1	8338.9
37.5°	9545.3	9549.9	9418.4	9111.6	8846.3	8777.1	8897.1	9683.7	11053.9	10624.8	9155.4
40°	10216.5	10265.0	10161.2	9872.8	9605.3	9563.7	9736.7	10509.5	12274.2	11815.1	10126.6
42.5°	10977.8	11033.1	10908.6	10608.7	10396.5	10382.6	10652.5	11450.6	13487.5	13192.2	11226.9
45°	11835.9	11914.3	11741.3	11404.5	11224.6	11529.1	11545.2	12493.3	14885.4	14733.1	12465.6
47.5°	12772.4	12837.0	12696.3	12334.1	12138.1	12578.6	12419.5	13621.3	16396.3	16384.8	13805.8
50°	13494.4	13565.9	13579.8	13420.6	13215.3	13270.7	13379.1	14806.9	17902.6	18082.5	15192.2
52.5°	13362.9	13432.1	13743.5	14161.1	14490.9	14347.9	14479.4	16066.4	19358.1	19738.8	16509.3
55°	12301.8	12338.7	12922.3	13914.2	15319.0	16001.8	16011.1	17436.6	20742.2	21275.0	17759.6
57.5°	10389.5	10394.2	11153.1	12615.5	14836.9	17074.5	18428.5	19157.5	22186.2	22972.8	19309.7
60°	7351.6	7370.0	8253.5	10165.8	13109.2	16945.3	21028.2	22236.9	23858.6	24880.5	21307.3
62.5°	4364.3	4405.9	5072.5	6606.5	9736.7	15284.4	22564.5	27715.5	26322.2	27678.5	24504.5
65°	2839.6	2874.2	3273.3	4043.7	5753.0	11120.8	22059.3	33020.9	30984.1	32079.8	29099.5
67.5°	2186.8	2214.5	2528.2	2994.1	3529.3	6011.4	17637.3	34132.8	36658.7	37000.1	32977.1
69°	1921.5	1944.6	2175.3	2622.8	2971.1	3979.1	13143.8	32114.4	38077.3	38264.2	33025.6
70°	1780.8	1799.3	2016.1	2403.6	2728.9	3176.4	10059.7	29770.8	37558.3	38035.8	32072.9
72.5°	1467.1	1483.2	1637.8	1935.4	2230.6	2262.9	4456.6	21738.7	31625.4	33152.4	27141.1
75°	1224.9	1234.1	1335.6	1552.4	1806.2	1801.6	2276.7	12313.4	19298.2	21118.2	16758.4
77.5°	1021.9	1028.8	1095.7	1229.5	1425.6	1418.6	1603.2	5314.7	8521.1	8221.2	5769.2
80°	901.9	906.5	941.1	975.7	1100.3	1093.4	1188.0	2440.5	3467.0	3204.1	2182.2
82.5°	685.1	694.3	869.6	885.8	853.5	823.5	828.1	1421.0	1776.2	1617.0	1171.8
85°	387.5	389.8	558.2	652.8	742.8	558.2	537.5	733.5	876.6	768.1	512.1
87.5°	173.0	179.9	267.6	309.1	401.4	327.6	306.8	311.4	378.3	313.7	203.0
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°	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0	4948.0
2.5°	4911.0	4871.8	4779.6	4685.0	4590.4	4530.4	4468.2	4410.5	4387.4	4385.1	4341.3
5°	4931.8	4839.5	4629.6	4398.9	4179.8	4009.1	3866.1	3773.8	3683.9	3667.7	3628.5
7.5°	4938.7	4788.8	4447.4	4078.3	3743.8	3508.5	3365.5	3303.2	3259.4	3247.9	3234.0
10°	4936.4	4724.2	4244.4	3739.2	3358.6	3181.0	3127.9	3141.8	3160.2	3169.5	3169.5
12.5°	4973.3	4694.2	4041.4	3420.9	3109.5	3024.1	3065.7	3137.2	3192.5	3215.6	3220.2
15°	5040.2	4675.8	3817.7	3144.1	2934.2	2954.9	3056.4	3160.2	3238.7	3273.3	3282.5
17.5°	5123.3	4650.4	3559.3	2915.7	2832.7	2904.2	3035.7	3167.2	3261.7	3305.6	3312.5
20°	5215.5	4613.5	3291.7	2745.0	2742.7	2832.7	2964.2	3111.8	3213.3	3261.7	3259.4
22.5°	5340.1	4578.9	3042.6	2620.5	2643.5	2726.6	2835.0	2968.8	3063.3	3107.2	3097.9
25°	5506.2	4546.6	2818.8	2509.7	2530.5	2585.9	2662.0	2763.5	2830.4	2853.4	2837.3
27.5°	5729.9	4521.2	2643.5	2408.2	2405.9	2431.3	2477.4	2532.8	2565.1	2558.2	2532.8
30°	6004.4	4495.8	2514.3	2318.3	2286.0	2283.7	2304.4	2336.7	2357.5	2316.0	2295.2
32.5°	6311.2	4452.0	2399.0	2239.8	2182.2	2161.4	2170.6	2214.5	2299.8	2258.3	2242.1
35°	6673.4	4401.3	2283.7	2154.5	2110.7	2071.5	2078.4	2172.9	2431.3	2401.3	2385.2
37.5°	7109.4	4355.1	2177.6	2062.2	2059.9	2011.5	2006.9	2119.9	2465.9	2401.3	2387.5
40°	7633.0	4345.9	2083.0	1960.7	1997.6	1979.2	1963.0	2032.2	2274.4	2143.0	2117.6
42.5°	8265.0	4387.4	2013.8	1863.8	1926.1	1970.0	1940.0	1956.1	2055.3	1937.7	1916.9
45°	9003.2	4500.4	1963.0	1778.5	1850.0	1963.0	1928.4	1914.6	1930.7	1866.2	1852.3
47.5°	9863.6	4701.1	1928.4	1707.0	1778.5	1944.6	1923.8	1896.1	1889.2	1852.3	1843.1
50°	10784.0	4971.0	1905.4	1642.4	1713.9	1912.3	1921.5	1882.3	1870.8	1854.6	1850.0
52.5°	11697.5	5264.0	1877.7	1587.0	1660.9	1873.1	1923.8	1868.5	1852.3	1843.1	1838.5
55°	12606.3	5568.5	1826.9	1538.6	1621.6	1826.9	1921.5	1850.0	1831.5	1831.5	1831.5
57.5°	13785.1	6032.1	1760.0	1499.4	1570.9	1767.0	1891.5	1829.2	1803.9	1806.2	1808.5
60°	15487.4	6809.5	1686.2	1455.6	1504.0	1697.8	1845.4	1792.3	1762.3	1771.6	1773.9
62.5°	18331.6	8168.2	1584.7	1393.3	1434.8	1623.9	1785.4	1741.6	1713.9	1730.1	1732.4
65°	22123.9	9812.9	1450.9	1314.8	1363.3	1540.9	1709.3	1681.6	1651.6	1690.8	1688.5
67.5°	24437.6	10295.0	1310.2	1231.8	1294.1	1453.2	1614.7	1603.2	1582.4	1651.6	1647.0
69°	23678.7	9423.0	1229.5	1178.7	1245.6	1393.3	1554.7	1550.1	1534.0	1600.9	1596.3
70°	22499.9	8608.7	1178.7	1144.1	1220.3	1356.4	1515.5	1515.5	1499.4	1557.0	1545.5
72.5°	18073.3	6385.0	1061.1	1056.5	1132.6	1254.9	1409.4	1421.0	1411.7	1432.5	1421.0
75°	10611.0	3847.6	945.8	959.6	1026.5	1146.4	1291.8	1301.0	1291.8	1289.5	1291.8
77.5°	3679.2	1725.4	835.0	855.8	913.5	1035.7	1162.6	1181.0	1167.2	1151.1	1155.7
80°	1439.4	1003.4	715.1	745.1	793.5	911.2	1033.4	1045.0	1024.2	1021.9	1003.4
82.5°	865.0	611.3	555.9	604.4	664.3	791.2	892.7	888.1	871.9	966.5	846.6
85°	376.0	339.1	406.0	454.4	484.4	592.8	754.3	733.5	694.3	611.3	597.4
87.5°	152.2	175.3	223.8	269.9	290.6	382.9	516.7	498.3	505.2	415.2	412.9
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)