

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: P196752

Luminaire Tested: **NAV-AF-06-D-UNV-T2-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196752
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-T2-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37409.3 lumens
Efficiency: N/A
Efficacy: 97.9 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): 382
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

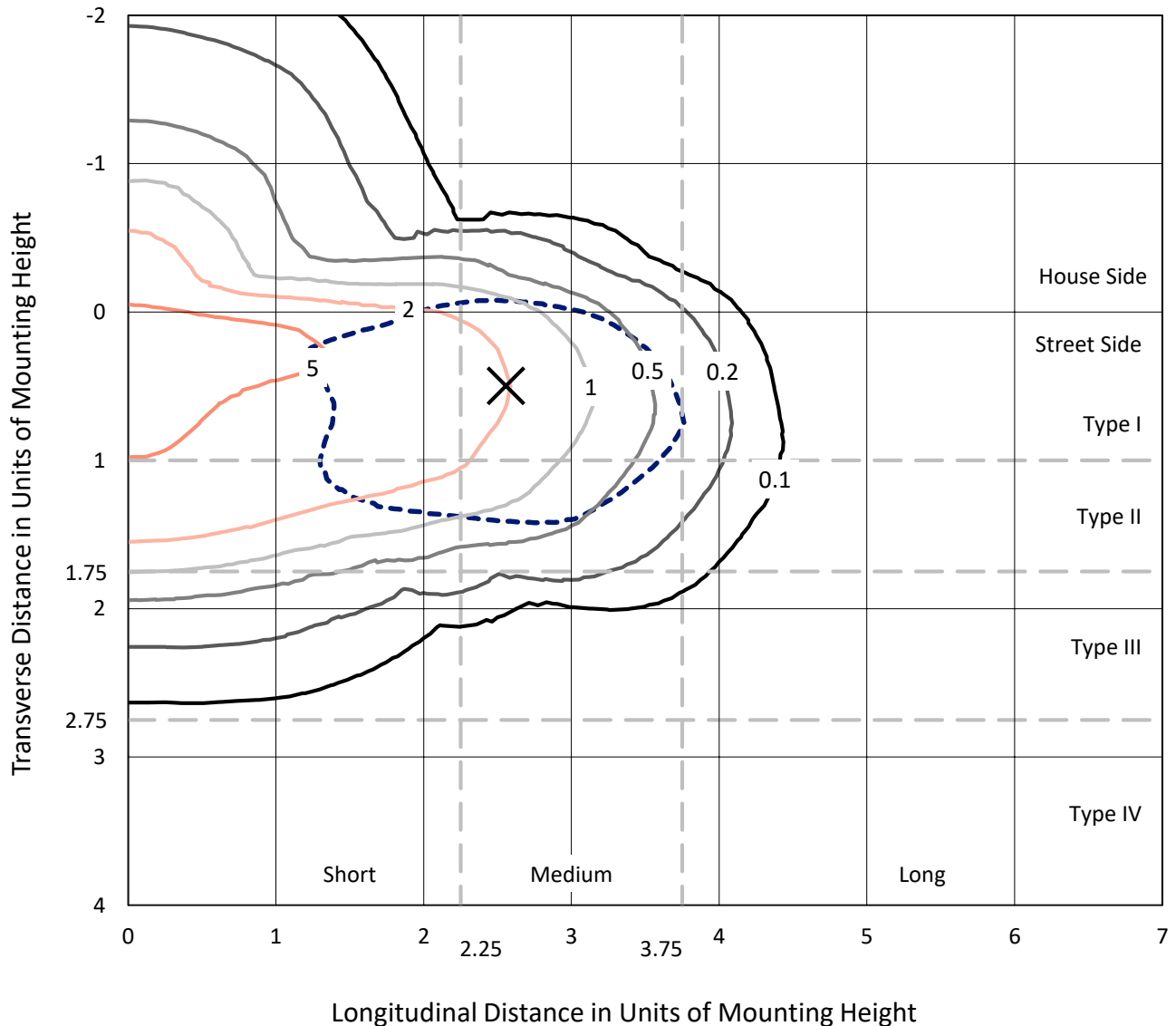


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Iso-Footcandle Lines of Horizontal Illumination

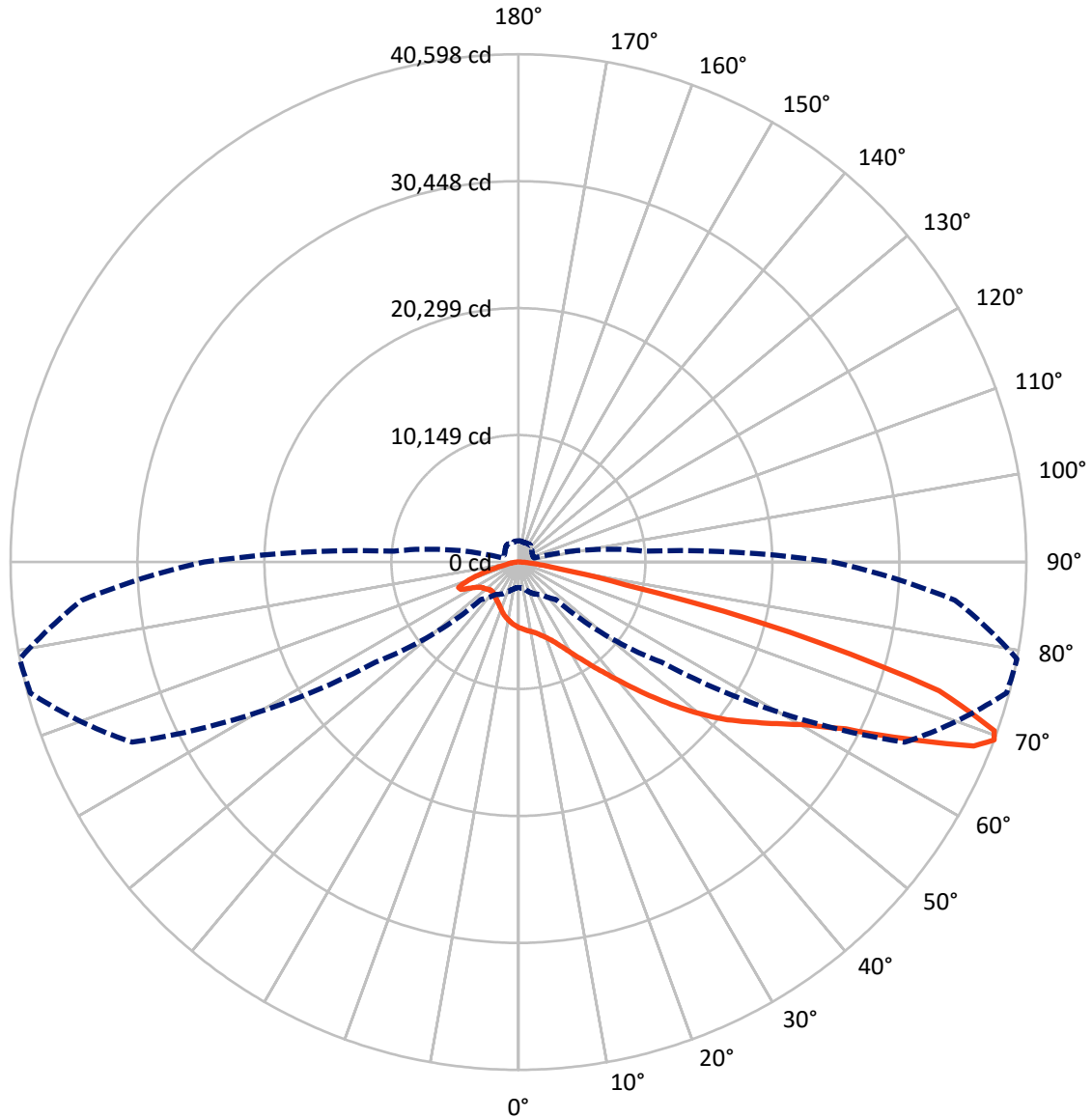
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7 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	7037.4	0.0	7037.4
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	30371.9	0.0	30371.9
	% Fixture	81.2	0.0	81.2
Total	Lumens	37409.3	0.0	37409.3
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	486.7	1.3
10°-20°	1395.3	3.7
20°-30°	2305.6	6.2
30°-40°	3733.3	10.0
40°-50°	5964.0	15.9
50°-60°	8541.1	22.8
60°-70°	9516.0	25.4
70°-80°	4760.8	12.7
80°-90°	706.5	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°	37409.3	100.0
0°-180°	37409.3	100.0

Coefficient of Utilization



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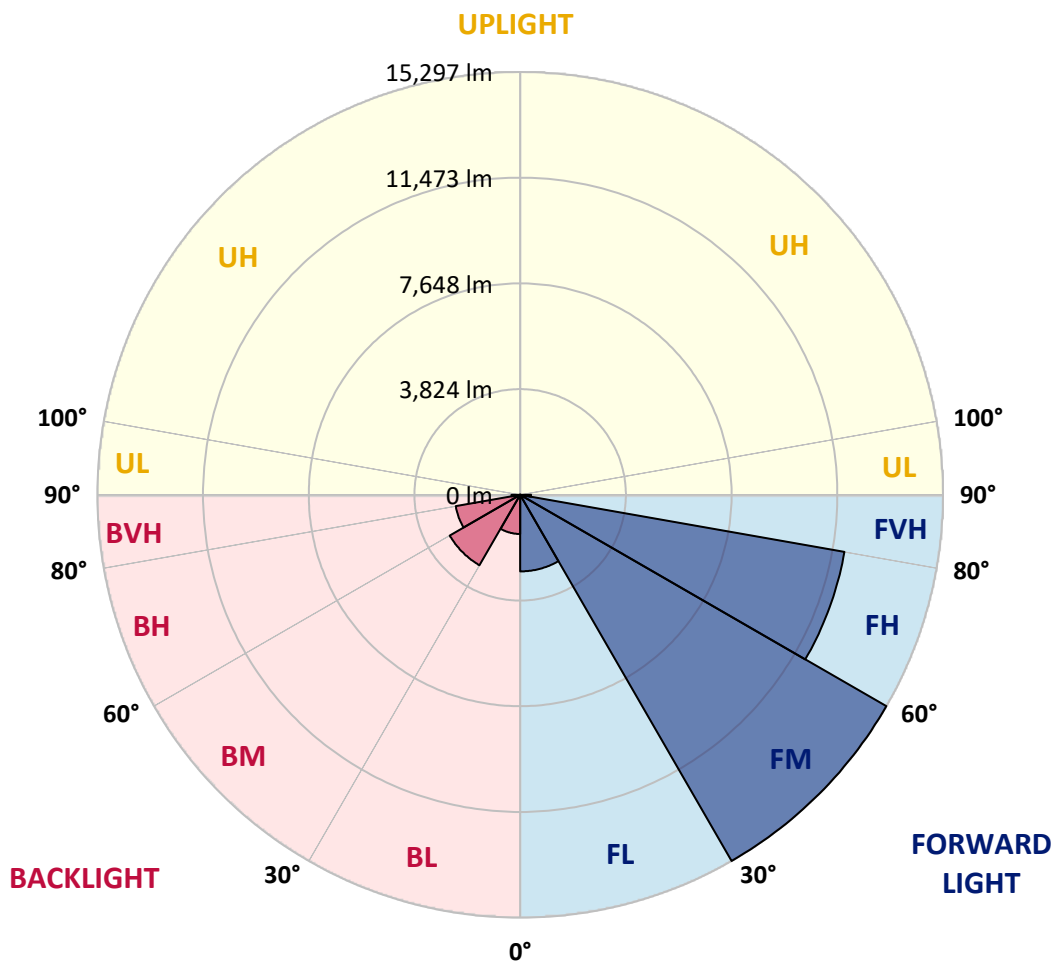
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2769.8	7.4			
FM (30°-60°)	15296.7	40.9			
FH (60°-80°)	11910.6	31.8			G4/12000
FVH (80°-90°)	394.8	1.1			G3/500
BL (0°-30°)	1417.7	3.8	B3/2500		
BM (30°-60°)	2941.7	7.9	B3/5000		
BH (60°-80°)	2366.2	6.3	B3/2500		G3/2500
BVH (80°-90°)	311.7	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°	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7
2.5°	5763.7	5751.4	5749.0	5712.3	5692.7	5651.1	5553.2	5452.8	5359.8	5310.9	5259.5
5°	6245.8	6221.3	6209.1	6147.9	6094.1	6001.1	5846.9	5687.8	5521.4	5435.7	5333.0
7.5°	6537.1	6539.5	6539.5	6490.5	6436.7	6324.2	6128.4	5910.5	5663.4	5550.7	5389.2
10°	6561.6	6564.0	6600.7	6612.9	6625.2	6566.4	6385.3	6111.2	5793.0	5646.2	5435.7
12.5°	6319.2	6336.4	6397.5	6485.6	6610.5	6674.1	6595.8	6326.5	5959.4	5780.8	5523.8
15°	5993.8	6010.9	6089.1	6223.7	6424.5	6637.4	6747.6	6573.8	6177.3	5966.7	5653.5
17.5°	5834.7	5854.2	5908.0	6015.7	6211.5	6497.8	6828.2	6838.1	6434.3	6191.9	5807.6
20°	5758.7	5773.5	5842.0	5930.0	6079.4	6353.5	6835.6	7117.0	6740.2	6458.8	5996.1
22.5°	5932.6	5937.4	5971.7	6020.6	6121.0	6331.5	6830.8	7405.9	7121.9	6794.1	6238.4
25°	6441.6	6409.8	6385.3	6324.2	6348.6	6497.8	6909.0	7714.2	7611.4	7234.6	6561.6
27.5°	7043.6	7038.8	6975.1	6833.2	6742.6	6838.1	7131.8	8059.3	8211.1	7795.0	6985.0
30°	7714.2	7716.7	7650.7	7476.8	7293.3	7303.1	7486.7	8458.3	8928.1	8470.6	7506.2
32.5°	8416.7	8460.7	8338.3	8164.6	7941.8	7870.9	7995.7	8940.3	9757.8	9268.4	8110.8
35°	9256.1	9263.4	9128.8	8874.4	8651.5	8539.0	8654.1	9542.4	10714.7	10205.7	8847.4
37.5°	10127.4	10132.2	9992.8	9667.3	9385.8	9312.3	9439.7	10274.2	11728.0	11272.9	9713.8
40°	10839.6	10891.0	10780.8	10474.9	10191.0	10147.0	10330.6	11150.5	13022.7	12535.7	10744.1
42.5°	11647.2	11706.0	11573.9	11255.7	11030.5	11015.8	11302.1	12149.0	14310.0	13996.7	11911.6
45°	12557.7	12640.9	12457.3	12100.0	11909.1	12232.2	12249.3	13255.3	15793.2	15631.6	13225.9
47.5°	13551.3	13619.8	13470.6	13086.3	12878.3	13345.8	13176.8	14451.9	17396.3	17384.0	14647.8
50°	14317.4	14393.3	14407.9	14239.1	14021.2	14080.0	14195.0	15710.0	18994.4	19185.3	16118.7
52.5°	14177.9	14251.3	14581.7	15024.7	15374.6	15222.9	15362.4	17046.2	20538.7	20942.5	17516.1
55°	13052.1	13091.2	13710.4	14762.8	16253.3	16977.7	16987.5	18500.0	22007.1	22572.5	18842.7
57.5°	11023.1	11028.1	11833.3	13385.0	15741.7	18115.7	19552.4	20325.8	23539.3	24373.8	20487.3
60°	7799.9	7819.4	8756.8	10785.7	13908.7	17978.7	22310.6	23593.1	25313.6	26397.8	22606.8
62.5°	4630.5	4674.5	5381.9	7009.4	10330.6	16216.6	23940.6	29405.7	27927.4	29366.4	25998.9
65°	3012.8	3049.4	3473.0	4290.3	6103.9	11799.0	23404.7	35034.7	32873.7	34036.2	30874.2
67.5°	2320.1	2349.5	2682.4	3176.7	3744.6	6378.0	18713.0	36214.4	38894.3	39256.6	34988.2
69°	2038.7	2063.2	2307.9	2782.8	3152.2	4221.8	13945.5	34072.9	40399.4	40597.7	35039.7
70°	1889.4	1909.0	2139.1	2550.2	2895.3	3370.1	10673.2	31586.3	39848.8	40355.5	34028.8
72.5°	1556.5	1573.7	1737.7	2053.4	2366.7	2400.9	4728.4	23064.4	33554.1	35174.3	28796.3
75°	1299.5	1309.4	1417.1	1647.1	1916.3	1911.4	2415.6	13064.3	20475.0	22406.2	17780.5
77.5°	1084.2	1091.5	1162.5	1304.4	1512.4	1505.1	1700.9	5638.9	9040.7	8722.6	6121.0
80°	956.9	961.8	998.5	1035.2	1167.4	1160.2	1260.5	2589.3	3678.4	3399.5	2315.2
82.5°	726.9	736.6	922.7	939.8	905.5	873.7	878.7	1507.6	1884.5	1715.6	1243.3
85°	411.2	413.6	592.3	692.6	788.1	592.3	570.3	778.3	930.1	815.0	543.3
87.5°	183.5	190.8	283.8	328.0	425.9	347.6	325.5	330.4	401.4	332.8	215.3
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°	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7	5249.7
2.5°	5210.6	5168.9	5071.0	4970.8	4870.3	4806.8	4740.6	4679.5	4655.0	4652.6	4606.1
5°	5232.5	5134.6	4912.0	4667.2	4434.8	4253.6	4101.9	4004.1	3908.5	3891.4	3849.7
7.5°	5240.0	5080.9	4718.6	4327.0	3972.1	3722.5	3570.8	3504.7	3458.2	3445.9	3431.3
10°	5237.5	5012.3	4503.2	3967.3	3563.4	3375.0	3318.6	3333.4	3352.9	3362.8	3362.8
12.5°	5276.6	4980.5	4287.9	3629.5	3299.1	3208.5	3252.6	3328.5	3387.2	3411.7	3416.5
15°	5347.5	4960.9	4050.5	3335.8	3113.2	3135.0	3242.9	3352.9	3436.2	3473.0	3482.6
17.5°	5435.7	4934.0	3776.3	3093.5	3005.4	3081.3	3220.8	3360.3	3460.7	3507.1	3514.5
20°	5533.7	4894.9	3492.5	2912.5	2910.0	3005.4	3144.9	3301.6	3409.2	3460.7	3458.2
22.5°	5665.7	4858.1	3228.2	2780.2	2804.6	2892.8	3007.9	3149.8	3250.1	3296.7	3286.8
25°	5842.0	4823.9	2990.8	2662.7	2684.8	2743.5	2824.4	2932.0	3003.0	3027.5	3010.3
27.5°	6079.4	4796.9	2804.6	2555.1	2552.7	2579.6	2628.6	2687.2	2721.5	2714.2	2687.2
30°	6370.6	4770.0	2667.7	2459.7	2425.3	2423.0	2445.0	2479.2	2501.3	2457.2	2435.2
32.5°	6696.2	4723.5	2545.3	2376.4	2315.2	2293.3	2302.9	2349.5	2440.1	2396.0	2378.9
35°	7080.3	4669.6	2423.0	2285.9	2239.4	2197.8	2205.1	2305.5	2579.6	2547.7	2530.7
37.5°	7542.9	4620.7	2310.4	2188.0	2185.5	2134.2	2129.3	2249.2	2616.3	2547.7	2533.0
40°	8098.6	4611.0	2210.0	2080.3	2119.4	2099.9	2082.7	2156.1	2413.1	2273.6	2246.7
42.5°	8769.0	4655.0	2136.6	1977.5	2043.5	2090.1	2058.2	2075.4	2180.6	2055.8	2033.8
45°	9552.2	4774.9	2082.7	1886.9	1962.9	2082.7	2046.0	2031.3	2048.5	1980.0	1965.2
47.5°	10465.2	4987.8	2046.0	1811.1	1886.9	2063.2	2041.2	2011.8	2004.5	1965.2	1955.5
50°	11441.6	5274.2	2021.6	1742.5	1818.4	2029.0	2038.7	1997.0	1984.8	1967.8	1962.9
52.5°	12410.9	5585.0	1992.3	1683.8	1762.2	1987.3	2041.2	1982.4	1965.2	1955.5	1950.6
55°	13375.1	5908.0	1938.4	1632.5	1720.5	1938.4	2038.7	1962.9	1943.2	1943.2	1943.2
57.5°	14625.8	6400.0	1867.4	1590.9	1666.6	1874.7	2006.9	1940.8	1913.9	1916.3	1918.8
60°	16431.9	7224.8	1789.0	1544.3	1595.7	1801.2	1957.9	1901.6	1869.9	1879.6	1882.1
62.5°	19449.6	8666.3	1681.4	1478.3	1522.3	1723.0	1894.3	1847.8	1818.4	1835.5	1838.0
65°	23473.1	10411.4	1539.5	1395.0	1446.4	1634.8	1813.4	1784.2	1752.3	1793.9	1791.6
67.5°	25927.9	10922.7	1390.1	1307.0	1373.0	1541.8	1713.1	1700.9	1678.9	1752.3	1747.5
69°	25122.7	9997.7	1304.4	1250.6	1321.6	1478.3	1649.6	1644.7	1627.5	1698.6	1693.6
70°	23872.0	9133.7	1250.6	1213.9	1294.7	1439.1	1608.0	1608.0	1590.9	1652.0	1639.8
72.5°	19175.5	6774.4	1125.8	1120.9	1201.7	1331.5	1495.3	1507.6	1497.8	1519.8	1507.6
75°	11258.1	4082.3	1003.4	1018.1	1089.1	1216.4	1370.5	1380.4	1370.5	1368.2	1370.5
77.5°	3903.7	1830.6	886.0	908.0	969.1	1098.9	1233.5	1253.1	1238.4	1221.3	1226.1
80°	1527.2	1064.6	758.7	790.5	842.0	966.7	1096.4	1108.7	1086.7	1084.2	1064.6
82.5°	917.8	648.6	589.8	641.3	704.8	839.4	947.2	942.3	925.1	1025.5	898.2
85°	398.9	359.8	430.7	482.2	513.9	629.0	800.4	778.3	736.6	648.6	633.9
87.5°	161.4	186.0	237.4	286.4	308.3	406.2	548.3	528.6	536.0	440.6	438.1
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)