

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: P196272

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196272
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-T2-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 4000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39566.7 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B4 - U0 - G5

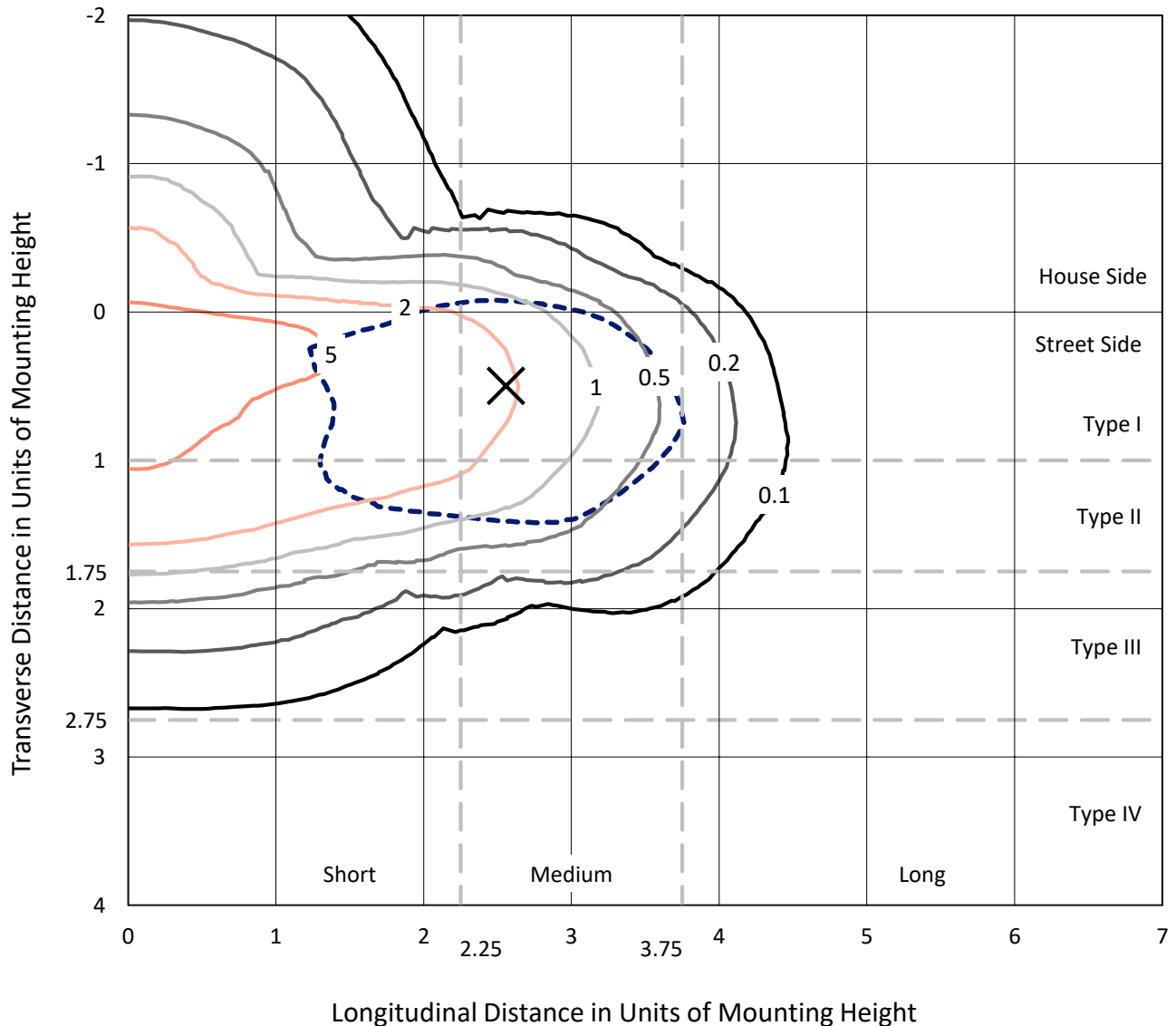
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196272
 CATALOG NUMBER: NAV-AF-06-D-UNV-T2-1200

Iso-Footcandle Lines of Horizontal Illumination

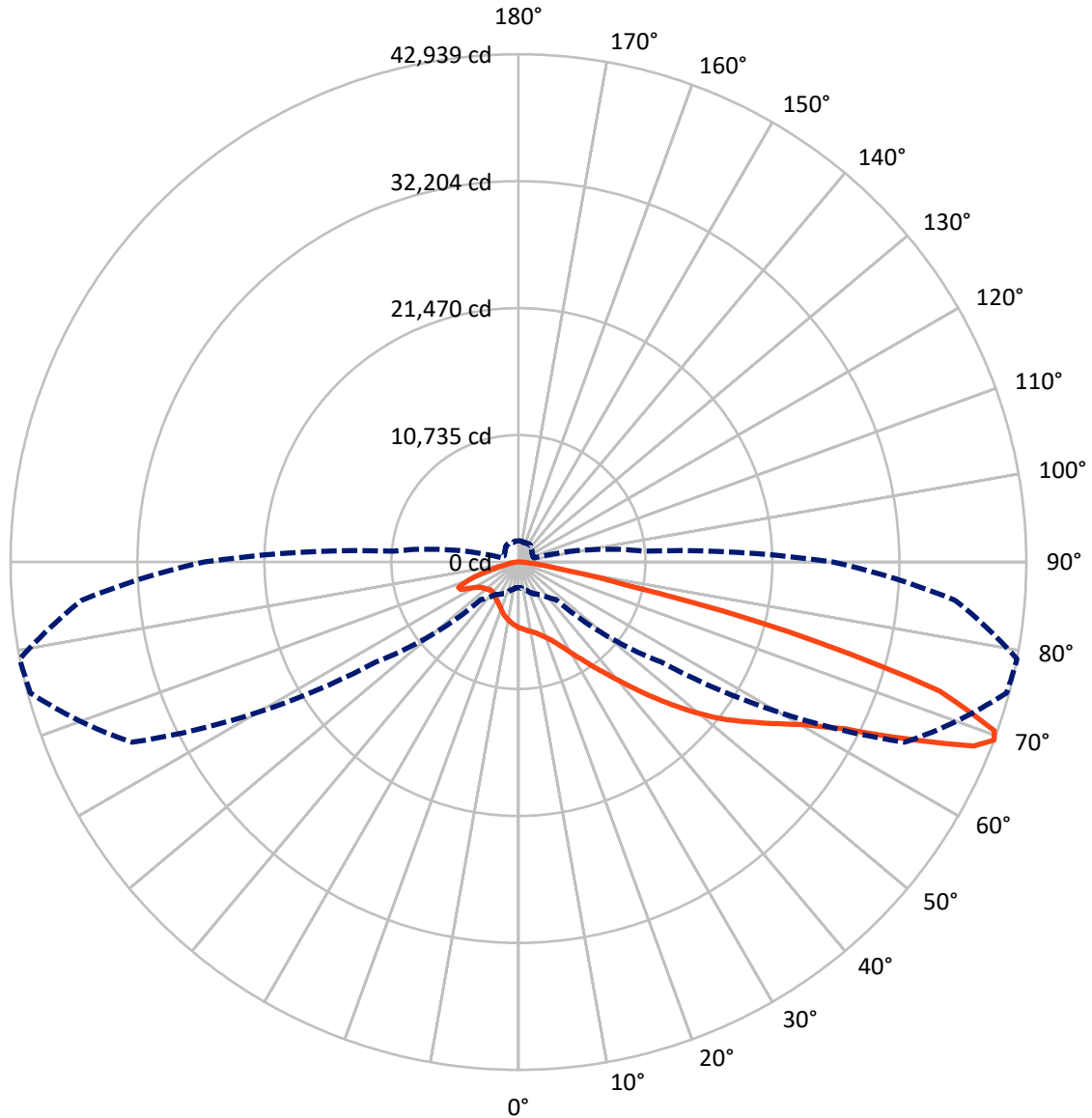
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 7.5 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P196272
CATALOG NUMBER: NAV-AF-06-D-UNV-T2-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196272

CATALOG NUMBER: NAV-AF-06-D-UNV-T2-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7443.2	0.0	7443.2
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	32123.5	0.0	32123.5
	% Fixture	81.2	0.0	81.2
Total	Lumens	39566.7	0.0	39566.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.7	1.3
10°-20°	1475.8	3.7
20°-30°	2438.5	6.2
30°-40°	3948.7	10.0
40°-50°	6308.0	15.9
50°-60°	9033.7	22.8
60°-70°	10064.8	25.4
70°-80°	5035.3	12.7
80°-90°	747.3	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°	39566.7	100.0
0°-180°	39566.7	100.0

Coefficient of Utilization



REPORT NUMBER: P196272

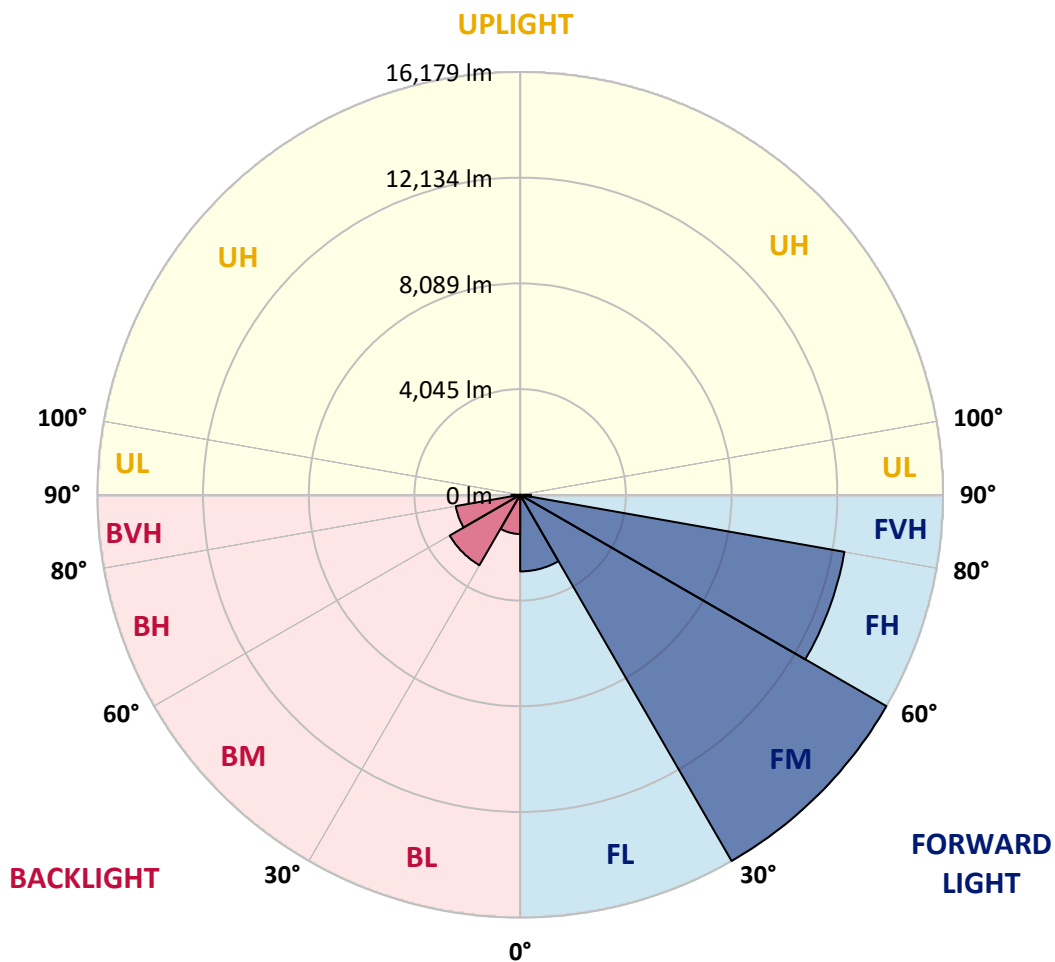
CATALOG NUMBER: NAV-AF-06-D-UNV-T2-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2929.6	7.4			
FM (30°-60°)	16178.9	40.9			
FH (60°-80°)	12597.5	31.8			G5
FVH (80°-90°)	417.5	1.1			G3/500
BL (0°-30°)	1499.5	3.8	B3/2500		
BM (30°-60°)	3111.4	7.9	B3/5000		
BH (60°-80°)	2502.7	6.3	B4/5000		G4/5000
BVH (80°-90°)	329.7	0.8			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type II Medium





REPORT NUMBER: P196272

CATALOG NUMBER: NAV-AF-06-D-UNV-T2-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5
2.5°	6096.1	6083.1	6080.5	6041.6	6021.0	5977.0	5873.5	5767.3	5669.0	5617.1	5562.8
5°	6606.0	6580.1	6567.1	6502.5	6445.5	6347.1	6184.0	6015.8	5839.8	5749.2	5640.4
7.5°	6914.0	6916.7	6916.7	6864.8	6807.9	6688.9	6481.7	6251.4	5989.9	5870.8	5700.0
10°	6939.9	6942.6	6981.3	6994.3	7007.2	6945.1	6753.5	6463.6	6127.2	5971.8	5749.2
12.5°	6683.7	6701.8	6766.5	6859.7	6991.7	7059.0	6976.2	6691.4	6303.1	6114.2	5842.4
15°	6339.4	6357.5	6440.3	6582.7	6795.0	7020.2	7136.6	6952.9	6533.5	6310.9	5979.6
17.5°	6171.2	6191.8	6248.8	6362.7	6569.8	6872.6	7222.0	7232.5	6805.3	6549.0	6142.6
20°	6090.9	6106.4	6178.9	6272.1	6430.0	6719.9	7229.8	7527.5	7128.9	6831.2	6342.0
22.5°	6274.7	6279.9	6316.1	6367.9	6473.9	6696.6	7224.7	7832.9	7532.7	7185.8	6598.2
25°	6813.1	6779.4	6753.5	6688.9	6714.8	6872.6	7307.6	8159.2	8050.4	7651.8	6939.9
27.5°	7449.8	7444.7	7377.4	7227.2	7131.5	7232.5	7543.0	8524.1	8684.6	8244.6	7387.8
30°	8159.2	8161.7	8091.8	7908.0	7713.9	7724.3	7918.4	8946.0	9443.1	8959.0	7939.1
32.5°	8902.0	8948.7	8819.3	8635.4	8399.9	8324.8	8456.8	9456.1	10320.6	9802.8	8578.5
35°	9789.9	9797.7	9655.3	9386.1	9150.6	9031.5	9153.2	10092.8	11332.8	10794.3	9357.6
37.5°	10711.4	10716.6	10569.1	10224.8	9927.1	9849.5	9984.1	10866.8	12404.4	11922.9	10274.0
40°	11464.7	11519.0	11402.6	11079.1	10778.7	10732.2	10926.3	11793.5	13773.7	13258.6	11363.8
42.5°	12319.0	12381.1	12241.3	11904.8	11666.7	11651.1	11954.0	12849.6	15135.3	14803.9	12598.6
45°	13281.9	13369.9	13175.8	12797.8	12595.9	12937.7	12955.8	14019.6	16704.0	16533.1	13988.5
47.5°	14332.9	14405.3	14247.5	13841.0	13621.0	14115.4	13936.8	15285.4	18399.5	18386.5	15492.5
50°	15143.0	15223.3	15238.9	15060.3	14829.8	14892.0	15013.6	16616.0	20089.8	20291.8	17048.3
52.5°	14995.5	15073.2	15422.6	15891.1	16261.3	16100.8	16248.3	18029.3	21723.2	22150.3	18526.4
55°	13804.8	13846.3	14501.1	15614.2	17190.6	17956.9	17967.2	19566.9	23276.3	23874.2	19929.3
57.5°	11658.9	11664.1	12515.7	14156.8	16649.6	19160.5	20680.0	21498.0	24896.8	25779.5	21668.9
60°	8249.7	8270.5	9261.9	11407.7	14710.7	19015.5	23597.3	24953.8	26773.5	27920.2	23910.6
62.5°	4897.6	4944.1	5692.2	7413.6	10926.3	17151.8	25321.3	31101.6	29538.0	31060.2	27498.2
65°	3186.5	3225.4	3673.2	4537.7	6455.8	12479.5	24754.4	37055.3	34769.5	35999.1	32654.6
67.5°	2454.0	2485.1	2837.1	3360.0	3960.5	6745.7	19792.2	38303.0	41137.4	41520.4	37006.1
69°	2156.3	2182.2	2441.0	2943.2	3334.1	4465.3	14749.6	36037.9	42729.4	42939.1	37060.4
70°	1998.3	2019.1	2262.4	2697.3	3062.3	3564.5	11288.7	33407.9	42146.9	42682.7	35991.3
72.5°	1646.3	1664.4	1837.8	2171.8	2503.2	2539.4	5001.1	24394.6	35489.1	37202.8	30457.0
75°	1374.5	1384.9	1498.7	1742.1	2026.9	2021.7	2554.9	13817.7	21655.9	23698.3	18805.9
77.5°	1146.7	1154.5	1229.6	1379.7	1599.7	1591.9	1799.1	5964.0	9562.1	9225.6	6473.9
80°	1012.1	1017.3	1056.1	1095.0	1234.7	1226.9	1333.1	2738.7	3890.6	3595.5	2448.7
82.5°	768.8	779.2	975.9	994.0	957.8	924.1	929.2	1594.6	1993.2	1814.6	1315.0
85°	434.9	437.5	626.5	732.5	833.5	626.5	603.1	823.2	983.7	862.0	574.7
87.5°	194.2	201.9	300.2	346.9	450.4	367.5	344.3	349.4	424.5	352.0	227.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196272

CATALOG NUMBER: NAV-AF-06-D-UNV-T2-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5	5552.5
2.5°	5511.0	5467.1	5363.5	5257.4	5151.3	5084.0	5014.0	4949.3	4923.5	4920.8	4871.7
5°	5534.4	5430.8	5195.3	4936.4	4690.4	4498.9	4338.4	4234.9	4133.9	4115.8	4071.8
7.5°	5542.1	5373.9	4990.8	4576.6	4201.3	3937.2	3776.7	3706.9	3657.7	3644.7	3629.1
10°	5539.5	5301.3	4763.0	4196.0	3769.0	3569.6	3510.1	3525.6	3546.4	3556.7	3556.7
12.5°	5580.9	5267.7	4535.2	3838.8	3489.4	3393.6	3440.2	3520.5	3582.6	3608.5	3613.7
15°	5656.0	5247.0	4284.0	3528.2	3292.7	3315.9	3429.9	3546.4	3634.3	3673.2	3683.5
17.5°	5749.2	5218.6	3994.1	3271.9	3178.7	3259.0	3406.5	3554.1	3660.2	3709.4	3717.2
20°	5852.7	5177.2	3693.9	3080.4	3077.8	3178.7	3326.3	3491.9	3605.9	3660.2	3657.7
22.5°	5992.5	5138.3	3414.3	2940.6	2966.5	3059.6	3181.4	3331.4	3437.6	3486.8	3476.4
25°	6178.9	5102.1	3163.3	2816.4	2839.6	2901.8	2987.2	3101.1	3176.2	3202.0	3183.9
27.5°	6430.0	5073.5	2966.5	2702.4	2699.9	2728.3	2780.1	2842.3	2878.5	2870.7	2842.3
30°	6738.0	5045.1	2821.5	2601.5	2565.3	2562.7	2586.0	2622.2	2645.6	2598.9	2575.6
32.5°	7082.3	4995.9	2692.1	2513.5	2448.7	2425.5	2435.9	2485.1	2580.8	2534.2	2516.0
35°	7488.7	4939.0	2562.7	2417.7	2368.5	2324.6	2332.3	2438.4	2728.3	2694.7	2676.6
37.5°	7977.9	4887.2	2443.6	2314.2	2311.6	2257.2	2252.0	2378.9	2767.2	2694.7	2679.1
40°	8565.6	4876.8	2337.4	2200.3	2241.7	2221.0	2202.8	2280.6	2552.4	2404.8	2376.3
42.5°	9274.8	4923.5	2259.8	2091.5	2161.5	2210.6	2176.9	2195.0	2306.4	2174.4	2151.1
45°	10103.2	5050.3	2202.8	1995.8	2076.0	2202.8	2164.1	2148.5	2166.6	2094.2	2078.6
47.5°	11068.6	5275.5	2164.1	1915.6	1995.8	2182.2	2158.8	2127.8	2120.1	2078.6	2068.3
50°	12101.5	5578.4	2138.2	1843.1	1923.2	2145.9	2156.3	2112.3	2099.3	2081.2	2076.0
52.5°	13126.6	5907.1	2107.1	1781.0	1863.7	2102.0	2158.8	2096.7	2078.6	2068.3	2063.1
55°	14146.5	6248.8	2050.1	1726.5	1819.7	2050.1	2156.3	2076.0	2055.3	2055.3	2055.3
57.5°	15469.3	6769.1	1975.1	1682.5	1762.9	1982.8	2122.6	2052.8	2024.2	2026.9	2029.4
60°	17379.6	7641.4	1892.3	1633.3	1687.8	1905.1	2070.9	2011.3	1977.7	1988.0	1990.6
62.5°	20571.2	9166.0	1778.3	1563.5	1610.1	1822.4	2003.6	1954.3	1923.2	1941.5	1944.0
65°	24826.9	11011.8	1628.2	1475.5	1529.8	1729.2	1918.1	1887.0	1853.4	1897.4	1894.8
67.5°	27423.2	11552.7	1470.3	1382.3	1452.2	1630.8	1812.0	1799.1	1775.7	1853.4	1848.3
69°	26571.6	10574.2	1379.7	1322.8	1397.9	1563.5	1744.6	1739.5	1721.4	1796.5	1791.3
70°	25248.8	9660.5	1322.8	1283.9	1369.3	1522.0	1700.7	1700.7	1682.5	1747.3	1734.3
72.5°	20281.3	7165.2	1190.7	1185.6	1271.0	1408.2	1581.6	1594.6	1584.2	1607.5	1594.6
75°	11907.4	4317.7	1061.3	1076.9	1151.9	1286.6	1449.6	1460.0	1449.6	1447.0	1449.6
77.5°	4128.7	1936.2	937.0	960.3	1025.1	1162.3	1304.7	1325.3	1309.8	1291.7	1296.9
80°	1615.2	1126.1	802.4	836.1	890.5	1022.4	1159.7	1172.6	1149.3	1146.7	1126.1
82.5°	970.7	686.0	623.8	678.2	745.5	887.9	1001.8	996.6	978.5	1084.6	950.0
85°	422.0	380.5	455.6	509.9	543.6	665.2	846.5	823.2	779.2	686.0	670.4
87.5°	170.8	196.7	251.1	302.9	326.1	429.7	579.8	559.1	566.9	466.0	463.4
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)