

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: P195408

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195408
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 39828 lumens
Efficiency: N/A
Efficacy: 104.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

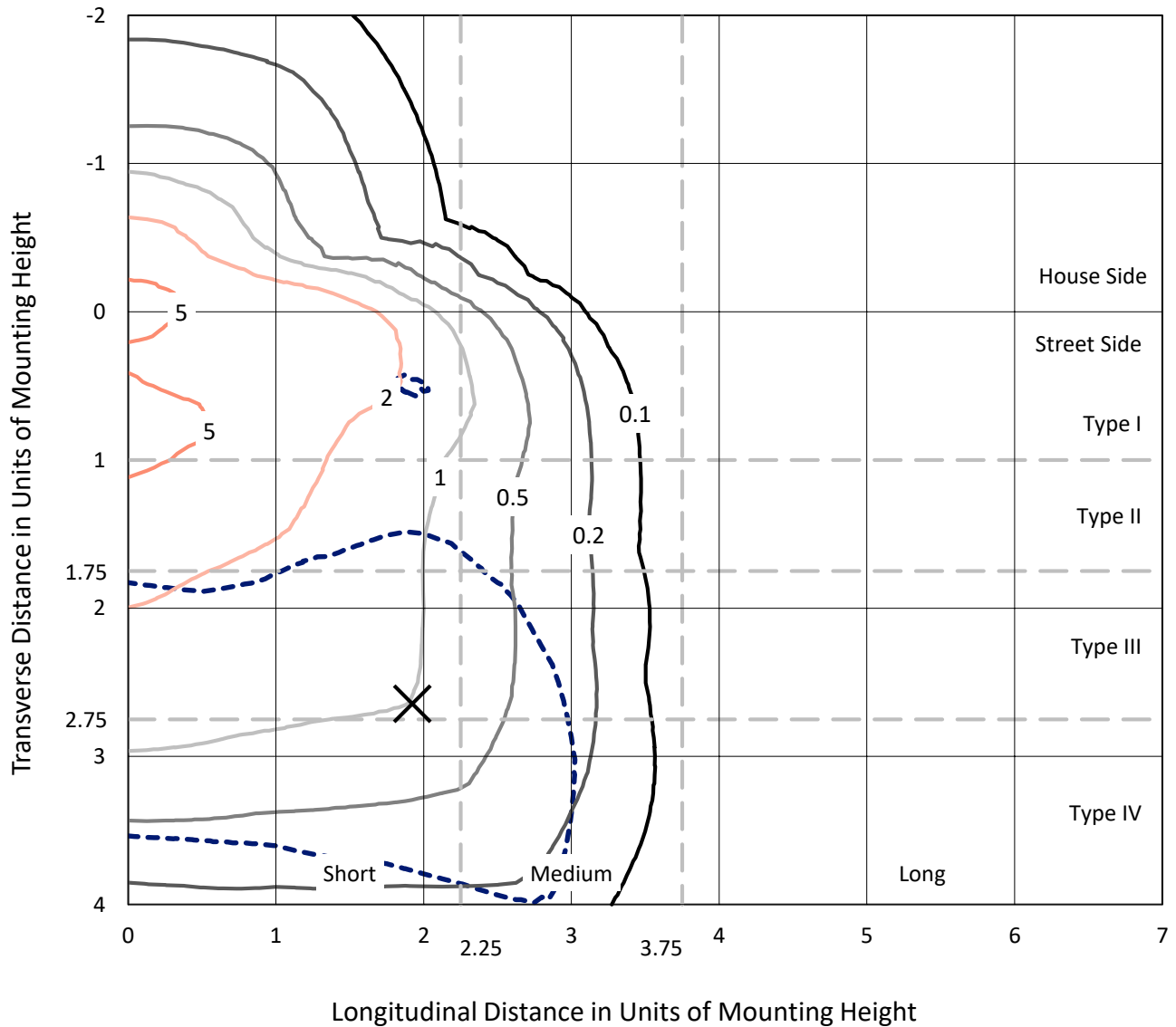
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

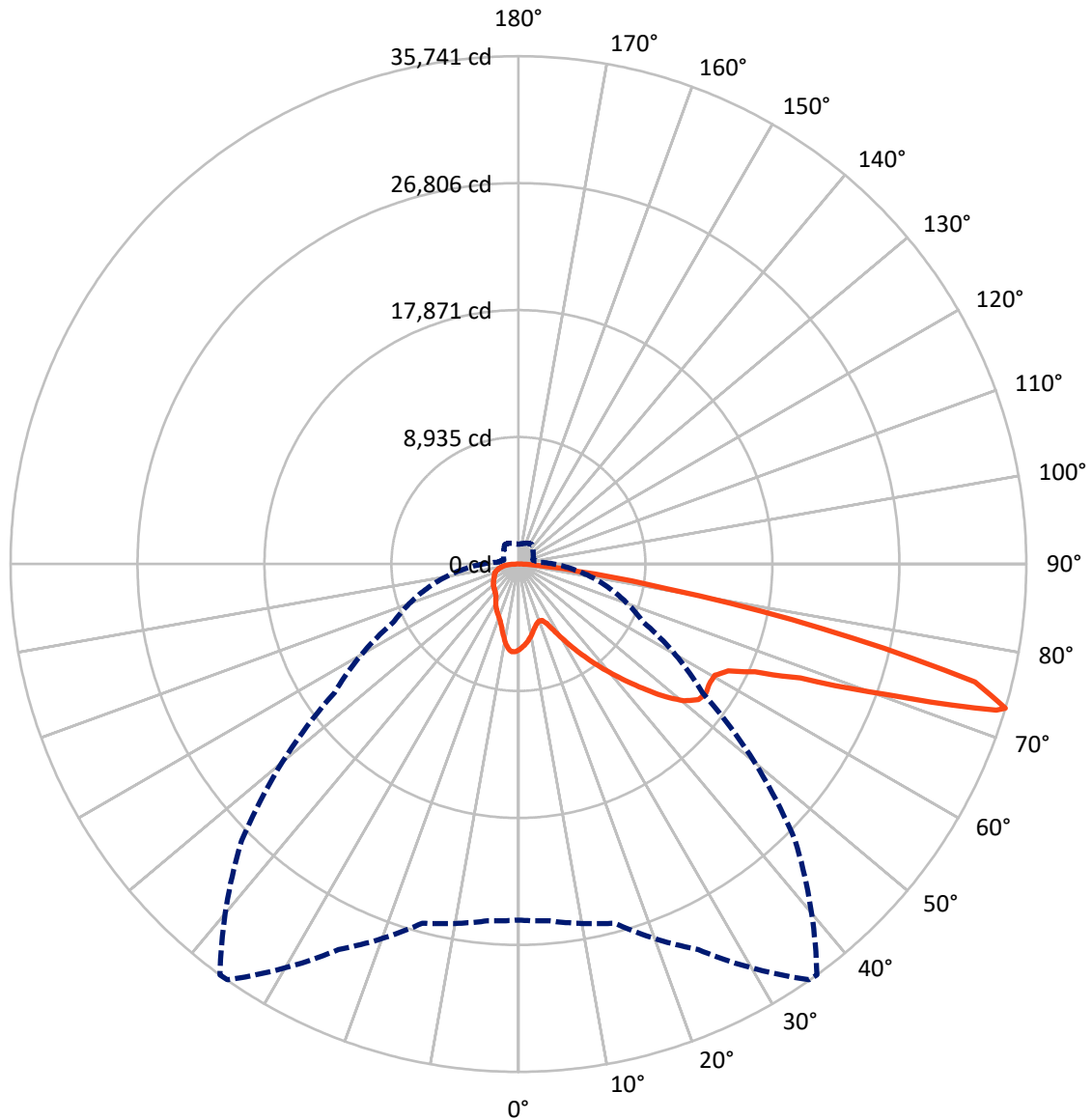
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.7 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	7680.0	0.0	7680.0
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	32148.0	0.0	32148.0
	% Fixture	80.7	0.0	80.7
Total	Lumens	39828.0	0.0	39828.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	548.0	1.4
10°-20°	1376.2	3.5
20°-30°	2206.4	5.5
30°-40°	3649.6	9.2
40°-50°	5647.3	14.2
50°-60°	7560.1	19.0
60°-70°	9875.8	24.8
70°-80°	8066.8	20.3
80°-90°	897.9	2.3
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°	39828.0	100.0
0°-180°	39828.0	100.0



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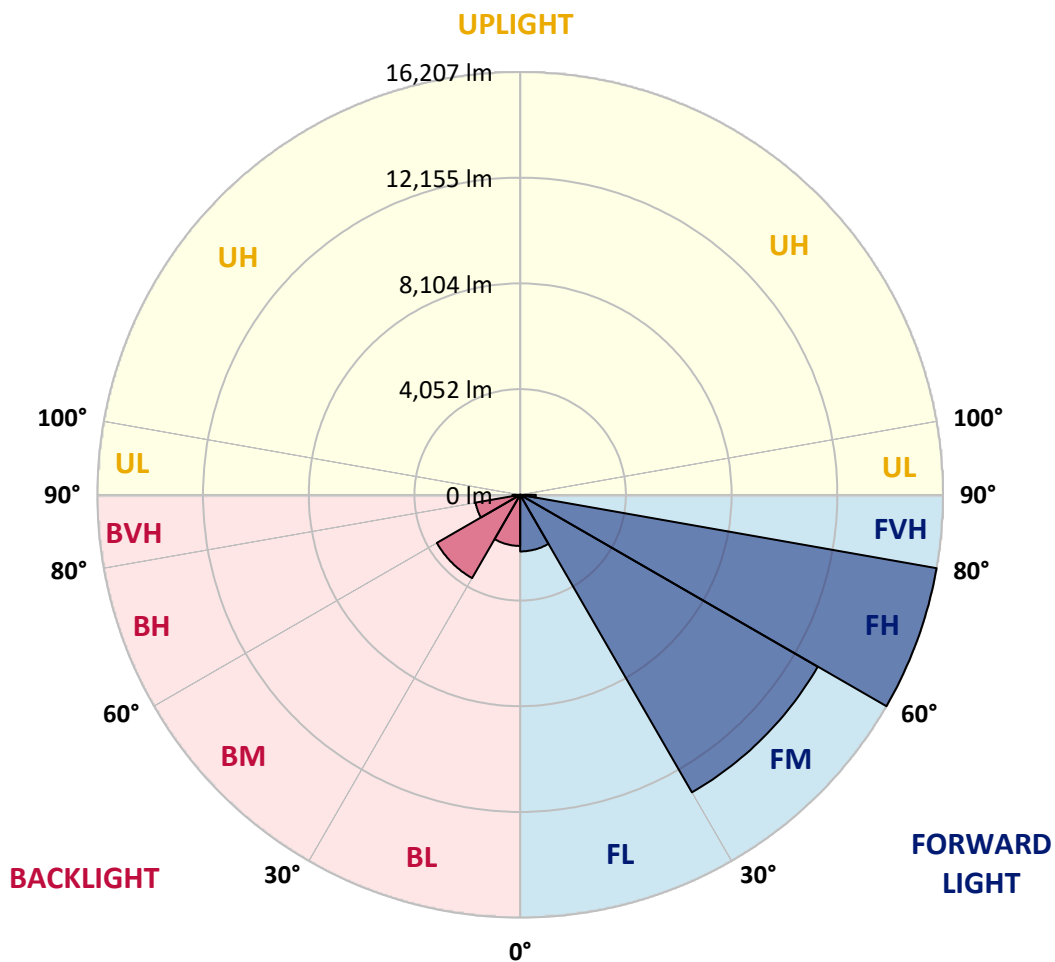
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2170.2	5.4			
FM (30°-60°)	13168.5	33.1			
FH (60°-80°)	16207.1	40.7			G5
FVH (80°-90°)	602.2	1.5			G4/750
BL (0°-30°)	1960.4	4.9	B3/2500		
BM (30°-60°)	3688.4	9.3	B3/5000		
BH (60°-80°)	1735.5	4.4	B3/2500		G3/2500
BVH (80°-90°)	295.7	0.7			G3/500
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8
2.5°	5802.5	5817.7	5820.2	5837.9	5837.9	5835.4	5843.0	5873.4	5888.5	5924.0	5954.3
5°	5516.6	5534.3	5541.9	5572.2	5610.2	5612.7	5640.6	5698.8	5754.4	5832.9	5898.7
7.5°	5195.2	5215.4	5235.7	5298.9	5354.6	5359.7	5412.8	5506.4	5579.8	5676.0	5794.9
10°	4883.9	4889.0	4909.2	4990.2	5063.6	5071.2	5147.1	5253.4	5352.1	5486.2	5620.3
12.5°	4628.3	4643.5	4638.5	4699.2	4762.5	4767.5	4868.7	5002.9	5147.1	5298.9	5458.4
15°	4539.8	4537.2	4484.1	4481.6	4509.4	4514.5	4613.2	4770.0	4932.0	5119.3	5324.2
17.5°	4600.5	4580.3	4441.1	4355.0	4337.3	4342.4	4415.8	4587.9	4759.9	4975.0	5220.5
20°	4934.5	4856.1	4529.6	4322.1	4263.9	4263.9	4307.0	4446.1	4635.9	4886.5	5195.2
22.5°	5726.6	5605.1	4909.2	4539.8	4334.8	4314.6	4281.7	4387.9	4598.0	4899.1	5298.9
25°	6723.6	6665.4	5605.1	5119.3	4696.7	4630.9	4413.2	4451.2	4676.4	5035.8	5582.3
27.5°	7647.3	7546.0	6518.6	5961.9	5364.7	5263.5	4802.9	4648.6	4863.7	5288.8	5992.3
30°	8186.3	8117.9	7457.5	6926.1	6215.0	6085.9	5425.5	5038.3	5197.7	5706.3	6574.3
32.5°	8773.3	8732.9	8398.8	7915.5	7136.1	6986.8	6230.2	5673.4	5708.9	6260.5	7275.3
35°	9342.7	9395.9	9206.1	8851.8	8128.1	7988.9	7310.7	6503.5	6339.0	6883.0	8024.3
37.5°	10026.0	10038.6	9919.7	9689.4	9170.6	9056.8	8497.5	7389.1	7024.8	7546.0	8748.0
40°	11389.9	11190.0	10724.4	10542.2	10233.5	10162.6	9524.9	8201.4	7662.4	8226.8	9431.3
42.5°	12865.2	12554.0	11825.2	11526.6	11402.6	11336.8	10380.2	8743.0	8259.7	8907.5	10101.9
45°	14054.6	13801.5	13087.9	12718.4	12733.6	12627.3	11126.7	9226.3	8907.5	9590.7	10850.9
47.5°	15226.2	14803.6	14004.0	13950.8	14127.9	13971.1	11840.4	9709.6	9583.1	10334.7	11599.9
50°	15302.1	14917.5	14593.6	15018.7	15322.4	15127.5	12488.2	10342.3	10284.1	11235.6	12566.6
52.5°	14378.5	14322.8	14816.3	15532.4	16036.0	15861.4	13017.0	10992.6	11000.2	12361.6	13743.3
55°	14041.9	13971.1	14563.2	15443.8	16124.5	16020.8	13411.8	11726.5	11794.8	13728.1	15006.0
57.5°	14608.8	14431.6	14548.0	15276.8	15917.0	15856.3	13821.8	12541.3	12665.3	15302.1	16172.6
60°	16367.5	16005.6	15388.2	15524.8	15924.6	15889.2	14408.8	13449.8	13657.3	16941.9	16911.5
62.5°	19001.8	18591.8	17334.1	16726.8	16638.2	16569.9	15378.0	14565.7	14669.5	18126.2	16481.3
65°	21891.6	21451.3	19955.8	18961.3	18440.0	18293.2	16941.9	15912.0	15261.6	18123.7	14806.1
67.5°	25135.8	24670.1	23179.7	22230.7	21666.4	21415.9	19480.0	17000.1	15069.3	16590.2	11847.9
70°	28458.3	28015.5	27332.3	27663.8	27911.7	27529.6	23478.3	17362.0	13687.6	13006.9	7956.0
72.5°	26694.6	26659.1	27177.9	30320.8	35101.0	35176.9	27471.4	16339.6	10575.1	7730.8	4241.2
73°	25057.3	25206.6	26168.2	29928.6	35715.9	35741.2	27549.9	15810.8	9709.6	6660.4	3724.9
75°	12981.6	13993.8	17561.9	24267.8	33071.5	33190.4	24285.5	11969.4	5787.3	3699.6	2510.3
77.5°	3476.9	3431.4	5658.3	11822.6	22048.5	21891.6	15345.1	5794.9	2773.5	2320.5	1761.2
80°	1191.9	1207.1	1925.7	4324.7	10291.7	10658.6	6660.4	2528.0	1824.5	1617.0	1247.6
82.5°	607.3	627.6	1007.2	1839.7	4304.4	4213.3	2143.4	1488.0	1222.2	981.8	698.4
85°	323.9	334.0	554.2	954.0	1579.1	1596.8	754.1	794.6	776.9	556.7	344.2
87.5°	159.4	164.5	265.7	420.1	584.6	564.3	263.2	344.2	382.1	313.8	189.8
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°	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8	6032.8
2.5°	5992.3	5992.3	6025.2	6080.9	6121.4	6159.3	6184.6	6225.1	6247.9	6245.3	6242.8
5°	5951.8	5977.1	6042.9	6111.2	6156.8	6187.1	6187.1	6204.9	6204.9	6197.3	6187.1
7.5°	5858.2	5901.2	5997.4	6058.1	6070.7	6037.8	5972.1	5921.4	5858.2	5825.3	5812.6
10°	5708.9	5764.5	5886.0	5913.8	5848.1	5731.7	5572.2	5435.6	5314.1	5258.4	5240.7
12.5°	5562.1	5635.5	5749.4	5706.3	5549.5	5321.7	5076.2	4889.0	4752.3	4699.2	4681.5
15°	5440.6	5529.2	5617.8	5483.7	5210.4	4894.0	4623.3	4448.7	4344.9	4304.4	4294.3
17.5°	5359.7	5463.4	5493.8	5243.3	4863.7	4509.4	4269.0	4155.1	4109.6	4091.9	4086.8
20°	5364.7	5481.1	5407.7	5010.4	4529.6	4172.8	4013.4	3980.5	3980.5	3980.5	3978.0
22.5°	5503.9	5605.1	5372.3	4792.8	4208.3	3889.4	3821.1	3848.9	3869.2	3869.2	3866.6
25°	5792.4	5848.1	5397.6	4582.8	3907.1	3644.0	3646.5	3699.6	3717.3	3717.3	3712.3
27.5°	6232.7	6187.1	5443.2	4350.0	3611.1	3421.3	3456.7	3504.8	3517.4	3509.8	3507.3
30°	6784.4	6602.2	5481.1	4076.7	3332.7	3213.8	3244.1	3272.0	3261.9	3244.1	3241.6
32.5°	7401.8	7024.8	5458.4	3770.5	3087.2	2998.7	3016.4	3031.6	3016.4	2973.4	2973.4
35°	8014.2	7406.9	5334.4	3436.5	2892.4	2791.2	2788.6	2836.7	2834.2	2783.6	2786.1
37.5°	8550.7	7708.0	5094.0	3130.3	2725.4	2639.3	2649.5	2679.8	2695.0	2626.7	2619.1
40°	9018.8	7915.5	4754.9	2869.6	2591.3	2596.3	2568.5	2520.4	2502.7	2472.3	2467.3
42.5°	9459.1	8059.7	4395.5	2652.0	2522.9	2581.1	2487.5	2373.6	2325.6	2353.4	2371.1
45°	9891.8	8221.7	4048.8	2472.3	2436.9	2535.6	2406.5	2280.0	2224.3	2237.0	2254.7
47.5°	10420.7	8446.9	3631.3	2280.0	2305.3	2452.1	2355.9	2219.3	2135.8	2085.2	2070.0
50°	11116.6	8773.3	3089.8	2072.5	2166.1	2361.0	2312.9	2130.7	2039.6	1938.4	1913.1
52.5°	11987.1	9082.1	2543.2	1905.5	2052.3	2282.5	2242.0	2054.8	1943.4	1822.0	1801.7
55°	12855.1	9125.1	2072.5	1761.2	1923.2	2176.3	2156.0	1994.1	1837.2	1738.5	1718.2
57.5°	13462.4	8717.7	1756.2	1639.8	1799.2	2044.7	2077.6	1920.7	1748.6	1672.7	1660.0
60°	13472.5	7743.4	1563.9	1558.8	1705.6	1930.8	1996.6	1834.6	1692.9	1642.3	1632.2
62.5°	12402.1	6240.3	1439.9	1498.1	1637.3	1837.2	1935.9	1786.6	1680.3	1660.0	1649.9
65°	10395.4	4610.6	1341.2	1442.4	1574.0	1758.7	1885.2	1771.4	1675.2	1667.6	1660.0
67.5°	7675.1	3160.6	1257.7	1371.5	1503.1	1677.7	1837.2	1748.6	1644.8	1675.2	1665.1
70°	4828.3	2110.5	1179.2	1290.6	1409.5	1584.1	1773.9	1708.1	1606.9	1589.2	1556.3
72.5°	2725.4	1525.9	1085.6	1186.8	1288.0	1460.1	1687.9	1639.8	1520.8	1450.0	1417.1
73°	2462.2	1444.9	1062.8	1161.5	1260.2	1434.8	1667.6	1619.5	1495.5	1417.1	1386.7
75°	1801.7	1181.8	959.1	1057.8	1143.8	1318.4	1571.5	1518.3	1384.2	1290.6	1270.3
77.5°	1305.8	911.0	825.0	913.5	989.4	1156.5	1427.2	1366.5	1234.9	1184.3	1164.0
80°	941.4	690.8	683.2	769.3	835.1	1004.6	1272.9	1209.6	1083.1	1232.4	1199.5
82.5°	561.8	442.8	501.0	597.2	665.5	842.7	1105.8	1032.5	911.0	921.1	784.5
85°	268.2	250.5	311.3	392.2	440.3	577.0	921.1	862.9	728.8	597.2	584.6
87.5°	118.9	113.9	149.3	174.6	235.3	346.7	630.1	559.2	528.9	316.3	248.0
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)