

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: P197310

Luminaire Tested: **NAV-AF-06-D-UNV-T4FT-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197310
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-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA 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: 19520 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - U0 - G4

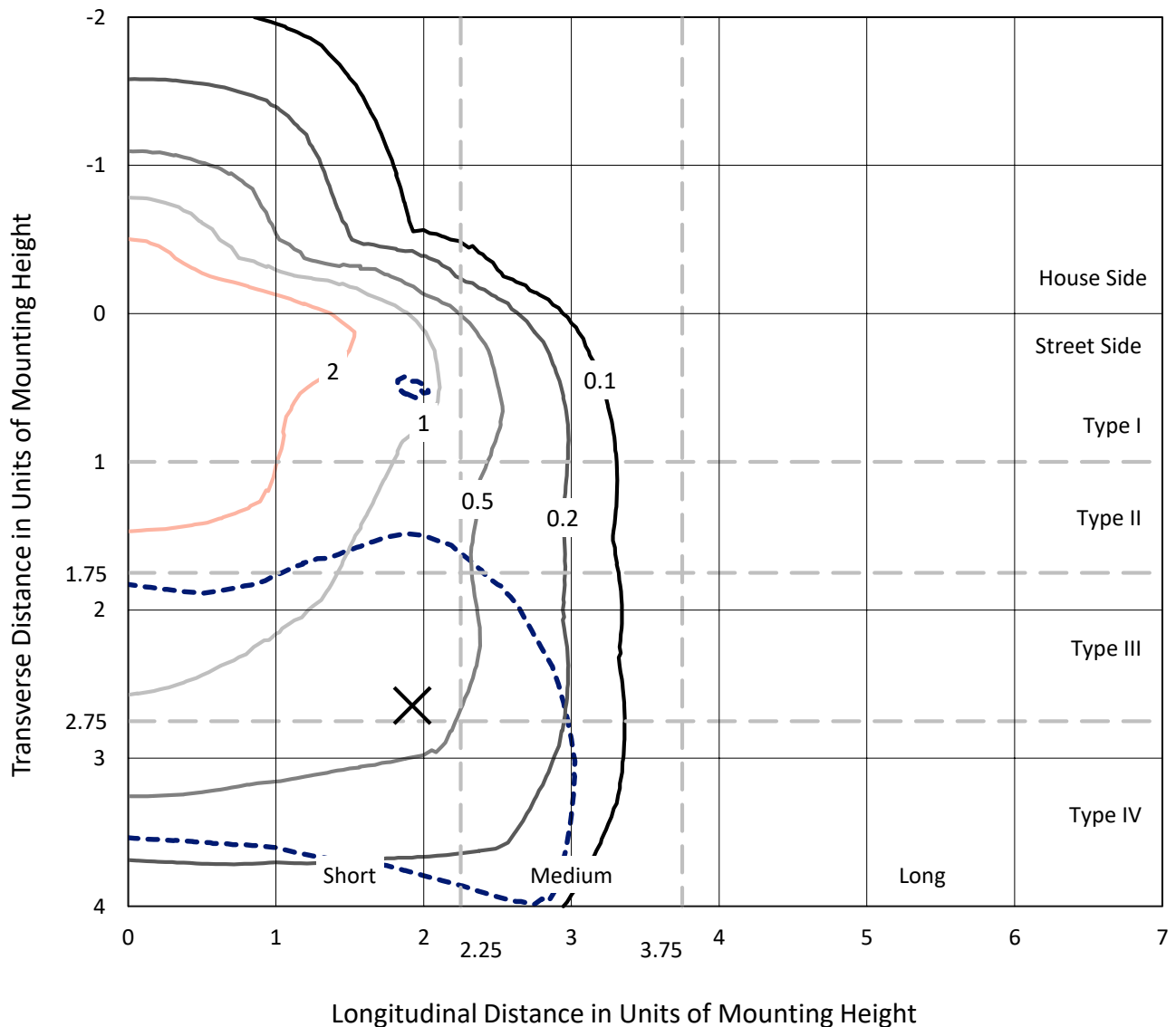
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

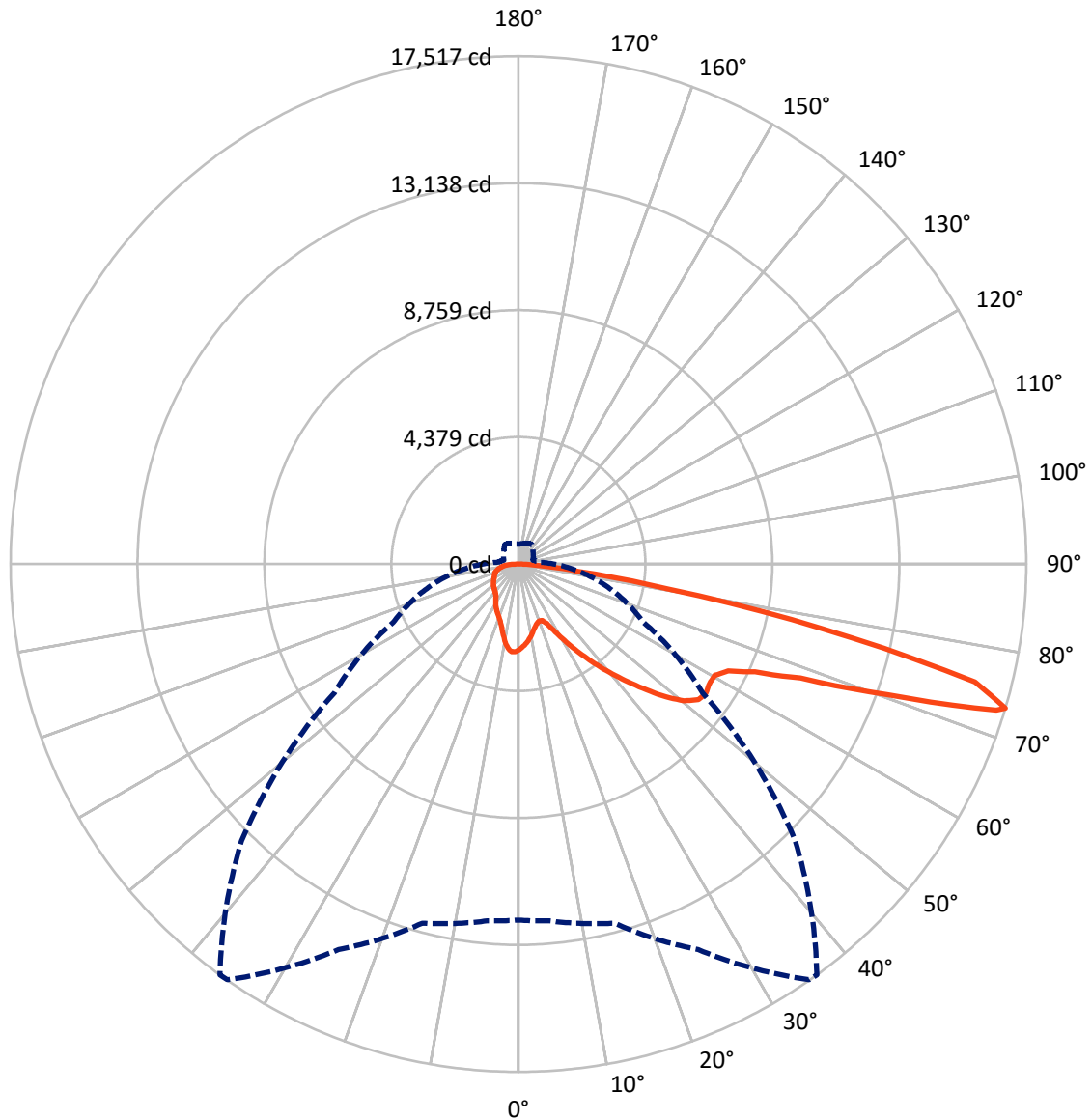
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 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	3764.0	0.0	3764.0
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	15756.0	0.0	15756.0
	% Fixture	80.7	0.0	80.7
Total	Lumens	19520.0	0.0	19520.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.6	1.4
10°-20°	674.5	3.5
20°-30°	1081.4	5.5
30°-40°	1788.7	9.2
40°-50°	2767.8	14.2
50°-60°	3705.2	19.0
60°-70°	4840.2	24.8
70°-80°	3953.6	20.3
80°-90°	440.1	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°	19520.0	100.0
0°-180°	19520.0	100.0



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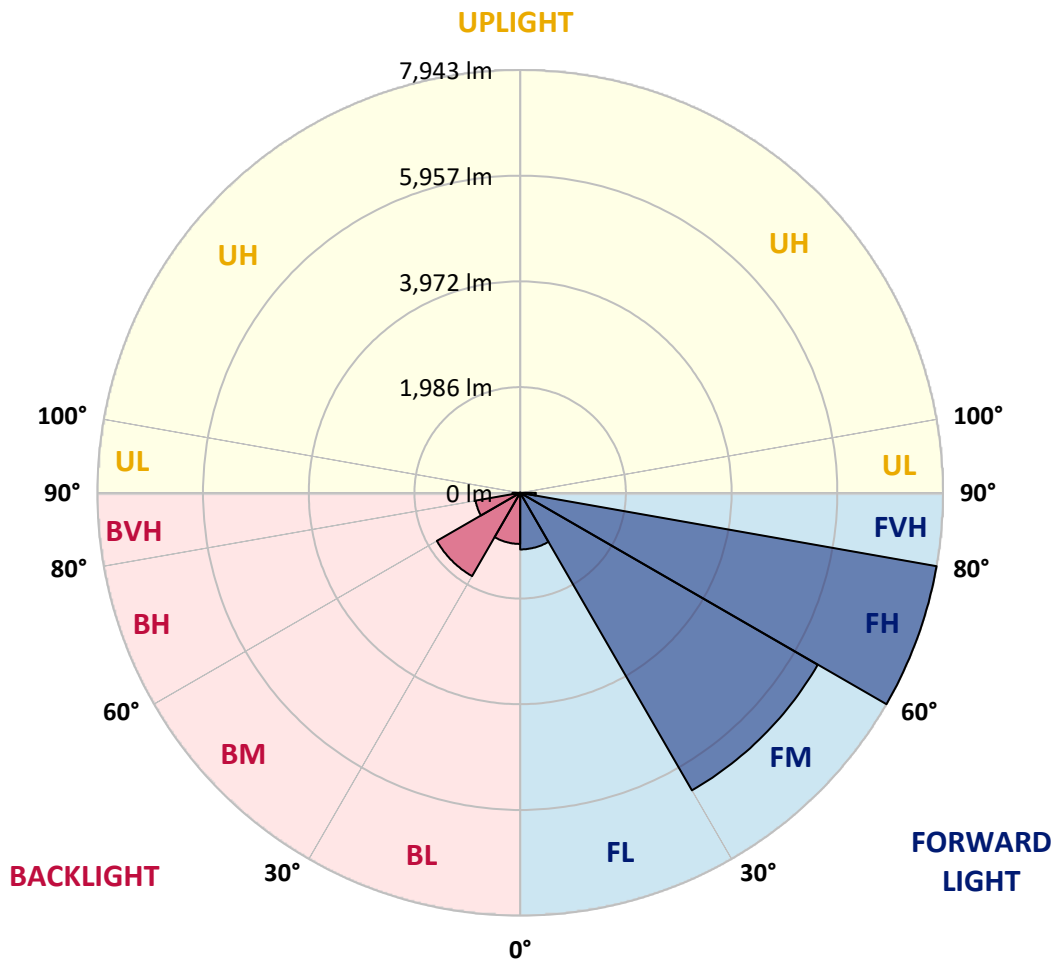
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1063.6	5.4			
FM (30°-60°)	6454.0	33.1			
FH (60°-80°)	7943.2	40.7			G4/12000
FVH (80°-90°)	295.1	1.5			G3/500
BL (0°-30°)	960.8	4.9	B2/1000		
BM (30°-60°)	1807.7	9.3	B2/2500		
BH (60°-80°)	850.6	4.4	B2/1000		G2/1000
BVH (80°-90°)	144.9	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7
2.5°	2843.9	2851.3	2852.5	2861.2	2861.2	2860.0	2863.7	2878.6	2886.0	2903.4	2918.3
5°	2703.7	2712.4	2716.1	2731.0	2749.6	2750.8	2764.5	2793.0	2820.3	2858.7	2891.0
7.5°	2546.2	2556.1	2566.0	2597.0	2624.3	2626.8	2652.9	2698.7	2734.7	2781.8	2840.1
10°	2393.6	2396.1	2406.0	2445.7	2481.7	2485.4	2522.6	2574.7	2623.1	2688.8	2754.6
12.5°	2268.4	2275.8	2273.3	2303.1	2334.1	2336.6	2386.2	2451.9	2522.6	2597.0	2675.2
15°	2225.0	2223.7	2197.7	2196.5	2210.1	2212.6	2260.9	2337.8	2417.2	2509.0	2609.4
17.5°	2254.7	2244.8	2176.6	2134.4	2125.8	2128.2	2164.2	2248.5	2332.9	2438.3	2558.6
20°	2418.5	2380.0	2220.0	2118.3	2089.8	2089.8	2110.9	2179.1	2272.1	2394.9	2546.2
22.5°	2806.6	2747.1	2406.0	2225.0	2124.5	2114.6	2098.5	2150.6	2253.5	2401.1	2597.0
25°	3295.3	3266.8	2747.1	2509.0	2301.9	2269.6	2163.0	2181.6	2291.9	2468.1	2736.0
27.5°	3748.0	3698.4	3194.8	2922.0	2629.3	2579.7	2354.0	2278.3	2383.7	2592.1	2936.9
30°	4012.1	3978.7	3655.0	3394.5	3046.0	2982.8	2659.1	2469.3	2547.4	2796.7	3222.1
32.5°	4299.9	4280.0	4116.3	3879.4	3497.5	3424.3	3053.5	2780.6	2798.0	3068.3	3565.7
35°	4578.9	4605.0	4512.0	4338.3	3983.6	3915.4	3583.0	3187.4	3106.8	3373.4	3932.8
37.5°	4913.8	4920.0	4861.7	4748.8	4494.6	4438.8	4164.7	3621.5	3442.9	3698.4	4287.5
40°	5582.3	5484.3	5256.1	5166.8	5015.5	4980.8	4668.2	4019.6	3755.4	4032.0	4622.3
42.5°	6305.3	6152.8	5795.6	5649.3	5588.5	5556.2	5087.4	4285.0	4048.1	4365.6	4951.0
45°	6888.2	6764.2	6414.5	6233.4	6240.8	6188.8	5453.3	4521.9	4365.6	4700.5	5318.1
47.5°	7462.5	7255.4	6863.4	6837.4	6924.2	6847.3	5803.0	4758.8	4696.8	5065.1	5685.2
50°	7499.7	7311.2	7152.4	7360.8	7509.6	7414.1	6120.5	5068.8	5040.3	5506.6	6159.0
52.5°	7047.0	7019.7	7261.6	7612.5	7859.3	7773.8	6379.8	5387.6	5391.3	6058.5	6735.7
55°	6882.0	6847.3	7137.5	7569.1	7902.8	7851.9	6573.2	5747.2	5780.7	6728.3	7354.6
57.5°	7159.9	7073.0	7130.1	7487.3	7801.1	7771.3	6774.1	6146.6	6207.4	7499.7	7926.3
60°	8021.8	7844.5	7541.8	7608.8	7804.8	7787.4	7061.9	6591.8	6693.5	8303.4	8288.5
62.5°	9312.9	9112.0	8495.6	8197.9	8154.5	8121.0	7536.9	7138.8	7189.6	8883.8	8077.6
65°	10729.2	10513.4	9780.5	9293.1	9037.6	8965.6	8303.4	7798.6	7479.8	8882.5	7256.6
67.5°	12319.2	12091.0	11360.5	10895.4	10618.9	10496.1	9547.3	8331.9	7385.6	8131.0	5806.8
70°	13947.6	13730.6	13395.7	13558.2	13679.8	13492.5	11506.9	8509.2	6708.4	6374.8	3899.3
72.5°	13083.2	13065.8	13320.1	14860.5	17203.3	17240.5	13464.0	8008.2	5182.9	3788.9	2078.6
73°	12280.8	12353.9	12825.2	14668.2	17504.6	17517.0	13502.4	7749.0	4758.8	3264.3	1825.6
75°	6362.4	6858.5	8607.2	11893.8	16208.6	16266.9	11902.5	5866.3	2836.4	1813.2	1230.3
77.5°	1704.1	1681.8	2773.2	5794.4	10806.1	10729.2	7520.8	2840.1	1359.3	1137.3	863.2
80°	584.1	591.6	943.8	2119.6	5044.0	5223.9	3264.3	1239.0	894.2	792.5	611.4
82.5°	297.7	307.6	493.6	901.6	2109.6	2065.0	1050.5	729.3	599.0	481.2	342.3
85°	158.7	163.7	271.6	467.6	773.9	782.6	369.6	389.4	380.8	272.9	168.7
87.5°	78.1	80.6	130.2	205.9	286.5	276.6	129.0	168.7	187.3	153.8	93.0
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°	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7	2956.7
2.5°	2936.9	2936.9	2953.0	2980.3	3000.1	3018.7	3031.1	3051.0	3062.1	3060.9	3059.7
5°	2917.0	2929.4	2961.7	2995.2	3017.5	3032.4	3032.4	3041.0	3041.0	3037.3	3032.4
7.5°	2871.1	2892.2	2939.3	2969.1	2975.3	2959.2	2926.9	2902.1	2871.1	2855.0	2848.8
10°	2798.0	2825.2	2884.8	2898.4	2866.2	2809.1	2731.0	2664.0	2604.5	2577.2	2568.5
12.5°	2726.0	2762.0	2817.8	2796.7	2719.8	2608.2	2487.9	2396.1	2329.2	2303.1	2294.4
15°	2666.5	2709.9	2753.3	2687.6	2553.6	2398.6	2265.9	2180.3	2129.5	2109.6	2104.7
17.5°	2626.8	2677.7	2692.5	2569.8	2383.7	2210.1	2092.3	2036.5	2014.1	2005.5	2003.0
20°	2629.3	2686.3	2650.4	2455.7	2220.0	2045.1	1967.0	1950.9	1950.9	1950.9	1949.6
22.5°	2697.5	2747.1	2633.0	2349.0	2062.5	1906.2	1872.7	1886.4	1896.3	1896.3	1895.1
25°	2838.9	2866.2	2645.4	2246.1	1914.9	1785.9	1787.2	1813.2	1821.9	1821.9	1819.4
27.5°	3054.7	3032.4	2667.7	2132.0	1769.8	1676.8	1694.2	1717.7	1723.9	1720.2	1719.0
30°	3325.1	3235.8	2686.3	1998.0	1633.4	1575.1	1590.0	1603.6	1598.7	1590.0	1588.7
32.5°	3627.7	3442.9	2675.2	1847.9	1513.1	1469.7	1478.4	1485.8	1478.4	1457.3	1457.3
35°	3927.8	3630.2	2614.4	1684.2	1417.6	1368.0	1366.7	1390.3	1389.1	1364.3	1365.5
37.5°	4190.7	3777.7	2496.6	1534.2	1335.7	1293.6	1298.5	1313.4	1320.8	1287.4	1283.6
40°	4420.2	3879.4	2330.4	1406.4	1270.0	1272.5	1258.8	1235.3	1226.6	1211.7	1209.2
42.5°	4636.0	3950.1	2154.3	1299.8	1236.5	1265.0	1219.1	1163.3	1139.8	1153.4	1162.1
45°	4848.1	4029.5	1984.4	1211.7	1194.3	1242.7	1179.5	1117.4	1090.2	1096.4	1105.0
47.5°	5107.3	4139.9	1779.7	1117.4	1129.9	1201.8	1154.7	1087.7	1046.8	1022.0	1014.5
50°	5448.3	4299.9	1514.3	1015.7	1061.6	1157.1	1133.6	1044.3	999.6	950.0	937.6
52.5°	5875.0	4451.2	1246.4	933.9	1005.8	1118.7	1098.8	1007.1	952.5	893.0	883.0
55°	6300.4	4472.3	1015.7	863.2	942.6	1066.6	1056.7	977.3	900.4	852.0	842.1
57.5°	6598.0	4272.6	860.7	803.7	881.8	1002.1	1018.2	941.3	857.0	819.8	813.6
60°	6603.0	3795.1	766.5	764.0	835.9	946.3	978.5	899.2	829.7	804.9	799.9
62.5°	6078.4	3058.4	705.7	734.2	802.4	900.4	948.8	875.6	823.5	813.6	808.6
65°	5094.9	2259.7	657.3	706.9	771.4	862.0	924.0	868.2	821.0	817.3	813.6
67.5°	3761.6	1549.0	616.4	672.2	736.7	822.3	900.4	857.0	806.2	821.0	816.1
70°	2366.4	1034.4	577.9	632.5	690.8	776.4	869.4	837.2	787.5	778.9	762.7
72.5°	1335.7	747.9	532.1	581.7	631.3	715.6	827.2	803.7	745.4	710.7	694.5
73°	1206.7	708.2	520.9	569.3	617.6	703.2	817.3	793.7	733.0	694.5	679.6
75°	883.0	579.2	470.0	518.4	560.6	646.2	770.2	744.1	678.4	632.5	622.6
77.5°	640.0	446.5	404.3	447.7	484.9	566.8	699.5	669.7	605.2	580.4	570.5
80°	461.4	338.6	334.9	377.0	409.3	492.4	623.8	592.8	530.8	604.0	587.9
82.5°	275.3	217.0	245.6	292.7	326.2	413.0	542.0	506.0	446.5	451.4	384.5
85°	131.5	122.8	152.5	192.2	215.8	282.8	451.4	422.9	357.2	292.7	286.5
87.5°	58.3	55.8	73.2	85.6	115.3	169.9	308.8	274.1	259.2	155.0	121.5
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)