

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: P197334

Luminaire Tested: **NAV-AF-06-D-UNV-T4W-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197334
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
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-T4W-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19138 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - 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

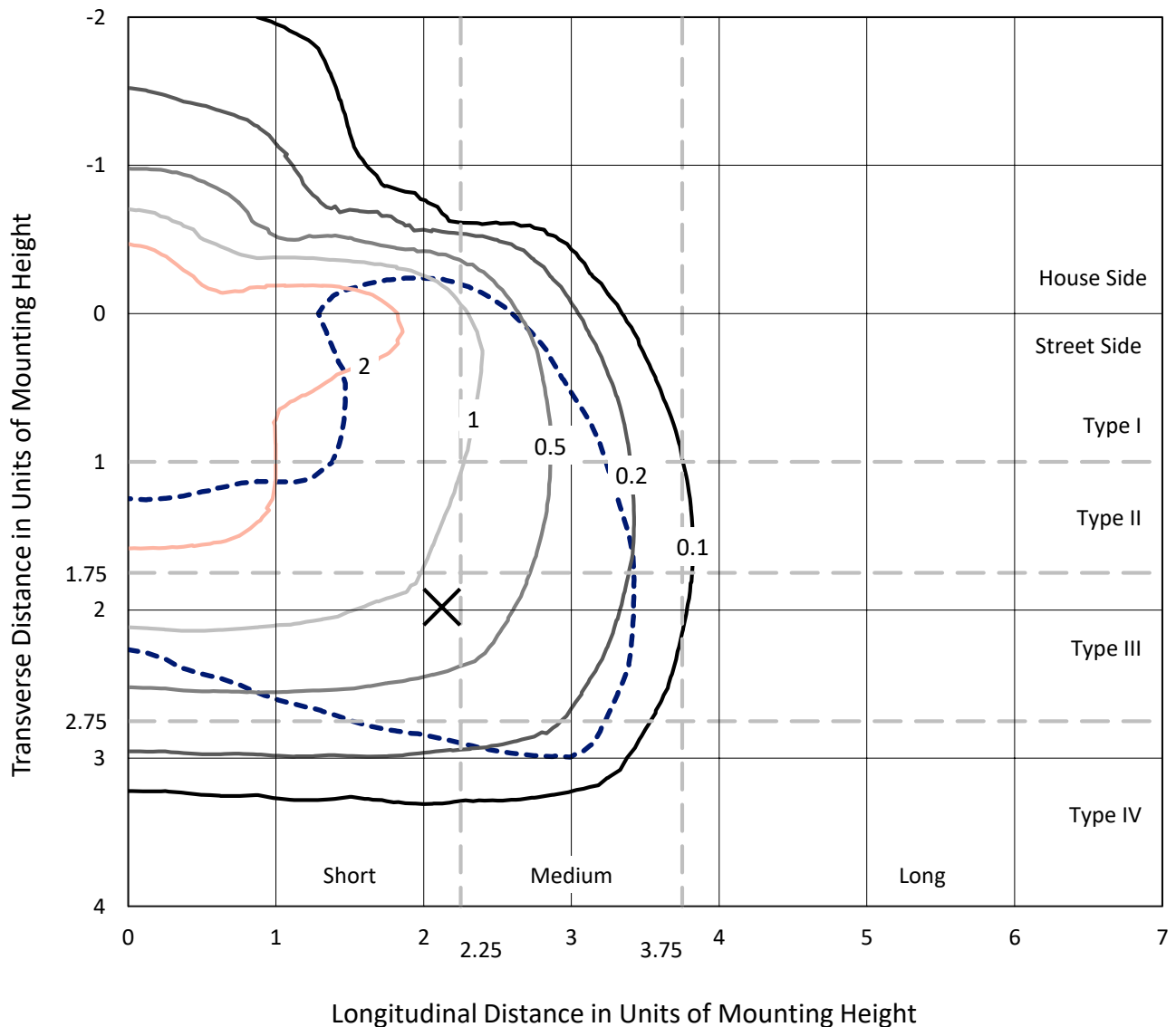


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Iso-Footcandle Lines of Horizontal Illumination

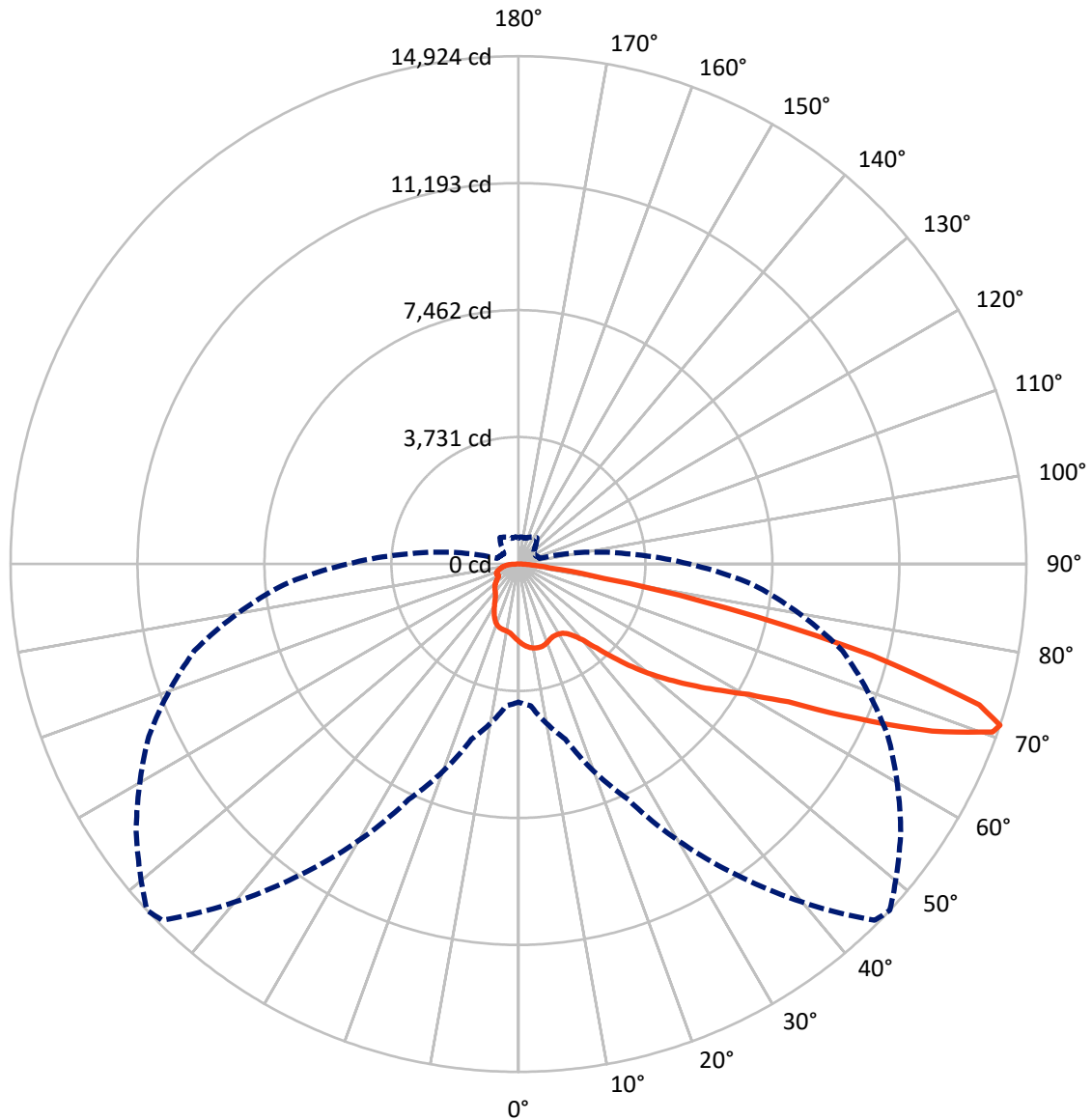
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4101.6	0.0	4101.6
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	15036.5	0.0	15036.5
	% Fixture	78.6	0.0	78.6
Total	Lumens	19138.0	0.0	19138.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.3	1.1
10°-20°	635.7	3.3
20°-30°	944.6	4.9
30°-40°	1356.4	7.1
40°-50°	2404.9	12.6
50°-60°	4115.1	21.5
60°-70°	5842.0	30.5
70°-80°	3199.6	16.7
80°-90°	422.4	2.2
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°	19138.0	100.0
0°-180°	19138.0	100.0

Coefficient of Utilization



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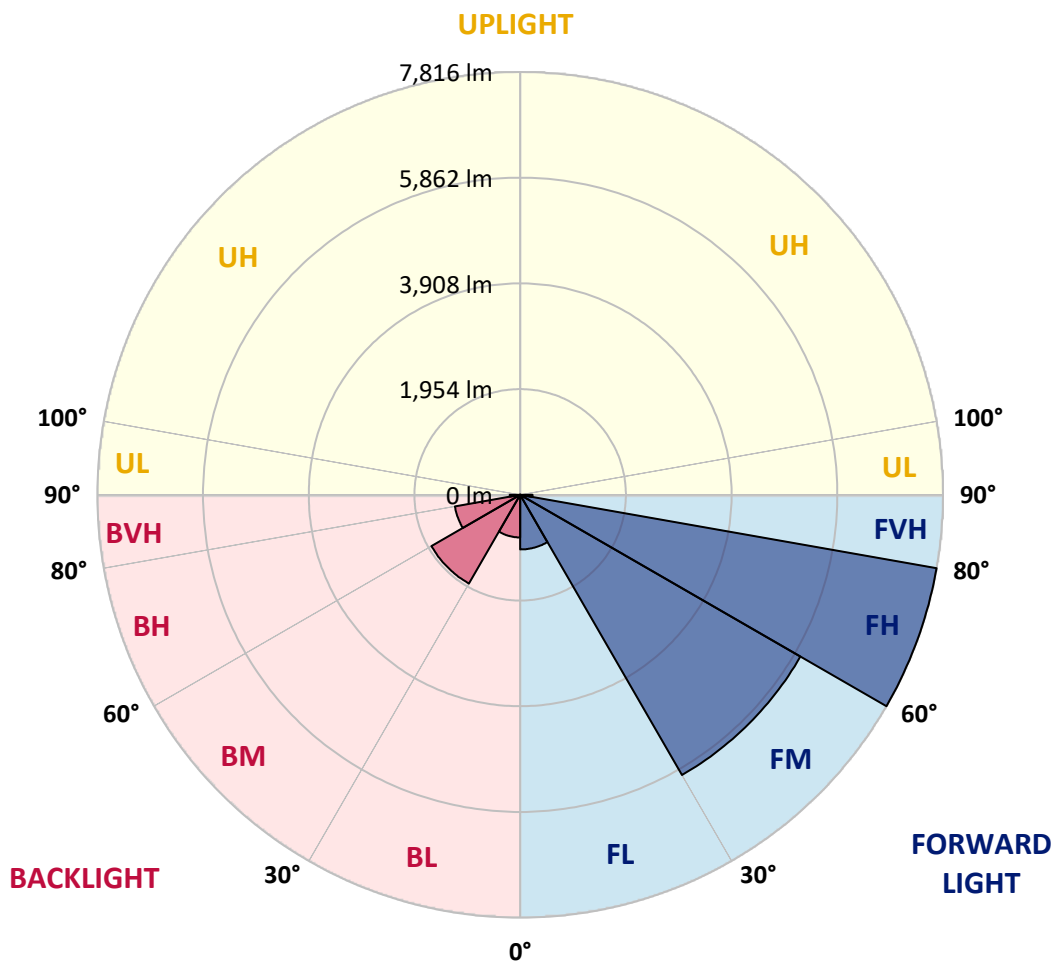
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1010.0	5.3			
FM	(30°-60°)	5981.2	31.3			
FH	(60°-80°)	7816.2	40.8			G4/12000
FVH	(80°-90°)	229.1	1.2			G3/500
BL	(0°-30°)	787.6	4.1	B2/1000		
BM	(30°-60°)	1895.1	9.9	B2/2500		
BH	(60°-80°)	1225.5	6.4	B3/2500		G3/2500
BVH	(80°-90°)	193.3	1.0			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8
2.5°	2414.7	2409.8	2412.3	2403.6	2382.5	2360.2	2360.2	2336.6	2311.8	2287.0	2259.7
5°	2564.8	2557.4	2551.2	2523.9	2482.9	2437.1	2429.6	2382.5	2331.6	2280.8	2231.2
7.5°	2690.1	2682.6	2664.0	2614.4	2554.9	2486.7	2478.0	2416.0	2349.0	2278.3	2208.9
10°	2779.4	2774.4	2738.4	2675.2	2605.7	2525.1	2510.2	2447.0	2367.6	2279.5	2191.5
12.5°	2829.0	2821.5	2778.1	2703.7	2621.9	2540.0	2525.1	2464.3	2373.8	2277.1	2174.1
15°	2809.1	2805.4	2764.5	2688.8	2607.0	2536.3	2523.9	2461.9	2370.1	2268.4	2158.0
17.5°	2724.8	2733.5	2701.2	2626.8	2559.8	2510.2	2496.6	2438.3	2351.5	2247.3	2133.2
20°	2608.2	2618.1	2602.0	2526.4	2487.9	2455.7	2448.2	2401.1	2320.5	2216.3	2103.4
22.5°	2484.2	2492.9	2494.1	2423.4	2411.0	2398.6	2392.4	2358.9	2293.2	2197.7	2083.6
25°	2398.6	2408.5	2411.0	2349.0	2356.4	2360.2	2358.9	2335.4	2288.2	2197.7	2086.1
27.5°	2376.3	2381.2	2378.8	2321.7	2335.4	2356.4	2357.7	2352.7	2308.1	2222.5	2120.8
30°	2453.2	2455.7	2424.7	2339.1	2352.7	2380.0	2381.2	2378.8	2350.2	2287.0	2198.9
32.5°	2785.6	2783.1	2676.4	2455.7	2408.5	2418.5	2422.2	2444.5	2447.0	2393.7	2311.8
35°	3291.6	3290.3	3166.3	2789.3	2567.3	2515.2	2520.2	2554.9	2585.9	2549.9	2502.8
37.5°	3848.4	3852.2	3776.5	3265.5	2909.6	2692.5	2687.6	2713.6	2769.4	2781.8	2788.0
40°	4466.1	4484.7	4481.0	3812.5	3389.6	2995.2	2945.6	2915.8	3023.7	3091.9	3180.0
42.5°	5171.8	5166.8	5169.3	4412.8	3937.7	3471.4	3379.6	3240.7	3366.0	3483.8	3677.3
45°	5778.2	5798.1	5813.0	5051.5	4551.7	4015.9	3922.9	3669.9	3782.7	3958.8	4254.0
47.5°	6388.4	6353.7	6381.0	5762.1	5235.0	4637.2	4516.9	4175.9	4281.3	4529.3	4978.3
50°	7099.1	7083.0	6959.0	6689.8	6061.0	5267.3	5109.8	4704.2	4858.0	5189.1	5872.5
52.5°	7736.6	7649.8	7553.0	7419.1	6873.4	5904.8	5705.1	5253.6	5536.4	5946.9	6982.5
55°	7969.7	7911.5	8028.0	8201.7	7732.9	6554.6	6331.4	5894.8	6301.6	6813.8	8288.5
57.5°	8217.8	8237.6	8500.6	8851.5	8546.5	7247.9	7006.1	6653.9	7141.3	7783.7	9748.2
60°	8341.8	8421.2	8945.8	9604.4	9320.4	8008.2	7776.3	7525.7	8072.7	8855.3	11204.3
62.5°	8362.9	8469.6	9212.5	9868.5	10385.7	9172.8	8904.9	8633.3	9236.0	10039.7	12258.5
65°	7975.9	8139.7	9188.9	10193.5	11356.8	11118.7	10948.8	10475.0	10793.8	11082.7	12438.3
67.5°	6838.6	7017.2	8279.8	10059.5	12135.7	13137.8	13105.5	12406.1	11996.8	11485.8	11105.1
70°	5019.2	5163.1	6376.0	8599.8	11795.9	14722.8	14779.9	13657.5	12332.9	10630.0	8257.5
71°	4059.3	4183.3	5326.8	7634.9	11133.6	14804.7	14923.7	13713.3	11983.1	9857.4	6913.1
72.5°	2526.4	2595.8	3537.1	5762.1	9587.0	13961.3	14162.2	12998.9	10881.8	8331.9	4886.5
75°	953.7	981.0	1312.2	2541.2	5722.4	10488.7	10731.7	9823.9	7644.8	4756.3	2045.1
77.5°	512.2	525.9	651.1	1056.7	2293.2	6012.7	6325.2	5603.4	3667.4	1664.4	835.9
80°	343.5	352.2	450.2	626.3	1054.2	2289.5	2549.9	2249.8	1372.9	950.0	595.3
82.5°	222.0	227.0	306.3	411.8	680.9	804.9	919.0	959.9	857.0	680.9	359.7
85°	146.3	150.1	202.2	262.9	421.7	396.9	406.8	532.1	584.2	449.0	183.6
87.5°	84.3	86.8	121.5	135.2	189.8	148.8	161.2	253.0	347.3	292.7	105.4
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°	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8	2275.8
2.5°	2247.3	2237.4	2215.1	2201.4	2195.2	2192.7	2190.3	2195.2	2195.2	2192.7	2187.8
5°	2206.4	2187.8	2150.6	2124.5	2110.9	2107.2	2112.1	2118.3	2122.0	2122.0	2118.3
7.5°	2176.6	2149.3	2099.7	2063.7	2042.7	2036.5	2050.1	2072.4	2087.3	2094.8	2096.0
10°	2151.8	2114.6	2060.0	2022.8	2005.5	2003.0	2020.3	2048.9	2079.9	2093.5	2096.0
12.5°	2129.5	2087.3	2027.8	1993.1	1980.7	1986.9	2010.4	2036.5	2072.4	2092.3	2093.5
15°	2108.4	2065.0	2001.7	1965.8	1963.3	1973.2	1995.5	2016.6	2043.9	2068.7	2068.7
17.5°	2083.6	2036.5	1970.7	1937.2	1937.2	1945.9	1960.8	1972.0	1989.3	2012.9	2011.7
20°	2053.8	2005.5	1938.5	1903.8	1896.3	1891.4	1891.4	1893.8	1908.7	1929.8	1933.5
22.5°	2031.5	1981.9	1911.2	1869.0	1835.5	1803.3	1789.7	1784.7	1798.3	1818.2	1823.1
25°	2031.5	1981.9	1902.5	1831.8	1750.0	1688.0	1661.9	1654.5	1668.1	1686.7	1694.2
27.5°	2065.0	2015.4	1922.4	1798.3	1648.3	1549.1	1518.0	1511.8	1524.2	1539.1	1546.6
30°	2143.1	2094.8	1979.4	1759.9	1535.4	1405.2	1370.5	1364.3	1370.5	1376.7	1385.3
32.5°	2273.3	2232.4	2072.4	1725.2	1421.3	1275.0	1232.8	1222.9	1225.4	1226.6	1234.0
35°	2485.4	2466.8	2196.5	1684.2	1313.4	1168.3	1124.9	1105.0	1103.8	1110.0	1118.7
37.5°	2810.4	2821.5	2356.4	1624.7	1224.1	1092.6	1049.2	1029.4	1019.5	1031.9	1041.8
40°	3269.3	3295.3	2541.2	1544.1	1150.9	1048.0	1002.1	983.5	969.9	966.1	971.1
42.5°	3865.8	3858.4	2729.8	1441.2	1071.6	1018.2	969.9	950.0	927.7	899.2	893.0
45°	4572.7	4466.1	2887.3	1314.6	981.0	989.7	940.1	912.8	878.1	835.9	831.0
47.5°	5407.4	5113.5	2984.0	1179.5	896.7	952.5	906.6	864.4	813.6	786.3	782.6
50°	6413.2	5871.3	3052.2	1041.8	821.0	905.4	859.5	803.7	754.1	746.6	745.4
52.5°	7603.9	6765.5	3136.6	917.8	761.5	844.6	812.4	755.3	715.6	719.3	719.3
55°	8870.2	7690.7	3139.0	819.8	709.4	773.9	777.6	731.7	700.7	713.1	716.9
57.5°	10024.8	8499.3	2892.2	750.3	659.8	718.1	766.5	740.4	716.9	760.3	764.0
60°	11031.9	9121.9	2361.4	693.3	618.9	697.0	791.3	793.7	788.8	906.6	915.3
62.5°	11400.2	9128.1	1676.8	644.9	596.6	709.4	843.4	847.1	847.1	956.2	972.3
65°	10884.3	8367.9	1116.2	616.4	581.7	736.7	885.5	869.4	831.0	906.6	889.2
67.5°	9066.1	6513.7	816.1	597.8	560.6	737.9	922.7	881.8	816.1	880.6	850.8
70°	6230.9	4144.9	683.4	580.4	535.8	705.7	942.6	878.1	793.7	821.0	781.3
71°	5015.5	3307.7	648.6	574.2	525.9	687.1	945.1	873.1	782.6	800.0	764.0
72.5°	3304.0	2037.7	606.5	560.6	511.0	654.8	938.9	862.0	767.7	768.9	745.4
75°	1303.5	844.6	545.7	529.6	468.8	602.8	911.6	838.4	739.2	714.4	704.5
77.5°	658.6	551.9	480.0	486.2	419.2	549.4	873.1	800.0	699.5	666.0	658.6
80°	481.2	419.2	410.5	421.7	363.4	497.3	824.8	747.9	648.6	683.4	668.5
82.5°	292.7	255.5	321.2	348.5	303.9	444.0	767.7	687.1	584.2	538.3	520.9
85°	138.9	150.1	231.9	256.7	224.5	354.7	702.0	620.1	509.7	440.3	447.7
87.5°	68.2	83.1	132.7	153.8	147.6	260.4	529.6	481.2	401.8	331.1	323.7
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)