

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: P197262

Luminaire Tested: **NAV-AF-06-D-UNV-T3-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197262
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (p24135)
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-T3-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19372 lumens
Efficiency: N/A
Efficacy: 100.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G3

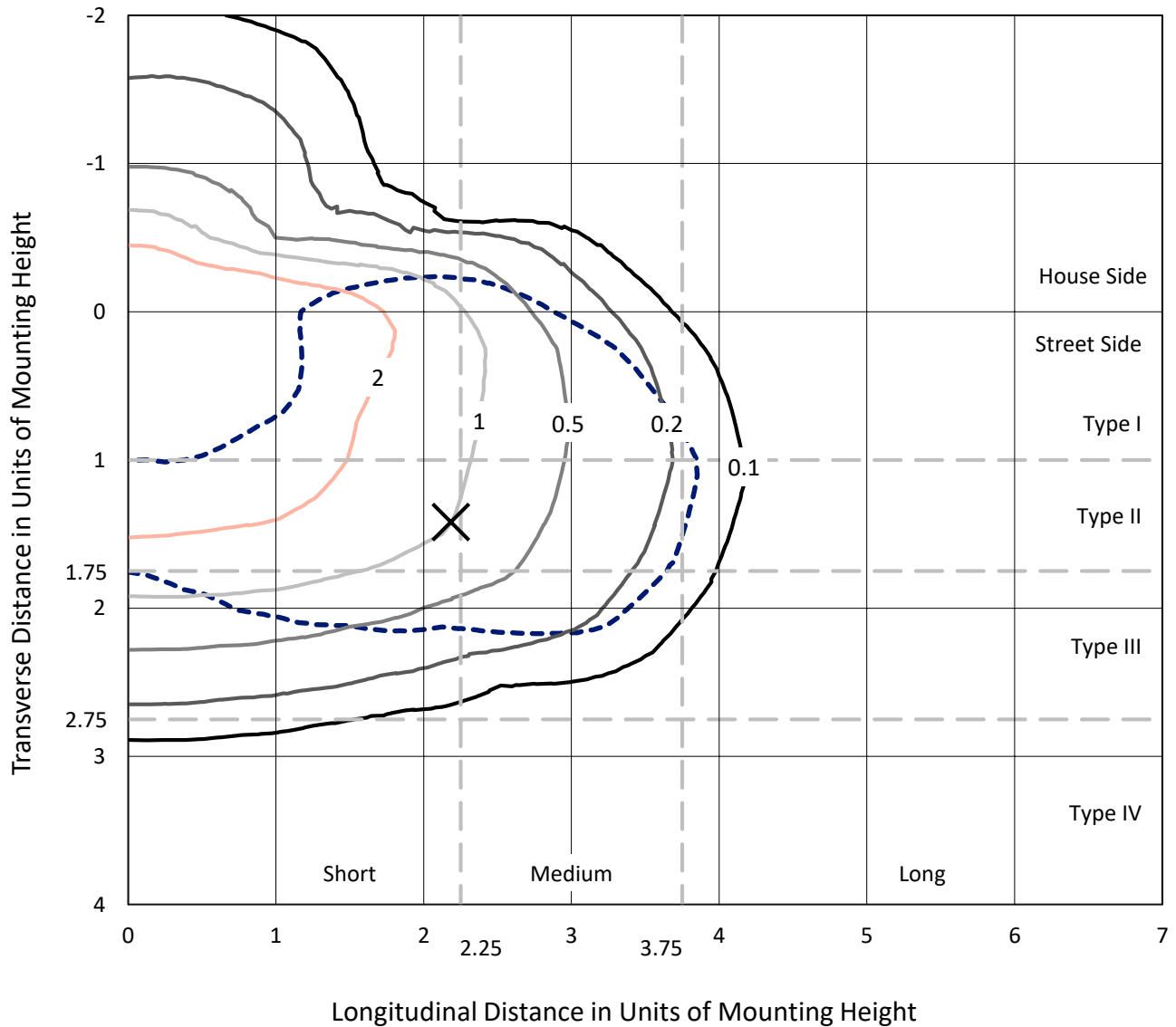
Input Watts (W): 193
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

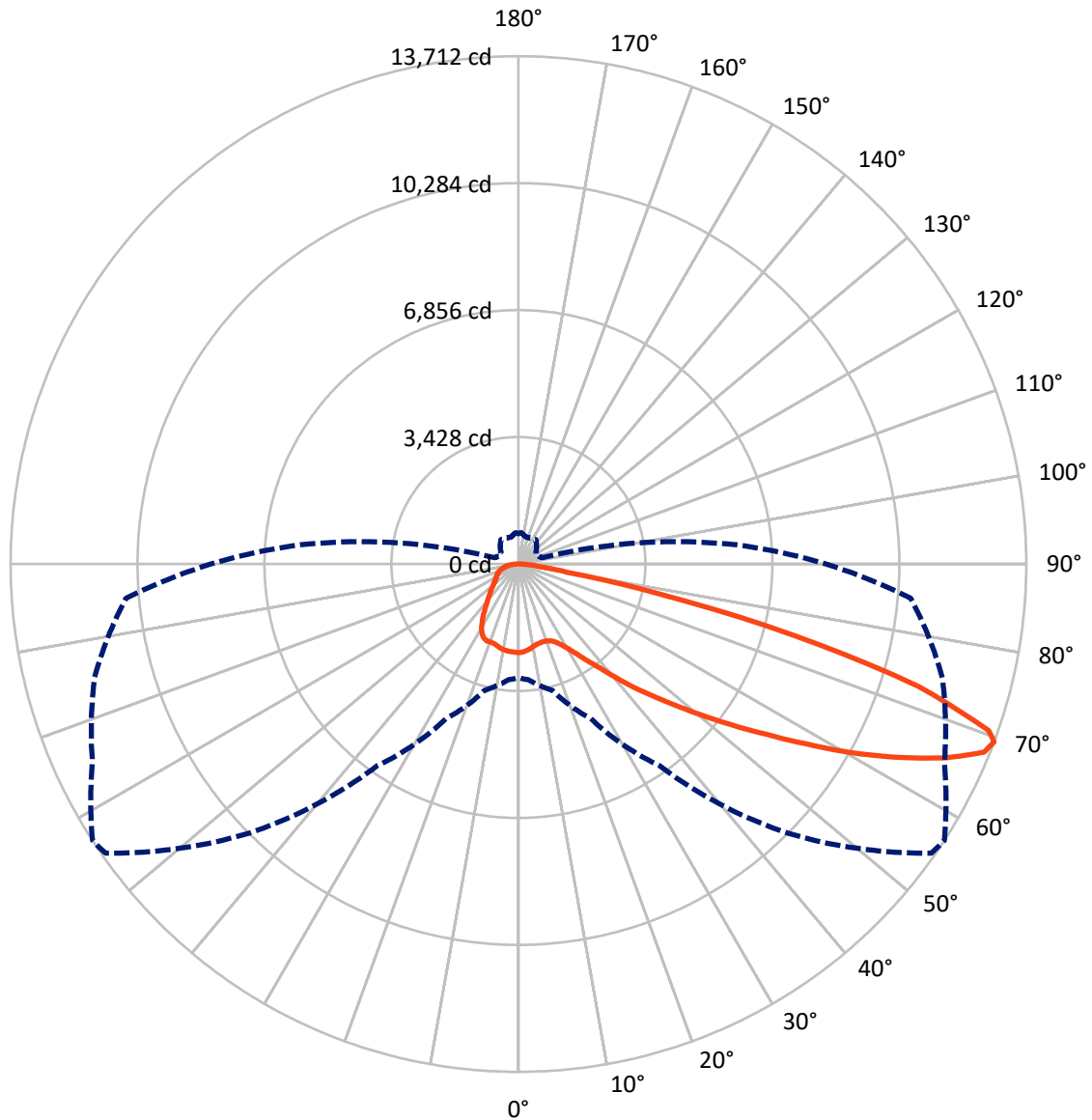
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 57-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4274.7	0.0	4274.7
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	15097.3	0.0	15097.3
	% Fixture	77.9	0.0	77.9
Total	Lumens	19372.0	0.0	19372.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.1	1.2
10°-20°	637.1	3.3
20°-30°	1059.9	5.5
30°-40°	1730.7	8.9
40°-50°	2921.1	15.1
50°-60°	4543.9	23.5
60°-70°	5412.8	27.9
70°-80°	2521.6	13.0
80°-90°	320.7	1.7
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°	19372.0	100.0
0°-180°	19372.0	100.0



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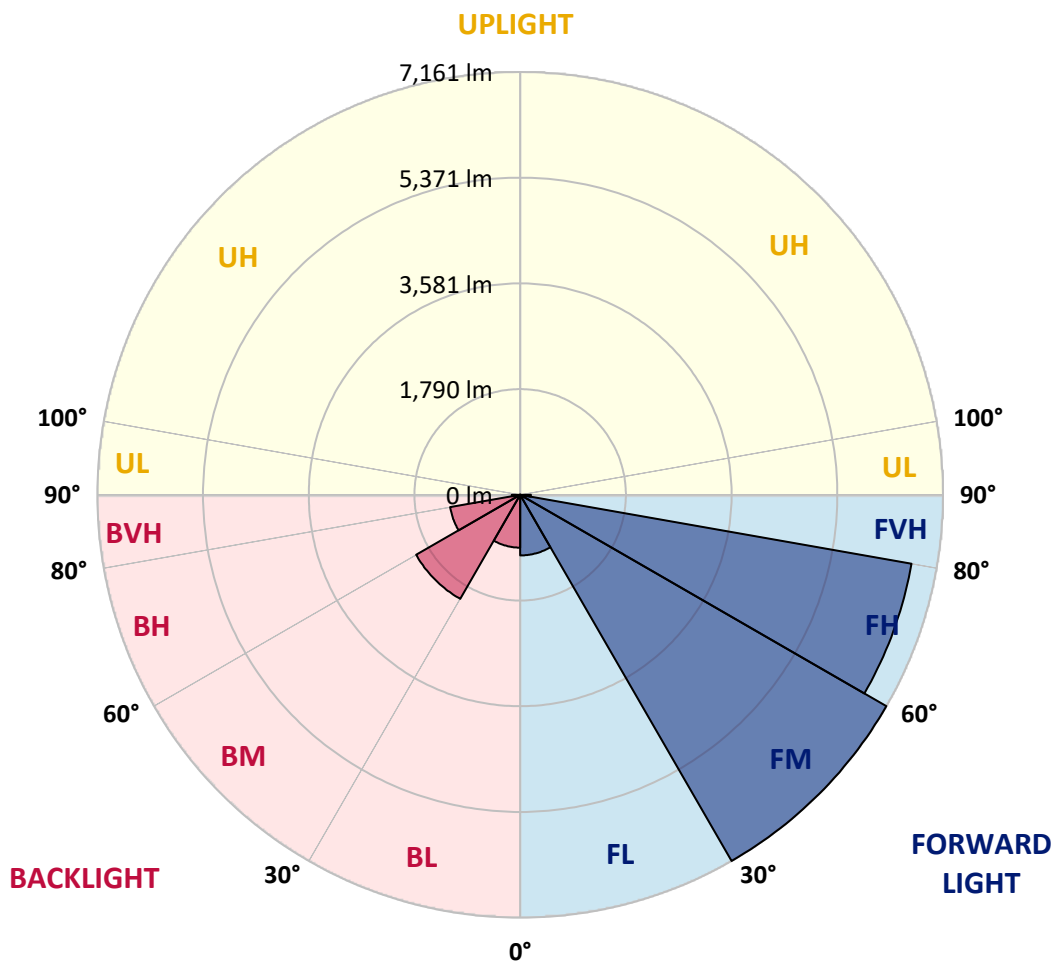
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1025.9	5.3			
FM	(30°-60°)	7161.2	37.0			
FH	(60°-80°)	6729.9	34.7			G3/7500
FVH	(80°-90°)	180.3	0.9			G2/225
BL	(0°-30°)	895.2	4.6	B2/1000		
BM	(30°-60°)	2034.5	10.5	B2/2500		
BH	(60°-80°)	1204.6	6.2	B3/2500		G3/2500
BVH	(80°-90°)	140.4	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6
2.5°	2380.0	2380.0	2386.2	2386.2	2386.2	2383.7	2376.2	2378.7	2373.8	2370.0	2363.8
5°	2331.6	2334.1	2341.5	2344.0	2347.7	2349.0	2349.0	2347.7	2349.0	2349.0	2345.2
7.5°	2264.6	2267.1	2275.8	2280.7	2291.9	2301.8	2306.8	2306.8	2313.0	2317.9	2319.2
10°	2223.7	2223.7	2228.7	2228.7	2237.3	2242.3	2258.4	2257.2	2274.5	2290.7	2298.1
12.5°	2218.7	2218.7	2216.2	2207.6	2202.6	2201.4	2217.5	2220.0	2246.0	2274.5	2288.2
15°	2234.9	2234.9	2227.4	2210.0	2191.4	2182.8	2198.9	2203.8	2232.4	2265.9	2286.9
17.5°	2286.9	2285.7	2269.6	2234.9	2202.6	2189.0	2193.9	2198.9	2224.9	2263.4	2289.4
20°	2402.3	2402.3	2367.6	2304.3	2248.5	2216.2	2208.8	2212.5	2231.1	2267.1	2300.6
22.5°	2604.4	2608.2	2546.1	2442.0	2346.5	2278.3	2248.5	2252.2	2260.9	2295.6	2332.8
25°	2902.1	2892.2	2804.1	2656.5	2507.7	2391.1	2330.3	2334.1	2334.1	2366.3	2404.8
27.5°	3217.1	3219.6	3093.1	2934.3	2738.4	2564.7	2468.0	2466.8	2465.5	2496.5	2537.5
30°	3573.0	3574.3	3427.9	3244.4	3019.9	2797.9	2652.8	2651.6	2640.4	2678.8	2732.2
32.5°	3962.5	3961.2	3791.3	3584.2	3334.9	3083.2	2894.6	2893.4	2884.7	2936.8	3001.3
35°	4394.1	4394.1	4225.4	3969.9	3700.8	3420.5	3202.2	3201.0	3205.9	3276.6	3337.4
37.5°	4913.7	4924.9	4721.5	4411.4	4117.5	3818.6	3564.4	3556.9	3519.7	3638.8	3739.2
40°	5455.7	5486.7	5275.8	4913.7	4596.2	4287.4	4007.1	4002.1	3969.9	4096.4	4258.9
42.5°	6042.3	6113.0	5878.6	5509.0	5163.0	4829.4	4547.8	4534.2	4410.2	4607.4	4861.6
45°	6811.2	6857.1	6517.3	6182.4	5856.3	5475.5	5140.7	5067.5	4943.5	5196.5	5526.4
47.5°	7334.6	7312.3	7100.2	6875.7	6666.1	6301.5	5786.8	5693.8	5542.5	5877.3	6240.7
50°	7659.5	7675.6	7556.6	7545.4	7534.3	7280.0	6516.0	6404.4	6229.6	6626.4	7050.6
52.5°	7874.1	7800.9	7822.0	8075.0	8381.3	8259.8	7340.8	7216.8	7036.9	7433.8	7912.5
55°	7784.8	7688.0	7882.8	8381.3	9101.9	9129.2	8246.1	8118.4	7964.6	8292.0	8949.3
57.5°	7415.2	7463.6	7771.1	8464.4	9594.2	9908.0	9286.7	9156.4	8853.8	9186.2	9934.1
60°	6895.6	6993.5	7463.6	8333.0	9939.0	10514.5	10428.9	10342.1	9821.2	10056.8	10968.4
62.5°	6337.5	6434.2	7012.1	8108.5	9784.0	11051.5	11550.0	11496.7	10889.0	10895.2	11624.5
65°	5512.7	5552.4	6142.7	7495.8	9353.6	11536.4	12672.4	12625.3	11909.7	11610.8	11808.0
67.5°	4163.4	4213.0	4697.9	5917.0	8044.0	11273.5	13569.1	13561.7	12523.6	11876.2	11371.5
69°	3074.5	3135.2	3530.9	4593.7	6651.2	10271.4	13611.3	13711.7	12689.8	11848.9	10633.5
70°	2249.7	2319.2	2685.0	3646.2	5540.0	9165.1	13250.4	13466.2	12626.5	11676.5	10058.1
72.5°	956.2	979.8	1159.6	1645.8	2810.3	5526.4	10853.1	11307.0	11403.7	10462.4	7858.0
75°	599.0	606.5	677.2	844.6	1250.1	2285.7	7028.3	7647.1	8514.0	8117.2	5261.0
77.5°	451.4	457.6	498.6	581.7	776.4	853.3	3260.5	3888.0	4876.5	4774.8	2618.1
80°	346.0	349.7	377.0	422.9	546.9	534.5	1057.9	1329.5	2035.2	1795.8	926.4
82.5°	271.6	272.8	296.4	305.1	382.0	359.7	530.8	591.6	822.3	683.4	452.7
85°	240.6	244.3	267.9	223.2	244.3	217.0	291.4	316.3	436.6	411.7	171.1
87.5°	122.8	129.0	224.5	191.0	122.8	102.9	127.7	137.7	177.3	192.2	83.1
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°	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6	2393.6
2.5°	2365.1	2366.3	2370.0	2376.2	2386.2	2398.6	2413.4	2428.3	2437.0	2443.2	2440.7
5°	2345.2	2346.5	2353.9	2365.1	2377.5	2396.1	2420.9	2439.5	2453.1	2461.8	2460.6
7.5°	2320.4	2324.1	2339.0	2351.4	2368.8	2383.7	2403.5	2420.9	2434.5	2443.2	2442.0
10°	2301.8	2305.5	2324.1	2340.3	2355.2	2357.6	2353.9	2349.0	2347.7	2353.9	2351.4
12.5°	2293.1	2300.6	2317.9	2329.1	2322.9	2299.3	2272.1	2260.9	2257.2	2269.6	2270.8
15°	2295.6	2301.8	2316.7	2309.3	2275.8	2236.1	2221.2	2229.9	2237.3	2244.8	2246.0
17.5°	2301.8	2305.5	2309.3	2282.0	2234.9	2208.8	2203.8	2195.2	2172.8	2160.4	2159.2
20°	2313.0	2317.9	2311.7	2268.3	2226.2	2191.4	2131.9	2078.6	2027.7	2000.5	1989.3
22.5°	2351.4	2355.2	2336.5	2294.4	2229.9	2117.0	1996.7	1905.0	1826.8	1784.7	1768.5
25°	2427.1	2433.3	2407.2	2353.9	2185.2	1988.1	1818.1	1694.1	1596.1	1545.3	1531.7
27.5°	2559.8	2566.0	2537.5	2398.6	2081.1	1815.7	1609.8	1487.0	1402.7	1359.3	1353.1
30°	2758.2	2766.9	2740.9	2397.3	1922.3	1596.1	1406.4	1334.5	1286.1	1256.3	1255.1
32.5°	3033.5	3065.8	2959.1	2355.2	1726.4	1374.1	1252.6	1227.8	1204.2	1184.4	1184.4
35°	3383.3	3458.9	3174.9	2267.1	1510.6	1222.8	1167.0	1143.5	1113.7	1092.6	1090.1
37.5°	3801.2	3919.1	3328.7	2110.8	1324.5	1149.7	1114.9	1076.5	1029.4	988.4	978.5
40°	4375.5	4402.7	3404.4	1856.6	1185.6	1110.0	1066.6	1018.2	958.7	912.8	907.8
42.5°	4952.1	4862.9	3389.5	1583.7	1106.3	1074.0	1017.0	963.6	910.3	871.9	871.9
45°	5608.2	5264.7	3276.6	1309.7	1034.3	1033.1	971.1	920.2	879.3	850.8	844.6
47.5°	6235.8	5625.6	3081.9	1107.5	959.9	992.2	941.3	900.4	863.2	835.9	830.9
50°	6997.2	6043.5	2874.8	966.1	888.0	956.2	928.9	907.8	871.9	824.7	819.8
52.5°	7753.8	6532.2	2714.8	859.5	824.7	927.7	936.4	938.8	905.4	813.6	807.4
55°	8566.1	7054.3	2546.1	776.4	772.6	914.0	953.7	951.2	935.1	816.1	806.1
57.5°	9338.8	7578.9	2294.4	718.1	731.7	900.4	957.4	917.8	889.2	828.5	812.3
60°	9978.7	8013.0	1924.8	677.2	697.0	873.1	932.6	873.1	824.7	826.0	811.1
62.5°	10290.0	8134.5	1472.1	630.0	668.5	828.5	896.7	839.6	795.0	830.9	822.3
65°	10053.1	7788.5	1049.2	586.6	633.7	776.4	875.6	811.1	780.1	855.7	845.8
67.5°	9202.3	6845.9	761.5	548.2	600.3	723.0	835.9	785.1	765.2	874.3	852.0
69°	8298.2	5910.8	659.8	525.8	576.7	694.5	809.9	771.4	754.0	848.3	816.1
70°	7546.7	5190.3	608.9	512.2	556.9	678.4	790.0	762.7	742.9	817.3	778.8
72.5°	5411.0	3354.8	512.2	471.3	504.8	642.4	746.6	730.5	700.7	737.9	713.1
75°	3269.2	1751.2	435.3	429.1	450.2	592.8	695.8	675.9	646.1	649.9	637.5
77.5°	1501.9	808.6	364.6	379.5	393.1	530.8	633.7	611.4	584.1	574.2	575.5
80°	658.5	472.5	305.1	323.7	331.1	477.5	566.8	542.0	512.2	565.5	524.6
82.5°	355.9	274.1	238.1	250.5	271.6	415.5	492.4	460.1	431.6	502.3	405.5
85°	143.9	140.1	161.2	173.6	188.5	298.9	411.7	378.3	343.5	307.6	300.1
87.5°	62.0	67.0	79.4	84.3	100.5	186.0	276.6	241.8	243.1	208.4	204.6
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)