

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: P197267

Luminaire Tested: **NAV-AF-05-D-UNV-T3-8030-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197267  
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-05-D-UNV-T3-8030-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 19830 lumens  
Efficiency: N/A  
Efficacy: 94.4 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

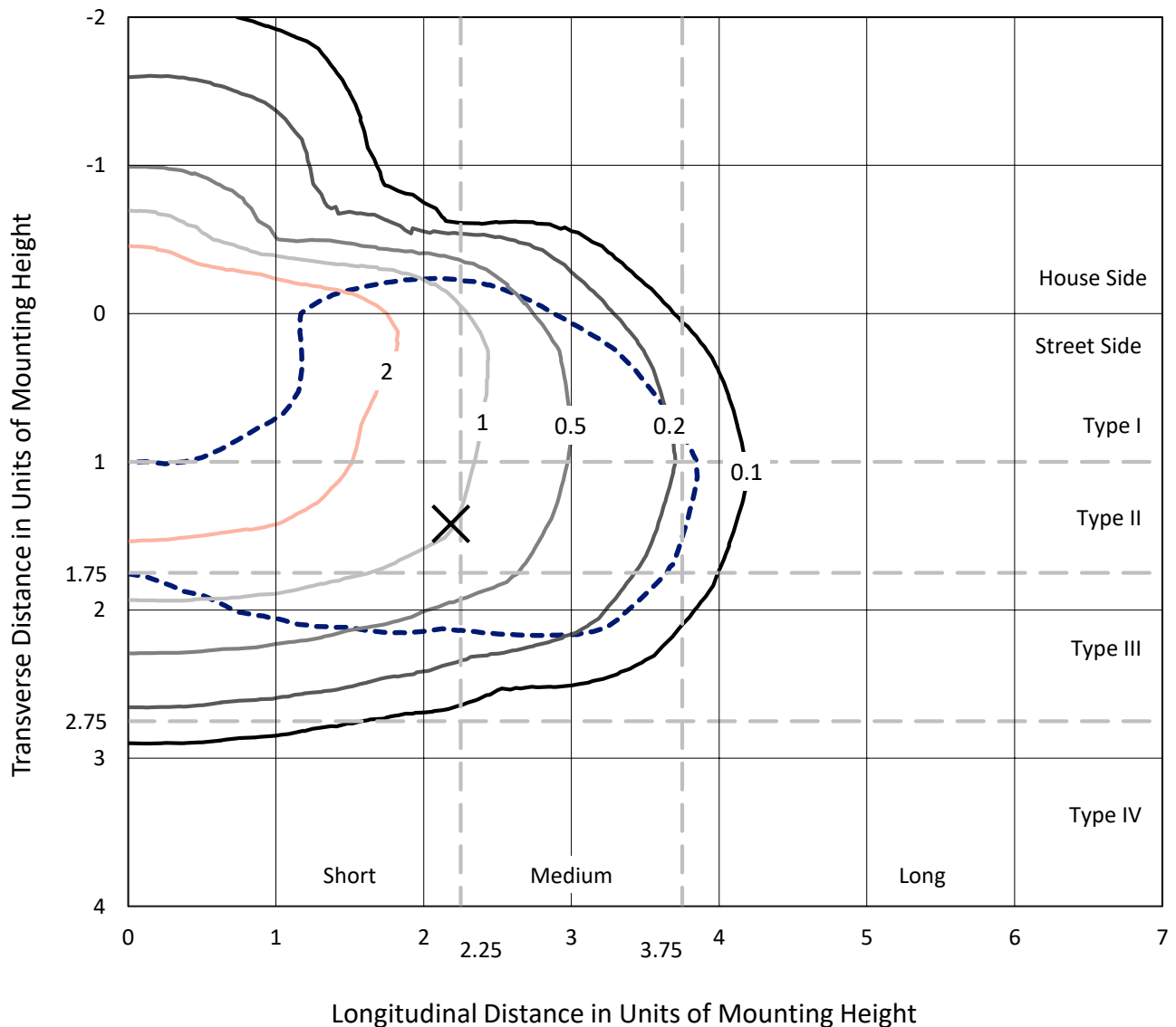
Input Watts (W): 210  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

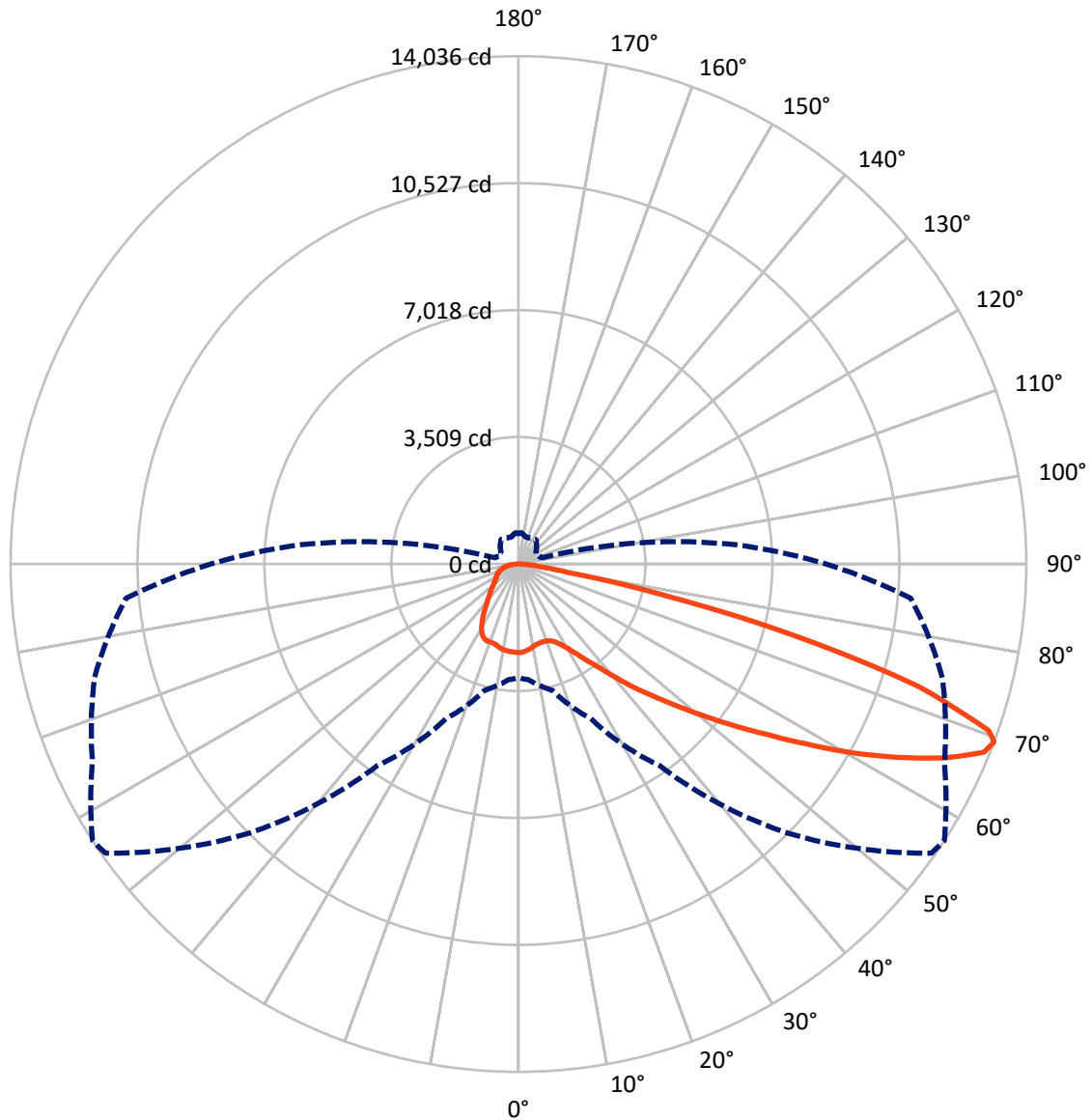
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 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
<b>House Side</b>	Lumens	4375.8	0.0	4375.8
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	15454.2	0.0	15454.2
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	19830.0	0.0	19830.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	229.4	1.2
10°-20°	652.2	3.3
20°-30°	1084.9	5.5
30°-40°	1771.7	8.9
40°-50°	2990.2	15.1
50°-60°	4651.3	23.5
60°-70°	5540.8	27.9
70°-80°	2581.2	13.0
80°-90°	328.3	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°	19830.0	100.0
0°-180°	19830.0	100.0

**Coefficient of Utilization**



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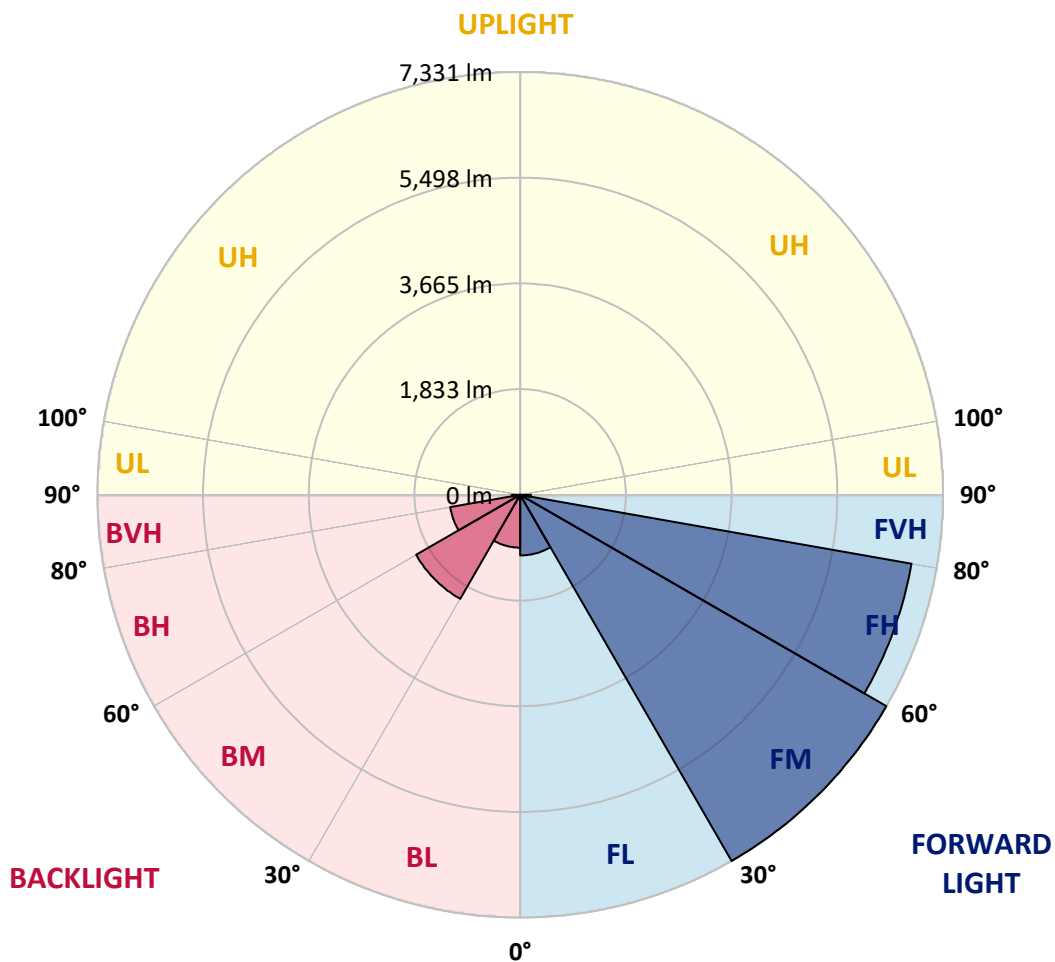
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1050.2	5.3			
FM	(30°-60°)	7330.6	37.0			
FH	(60°-80°)	6889.0	34.7			G3/7500
FVH	(80°-90°)	184.5	0.9			G2/225
BL	(0°-30°)	916.4	4.6	B2/1000		
BM	(30°-60°)	2082.6	10.5	B2/2500		
BH	(60°-80°)	1233.0	6.2	B3/2500		G3/2500
BVH	(80°-90°)	143.8	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°	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2
2.5°	2436.2	2436.2	2442.6	2442.6	2442.6	2440.0	2432.4	2435.0	2429.9	2426.1	2419.7
5°	2386.7	2389.3	2396.9	2399.4	2403.2	2404.5	2404.5	2403.2	2404.5	2404.5	2400.7
7.5°	2318.2	2320.7	2329.6	2334.7	2346.1	2356.2	2361.3	2361.3	2367.7	2372.7	2374.0
10°	2276.3	2276.3	2281.3	2281.3	2290.2	2295.3	2311.8	2310.5	2328.3	2344.8	2352.4
12.5°	2271.2	2271.2	2268.6	2259.8	2254.7	2253.4	2269.9	2272.5	2299.1	2328.3	2342.3
15°	2287.7	2287.7	2280.1	2262.3	2243.3	2234.4	2250.9	2256.0	2285.2	2319.4	2341.0
17.5°	2341.0	2339.7	2323.2	2287.7	2254.7	2240.7	2245.8	2250.9	2277.5	2316.9	2343.5
20°	2459.1	2459.1	2423.5	2358.8	2301.7	2268.6	2261.0	2264.8	2283.9	2320.7	2355.0
22.5°	2666.0	2669.8	2606.3	2499.7	2401.9	2332.1	2301.7	2305.5	2314.4	2349.9	2388.0
25°	2970.7	2960.5	2870.4	2719.3	2567.0	2447.7	2385.4	2389.3	2389.3	2422.3	2461.6
27.5°	3293.2	3295.7	3166.2	3003.7	2803.1	2625.4	2526.4	2525.1	2523.8	2555.6	2597.5
30°	3657.5	3658.8	3509.0	3321.1	3091.3	2864.1	2715.5	2714.3	2702.8	2742.2	2796.8
32.5°	4056.1	4054.9	3880.9	3668.9	3413.8	3156.0	2963.1	2961.8	2952.9	3006.2	3072.3
35°	4497.9	4497.9	4325.3	4063.8	3788.3	3501.4	3277.9	3276.7	3281.7	3354.1	3416.3
37.5°	5029.9	5041.3	4833.1	4515.7	4214.8	3908.9	3648.6	3641.0	3602.9	3724.8	3827.6
40°	5584.7	5616.4	5400.6	5029.9	4704.9	4388.8	4101.8	4096.8	4063.8	4193.3	4359.6
42.5°	6185.1	6257.5	6017.6	5639.2	5285.0	4943.5	4655.4	4641.4	4514.4	4716.3	4976.6
45°	6972.3	7019.2	6671.4	6328.6	5994.7	5605.0	5262.2	5187.3	5060.3	5319.3	5657.0
47.5°	7508.0	7485.1	7268.1	7038.3	6823.7	6450.5	5923.6	5828.4	5673.5	6016.3	6388.3
50°	7840.6	7857.1	7735.2	7723.8	7712.4	7452.1	6670.1	6555.8	6376.8	6783.1	7217.3
52.5°	8060.2	7985.3	8006.9	8265.9	8579.5	8455.1	7514.3	7387.4	7203.3	7609.6	8099.6
55°	7968.8	7869.8	8069.1	8579.5	9317.1	9345.0	8441.1	8310.3	8152.9	8488.1	9160.9
57.5°	7590.5	7640.0	7954.9	8664.5	9821.1	10142.3	9506.2	9372.9	9063.2	9403.4	10168.9
60°	7058.6	7158.9	7640.0	8530.0	10174.0	10763.1	10675.5	10586.6	10053.4	10294.6	11227.7
62.5°	6487.3	6586.3	7177.9	8300.2	10015.3	11312.8	11823.1	11768.5	11146.5	11152.8	11899.3
65°	5643.1	5683.7	6288.0	7673.0	9574.8	11809.2	12972.0	12923.8	12191.3	11885.3	12087.2
67.5°	4261.8	4312.6	4809.0	6056.9	8234.2	11540.0	13889.9	13882.3	12819.7	12157.0	11640.3
69°	3147.2	3209.4	3614.3	4702.3	6808.5	10514.2	13933.1	14035.9	12989.8	12129.1	10884.9
70°	2302.9	2374.0	2748.5	3732.4	5671.0	9381.8	13563.6	13784.5	12925.1	11952.6	10295.9
72.5°	978.8	1002.9	1187.0	1684.7	2876.8	5657.0	11109.6	11574.3	11673.3	10709.7	8043.7
75°	613.2	620.8	693.2	864.5	1279.7	2339.7	7194.4	7827.9	8715.3	8309.1	5385.3
77.5°	462.1	468.5	510.4	595.4	794.7	873.4	3337.6	3980.0	4991.8	4887.7	2680.0
80°	354.2	358.0	385.9	432.9	559.9	547.2	1082.9	1360.9	2083.3	1838.3	948.3
82.5°	278.0	279.3	303.4	312.3	391.0	368.2	543.4	605.6	841.7	699.5	463.4
85°	246.3	250.1	274.2	228.5	250.1	222.2	298.3	323.7	446.9	421.5	175.2
87.5°	125.7	132.0	229.8	195.5	125.7	105.4	130.8	140.9	181.5	196.8	85.1
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°	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2	2450.2
2.5°	2421.0	2422.3	2426.1	2432.4	2442.6	2455.3	2470.5	2485.7	2494.6	2501.0	2498.4
5°	2400.7	2401.9	2409.6	2421.0	2433.7	2452.7	2478.1	2497.2	2511.1	2520.0	2518.7
7.5°	2375.3	2379.1	2394.3	2407.0	2424.8	2440.0	2460.3	2478.1	2492.1	2501.0	2499.7
10°	2356.2	2360.1	2379.1	2395.6	2410.8	2413.4	2409.6	2404.5	2403.2	2409.6	2407.0
12.5°	2347.4	2355.0	2372.7	2384.2	2377.8	2353.7	2325.8	2314.4	2310.5	2323.2	2324.5
15°	2349.9	2356.2	2371.5	2363.9	2329.6	2289.0	2273.7	2282.6	2290.2	2297.8	2299.1
17.5°	2356.2	2360.1	2363.9	2335.9	2287.7	2261.0	2256.0	2247.1	2224.2	2211.5	2210.2
20°	2367.7	2372.7	2366.4	2322.0	2278.8	2243.3	2182.3	2127.7	2075.7	2047.7	2036.3
22.5°	2407.0	2410.8	2391.8	2348.6	2282.6	2167.1	2043.9	1950.0	1870.0	1826.9	1810.3
25°	2484.5	2490.8	2464.2	2409.6	2236.9	2035.1	1861.1	1734.2	1633.9	1581.8	1567.9
27.5°	2620.3	2626.7	2597.5	2455.3	2130.3	1858.6	1647.8	1522.2	1435.8	1391.4	1385.1
30°	2823.4	2832.3	2805.7	2454.0	1967.8	1633.9	1439.6	1366.0	1316.5	1286.0	1284.8
32.5°	3105.3	3138.3	3029.1	2410.8	1767.2	1406.6	1282.2	1256.8	1232.7	1212.4	1212.4
35°	3463.3	3540.7	3250.0	2320.7	1546.3	1251.8	1194.6	1170.5	1140.0	1118.5	1115.9
37.5°	3891.1	4011.7	3407.4	2160.7	1355.9	1176.9	1141.3	1102.0	1053.7	1011.8	1001.7
40°	4478.9	4506.8	3484.9	1900.5	1213.7	1136.2	1091.8	1042.3	981.3	934.4	929.3
42.5°	5069.2	4977.8	3469.6	1621.2	1132.4	1099.4	1041.0	986.4	931.8	892.5	892.5
45°	5740.8	5389.1	3354.1	1340.6	1058.8	1057.5	994.0	942.0	900.1	870.9	864.5
47.5°	6383.2	5758.6	3154.8	1133.7	982.6	1015.6	963.6	921.7	883.6	855.7	850.6
50°	7162.7	6186.4	2942.8	989.0	909.0	978.8	950.9	929.3	892.5	844.2	839.2
52.5°	7937.1	6686.6	2779.0	879.8	844.2	949.6	958.5	961.0	926.8	832.8	826.5
55°	8768.6	7221.1	2606.3	794.7	790.9	935.6	976.3	973.7	957.2	835.3	825.2
57.5°	9559.5	7758.1	2348.6	735.1	749.0	921.7	980.1	939.5	910.3	848.0	831.5
60°	10214.6	8202.4	1970.3	693.2	713.5	893.7	954.7	893.7	844.2	845.5	830.3
62.5°	10533.3	8326.8	1506.9	644.9	684.3	848.0	917.9	859.5	813.8	850.6	841.7
65°	10290.8	7972.6	1074.0	600.5	648.7	794.7	896.3	830.3	798.5	876.0	865.8
67.5°	9419.9	7007.8	779.5	561.1	614.5	740.1	855.7	803.6	783.3	895.0	872.2
69°	8494.4	6050.6	675.4	538.3	590.3	710.9	829.0	789.6	771.9	868.4	835.3
70°	7725.1	5313.0	623.3	524.3	570.0	694.4	808.7	780.8	760.4	836.6	797.3
72.5°	5539.0	3434.1	524.3	482.4	516.7	657.6	764.3	747.8	717.3	755.4	730.0
75°	3346.5	1792.6	445.6	439.3	460.8	606.8	712.2	691.9	661.4	665.2	652.5
77.5°	1537.4	827.7	373.2	388.5	402.4	543.4	648.7	625.9	597.9	587.8	589.1
80°	674.1	483.7	312.3	331.3	339.0	488.8	580.2	554.8	524.3	578.9	537.0
82.5°	364.4	280.6	243.7	256.4	278.0	425.3	504.0	471.0	441.8	514.2	415.1
85°	147.3	143.5	165.0	177.7	193.0	306.0	421.5	387.2	351.7	314.8	307.2
87.5°	63.5	68.6	81.2	86.3	102.8	190.4	283.1	247.6	248.8	213.3	209.5
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)