

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: P197302

Luminaire Tested: **NAV-AF-04-D-UNV-T3R-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197302  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-04-D-UNV-T3R-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
ROADWAY OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22212 lumens  
Efficiency: N/A  
Efficacy: 86.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Full Cutoff  
BUG Rating: B3 - U0 - G4

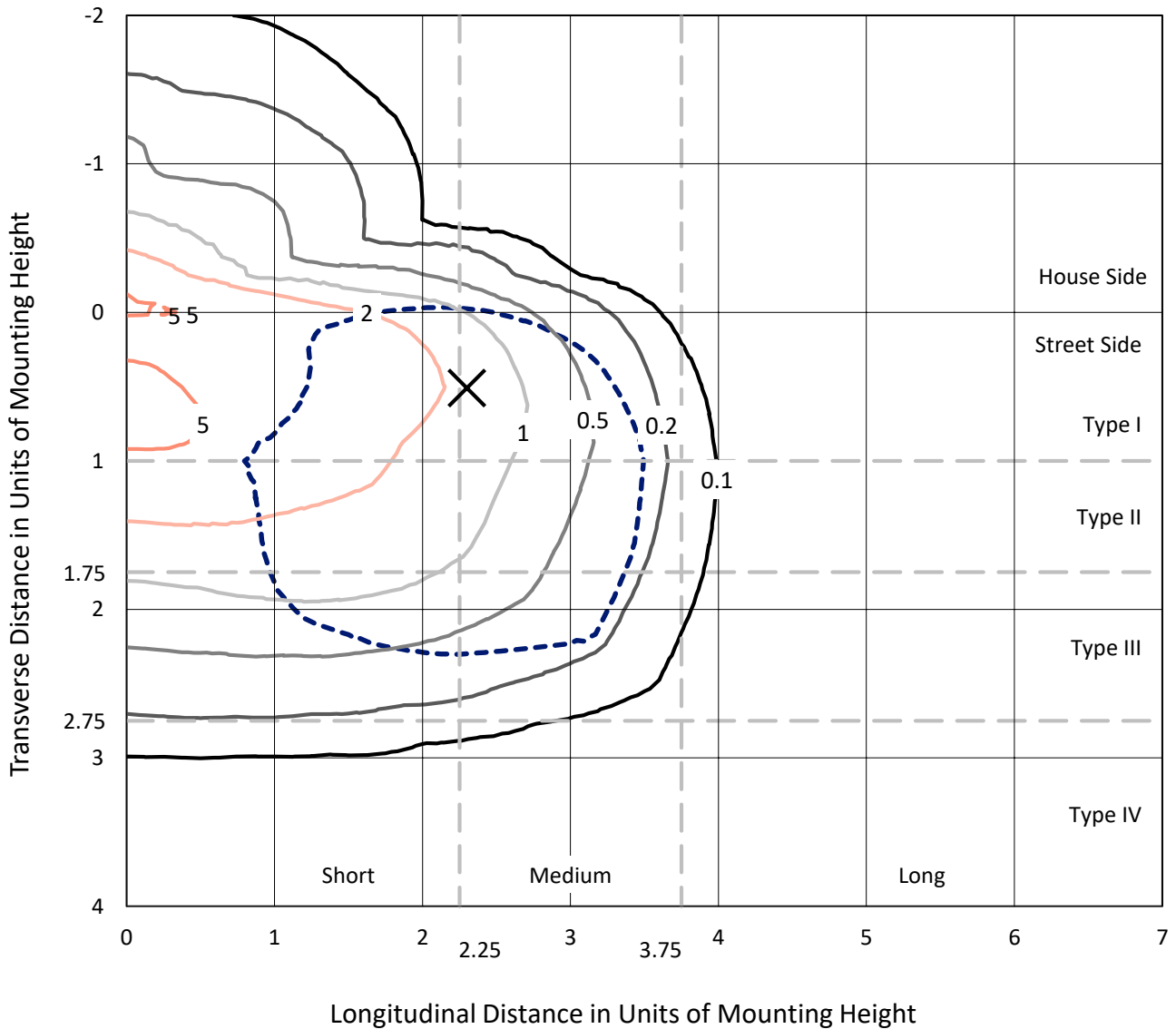
Input Watts (W): 258  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

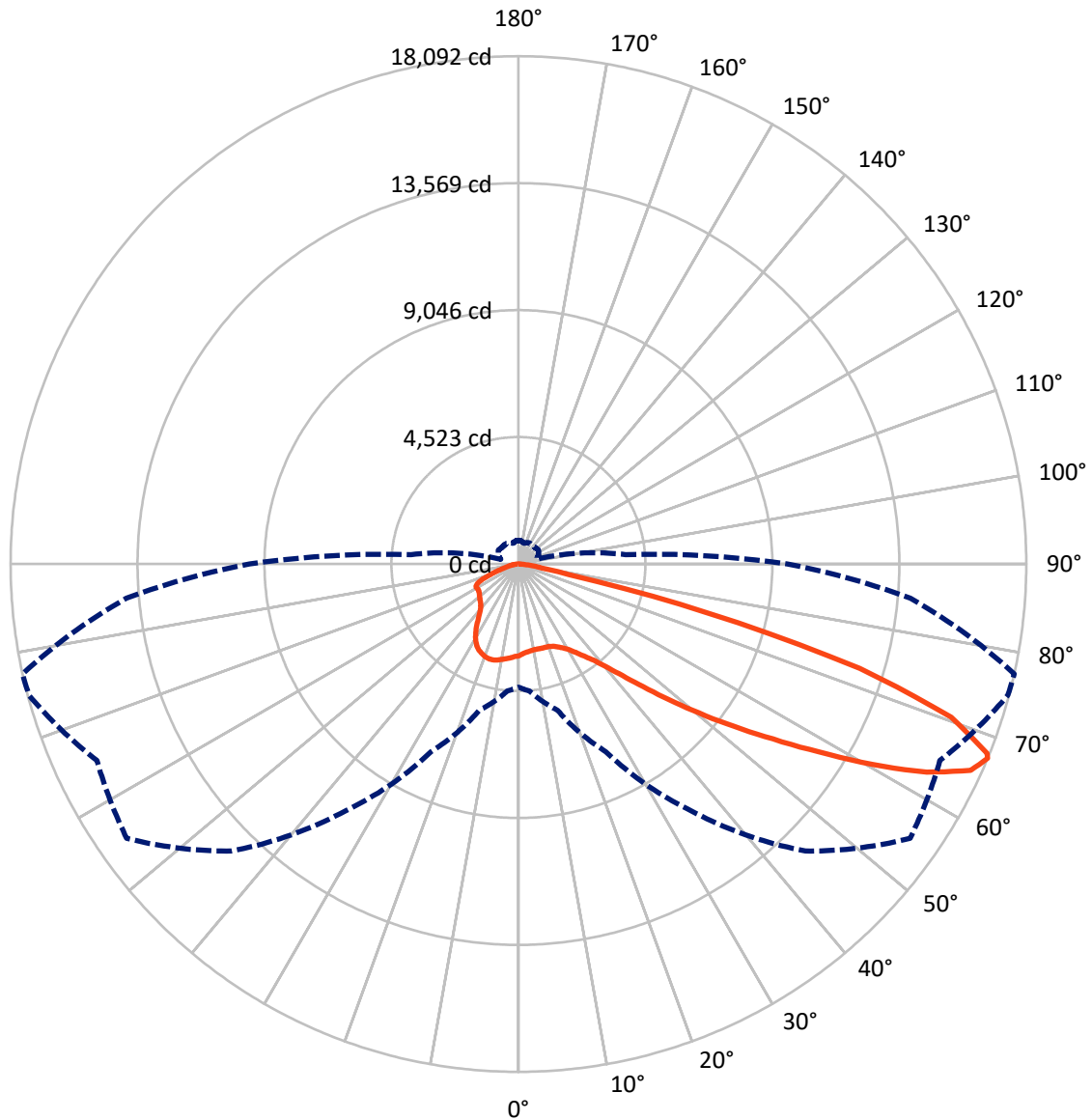
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 fc  
 Type III - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral    - - - Horizontal Cone Through 67-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3817.1	0.0	3817.1
	% Fixture	17.2	0.0	17.2
<b>Street Side</b>	Lumens	18394.9	0.0	18394.9
	% Fixture	82.8	0.0	82.8
<b>Total</b>	Lumens	22212.0	0.0	22212.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	291.2	1.3
10°-20°	806.3	3.6
20°-30°	1370.0	6.2
30°-40°	2191.7	9.9
40°-50°	3374.1	15.2
50°-60°	4681.2	21.1
60°-70°	6244.4	28.1
70°-80°	2971.7	13.4
80°-90°	281.4	1.3
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°	22212.0	100.0
0°-180°	22212.0	100.0



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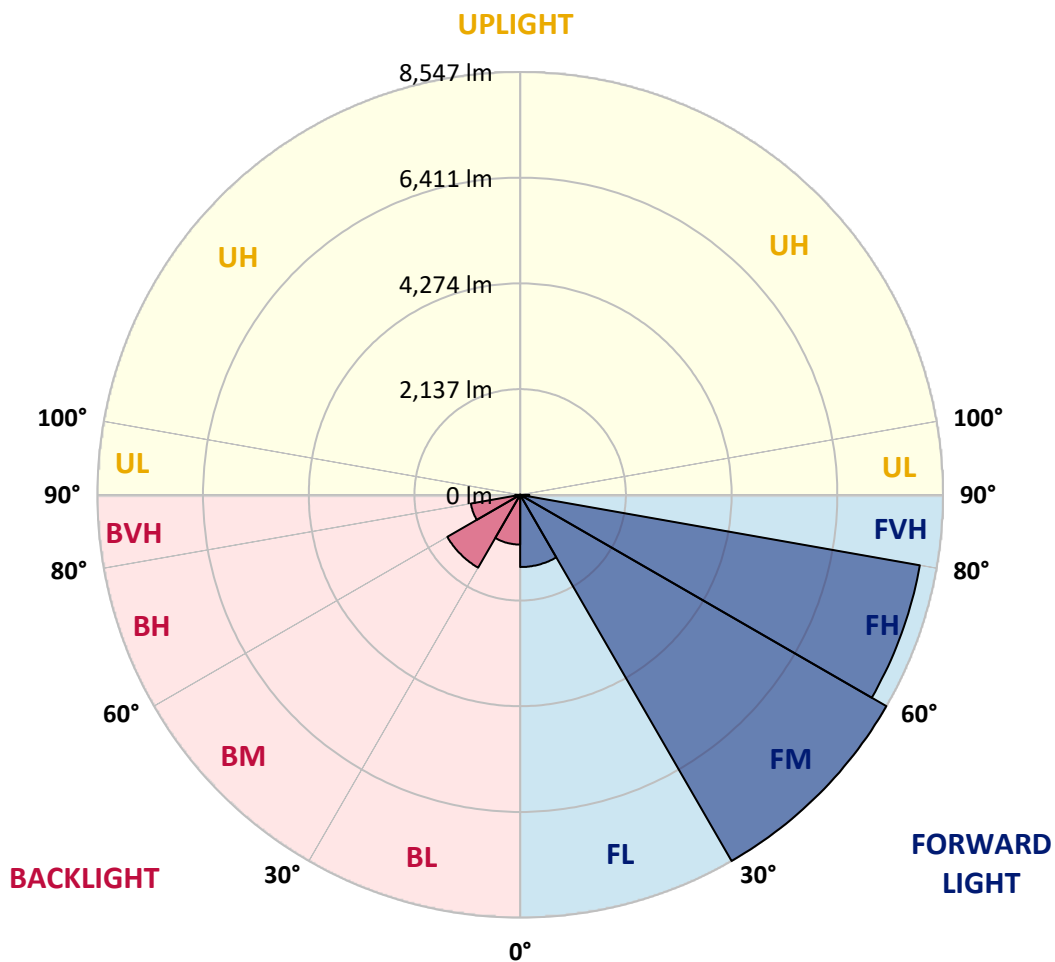
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1460.7	6.6			
FM	(30°-60°)	8547.4	38.5			
FH	(60°-80°)	8204.1	36.9			G4/12000
FVH	(80°-90°)	182.8	0.8			G2/225
BL	(0°-30°)	1006.8	4.5	B3/2500		
BM	(30°-60°)	1699.6	7.7	B2/2500		
BH	(60°-80°)	1012.1	4.6	B3/2500		G3/2500
BVH	(80°-90°)	98.6	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0
2.5°	2931.3	2945.0	2946.4	2986.2	3004.0	3049.3	3098.8	3142.7	3181.2	3194.9	3219.6
5°	2637.5	2637.5	2641.6	2667.7	2718.5	2791.2	2894.2	3006.8	3124.9	3153.7	3226.5
7.5°	2483.7	2486.4	2489.2	2515.3	2555.1	2619.6	2722.6	2876.4	3072.7	3120.7	3248.4
10°	2497.4	2493.3	2479.6	2474.1	2490.6	2531.7	2621.0	2778.9	3028.8	3102.9	3288.2
12.5°	2713.0	2704.7	2659.4	2593.5	2533.1	2518.0	2579.8	2729.4	3008.2	3102.9	3355.5
15°	3082.3	3087.8	2998.5	2861.3	2703.4	2596.3	2588.0	2711.6	3001.3	3111.1	3433.8
17.5°	3562.8	3565.6	3442.0	3242.9	2980.7	2759.7	2644.3	2711.6	3001.3	3119.4	3509.3
20°	4073.6	4054.4	3914.3	3664.4	3323.9	2986.2	2747.3	2728.1	3009.5	3131.7	3580.7
22.5°	4511.6	4493.7	4346.8	4084.6	3694.6	3253.9	2886.0	2783.0	3054.8	3182.5	3680.9
25°	4894.6	4905.6	4762.8	4467.6	4064.0	3556.0	3093.3	2909.3	3149.6	3274.5	3804.5
27.5°	5360.0	5339.4	5174.7	4893.2	4444.3	3869.0	3352.8	3068.6	3262.2	3385.7	3955.5
30°	5898.2	5888.6	5666.2	5376.5	4863.0	4219.1	3609.5	3240.2	3409.1	3538.1	4145.0
32.5°	6551.8	6550.4	6311.5	5955.9	5334.0	4614.5	3912.9	3475.0	3623.2	3753.7	4396.2
35°	7291.8	7290.4	7043.3	6573.7	5876.3	5052.5	4269.9	3760.5	3888.2	4025.5	4695.5
37.5°	7805.3	7797.1	7668.0	7212.2	6476.3	5561.9	4716.1	4145.0	4188.9	4342.7	5056.6
40°	7904.1	7953.6	8064.8	7795.7	7131.2	6127.5	5163.7	4558.2	4599.4	4797.1	5511.1
42.5°	7797.1	7861.6	8230.9	8306.4	7786.1	6812.6	5723.9	5130.8	5182.9	5428.7	6045.2
45°	7703.7	7760.0	8222.7	8589.3	8432.7	7559.5	6422.7	5829.6	5928.5	6233.2	6654.7
47.5°	7544.4	7596.6	8060.7	8640.1	8802.1	8279.0	7264.3	6669.8	6840.1	7209.4	7349.5
50°	7536.2	7559.5	7839.6	8469.8	8929.7	8825.4	8196.6	7652.9	7913.8	8339.4	8118.3
52.5°	7327.5	7490.9	7744.9	8198.0	8932.5	9143.9	9115.1	8730.7	9132.9	9603.9	8961.3
55°	6050.6	6238.7	7429.1	8064.8	8916.0	9417.1	9954.0	9877.1	10505.9	11001.5	9905.9
57.5°	5649.7	5729.4	6517.5	8104.6	9053.3	9868.9	10792.9	11108.6	12076.6	12617.5	11038.6
60°	5539.9	5623.7	6334.8	8123.8	9425.4	10691.3	11931.0	12499.4	13923.2	14497.1	12325.1
62.5°	5417.7	5526.2	6348.6	8141.7	10078.9	11907.7	13441.3	14008.3	15819.3	16331.4	13530.5
65°	5060.7	5204.9	6094.6	8029.1	10794.2	13434.4	15437.6	15581.7	17385.8	17711.2	14258.2
67°	4383.9	4541.8	5397.1	7378.3	10728.3	14462.8	17034.3	16566.2	18051.7	18091.5	14022.1
67.5°	4169.7	4333.1	5161.0	7107.8	10540.2	14597.3	17317.2	16702.1	18046.2	18002.3	13802.4
70°	2807.7	2991.7	3654.8	5218.6	8454.7	13585.5	17248.5	16283.3	16862.7	16358.8	11858.3
72.5°	1393.6	1399.0	1823.3	2858.5	5122.5	9743.9	14388.6	13930.1	13669.2	12717.7	8701.8
75°	671.4	683.7	860.8	1263.1	2159.7	5030.5	9812.6	9399.3	8003.0	6929.3	4355.0
77.5°	512.1	524.5	668.6	822.4	900.7	1640.7	4860.3	3928.0	2318.9	1852.1	1227.4
80°	395.4	418.8	564.3	631.6	595.9	657.6	1528.1	1202.7	902.0	827.9	608.2
82.5°	308.9	322.6	479.2	479.2	411.9	440.7	711.2	694.7	560.2	505.3	326.8
85°	218.3	245.8	385.8	357.0	270.5	273.2	425.6	407.8	288.3	232.0	127.7
87.5°	97.5	124.9	274.6	233.4	144.2	111.2	174.4	149.7	114.0	87.9	59.0
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°	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0	3269.0
2.5°	3247.1	3269.0	3303.3	3323.9	3351.4	3362.4	3373.4	3392.6	3407.7	3403.6	3396.7
5°	3277.3	3314.3	3356.9	3370.6	3370.6	3356.9	3348.7	3350.0	3345.9	3343.2	3334.9
7.5°	3321.2	3372.0	3402.2	3388.5	3345.9	3292.4	3241.6	3211.4	3182.5	3164.7	3170.2
10°	3383.0	3439.3	3440.6	3380.2	3278.6	3161.9	3061.7	2997.2	2935.4	2907.9	2916.2
12.5°	3472.2	3528.5	3480.5	3350.0	3171.5	2988.9	2805.0	2671.8	2552.3	2523.5	2515.3
15°	3568.3	3612.3	3505.2	3285.5	3017.8	2717.1	2408.2	2209.1	2075.9	2052.6	2044.3
17.5°	3652.1	3676.8	3492.8	3170.2	2774.8	2301.1	1941.4	1806.8	1779.4	1793.1	1793.1
20°	3726.2	3718.0	3439.3	2991.7	2391.7	1839.8	1631.1	1629.7	1666.8	1701.1	1703.8
22.5°	3819.6	3755.1	3354.1	2726.7	1934.5	1535.0	1499.3	1535.0	1576.2	1614.6	1618.7
25°	3930.8	3796.2	3240.2	2349.1	1555.6	1393.6	1408.7	1438.9	1465.0	1495.2	1496.5
27.5°	4042.0	3827.8	3079.6	1905.7	1349.6	1302.9	1319.4	1331.8	1338.6	1357.9	1357.9
30°	4171.1	3852.5	2847.5	1526.7	1254.9	1223.3	1213.7	1208.2	1213.7	1239.8	1241.2
32.5°	4333.1	3896.5	2530.4	1309.8	1211.0	1167.0	1117.6	1090.1	1109.4	1156.0	1164.3
35°	4517.0	3948.6	2150.1	1223.3	1195.9	1139.6	1048.9	1006.4	1013.2	1055.8	1062.7
37.5°	4747.7	4015.9	1775.2	1202.7	1211.0	1136.8	1017.4	957.0	926.7	928.1	926.7
40°	5042.9	4083.2	1478.7	1208.2	1243.9	1143.7	1002.3	907.5	844.4	847.1	852.6
42.5°	5351.8	4127.1	1290.6	1224.7	1283.7	1153.3	996.8	859.5	804.6	851.2	893.8
45°	5712.9	4114.8	1193.1	1239.8	1313.9	1157.4	976.2	854.0	808.7	948.7	1028.3
47.5°	6127.5	4061.2	1138.2	1246.6	1322.2	1156.0	961.1	871.8	843.0	1086.0	1176.6
50°	6577.9	3977.5	1094.3	1235.7	1318.0	1150.5	977.5	893.8	856.7	1116.2	1186.2
52.5°	7070.8	3900.6	1048.9	1211.0	1297.4	1134.1	998.1	884.2	818.3	1028.3	1081.9
55°	7654.3	3882.7	998.1	1168.4	1263.1	1116.2	987.2	854.0	775.7	911.6	944.6
57.5°	8321.5	3993.9	932.2	1116.2	1216.4	1080.5	961.1	837.5	760.6	829.3	847.1
60°	9168.6	4239.7	862.2	1061.3	1158.8	1027.0	937.7	841.6	764.7	816.9	821.0
62.5°	9830.4	4460.8	799.1	994.0	1081.9	962.4	913.0	845.7	777.1	833.4	826.5
65°	10070.7	4352.3	720.8	893.8	973.4	891.1	878.7	848.5	777.1	843.0	827.9
67°	9577.8	3834.7	646.7	793.6	870.5	827.9	845.7	837.5	763.4	841.6	815.5
67.5°	9343.0	3652.1	627.4	777.1	843.0	808.7	837.5	832.0	759.2	838.9	808.7
70°	7705.1	2619.6	530.0	652.2	705.7	712.6	786.7	796.3	726.3	788.1	733.2
72.5°	5482.2	1639.3	457.2	505.3	569.8	609.6	718.1	748.3	682.4	685.1	639.8
75°	2713.0	880.1	407.8	389.9	443.5	508.0	626.1	682.4	617.8	571.2	556.0
77.5°	915.8	498.4	344.6	314.4	344.6	407.8	519.0	595.9	545.1	483.3	473.7
80°	473.7	362.5	269.1	252.6	271.8	315.8	406.4	495.6	465.4	468.2	385.8
82.5°	295.2	221.0	193.6	192.2	205.9	241.6	299.3	402.3	399.5	341.9	248.5
85°	137.3	127.7	123.6	127.7	131.8	137.3	195.0	286.9	303.4	184.0	163.4
87.5°	57.7	56.3	49.4	53.5	59.0	57.7	78.3	122.2	170.2	115.3	105.7
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)