

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: P197268

Luminaire Tested: **NAV-AF-06-D-UNV-T3-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197268
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-T3-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 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: 23755 lumens
Efficiency: N/A
Efficacy: 95.4 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 - G4

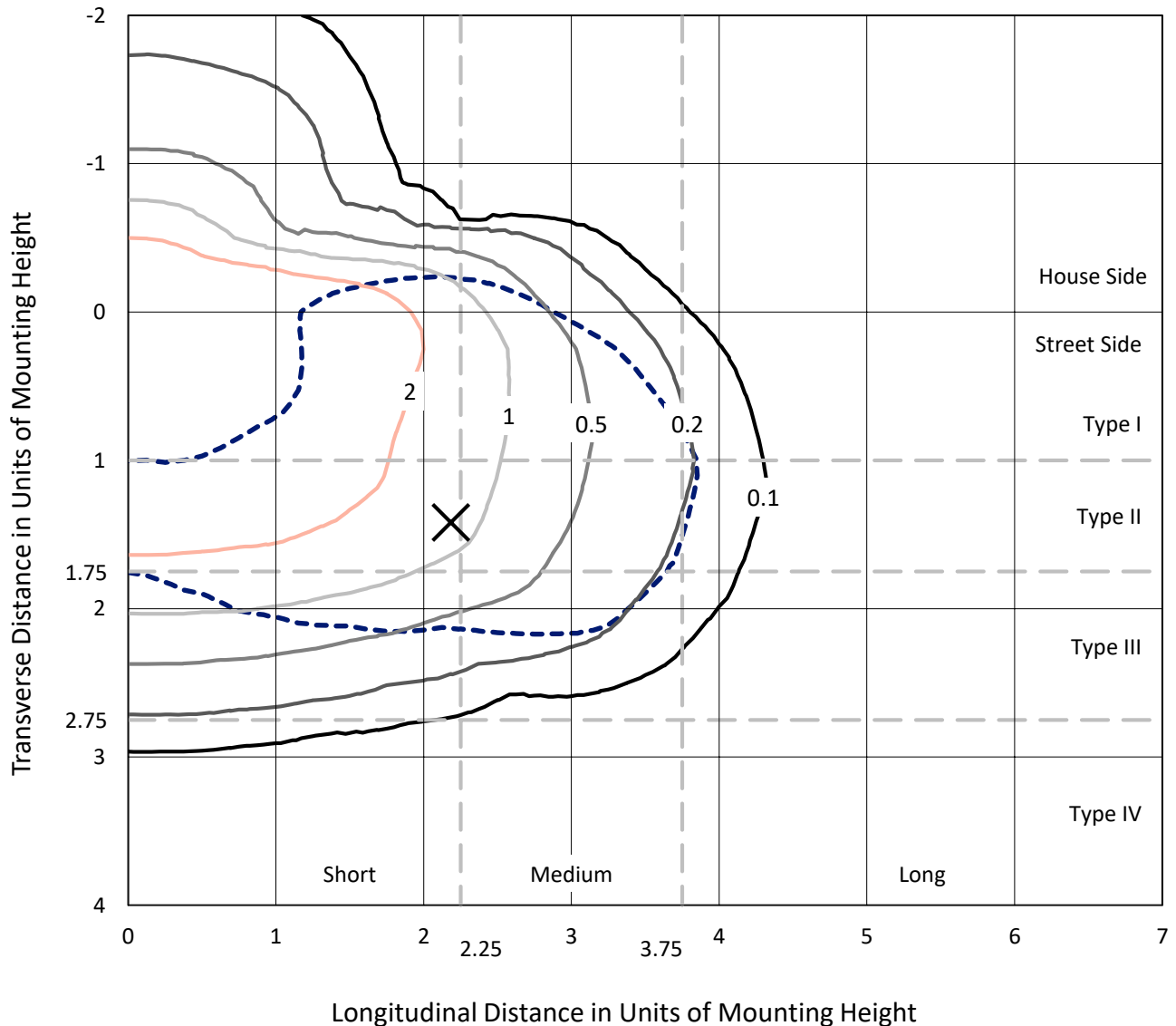
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

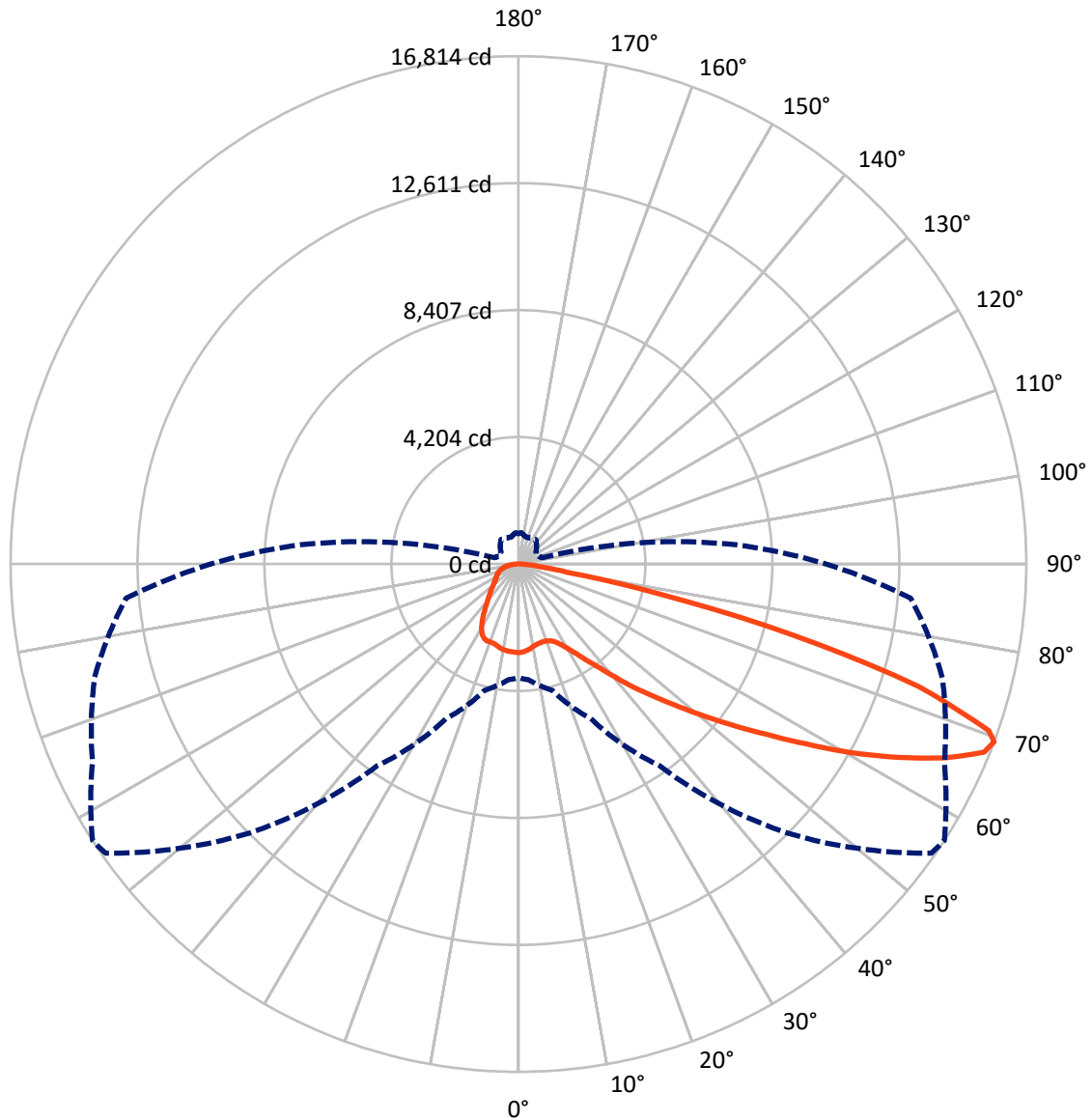
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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	5241.9	0.0	5241.9
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	18513.1	0.0	18513.1
	% Fixture	77.9	0.0	77.9
Total	Lumens	23755.0	0.0	23755.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	274.8	1.2
10°-20°	781.3	3.3
20°-30°	1299.7	5.5
30°-40°	2122.3	8.9
40°-50°	3582.0	15.1
50°-60°	5572.0	23.5
60°-70°	6637.5	27.9
70°-80°	3092.2	13.0
80°-90°	393.3	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°	23755.0	100.0
0°-180°	23755.0	100.0



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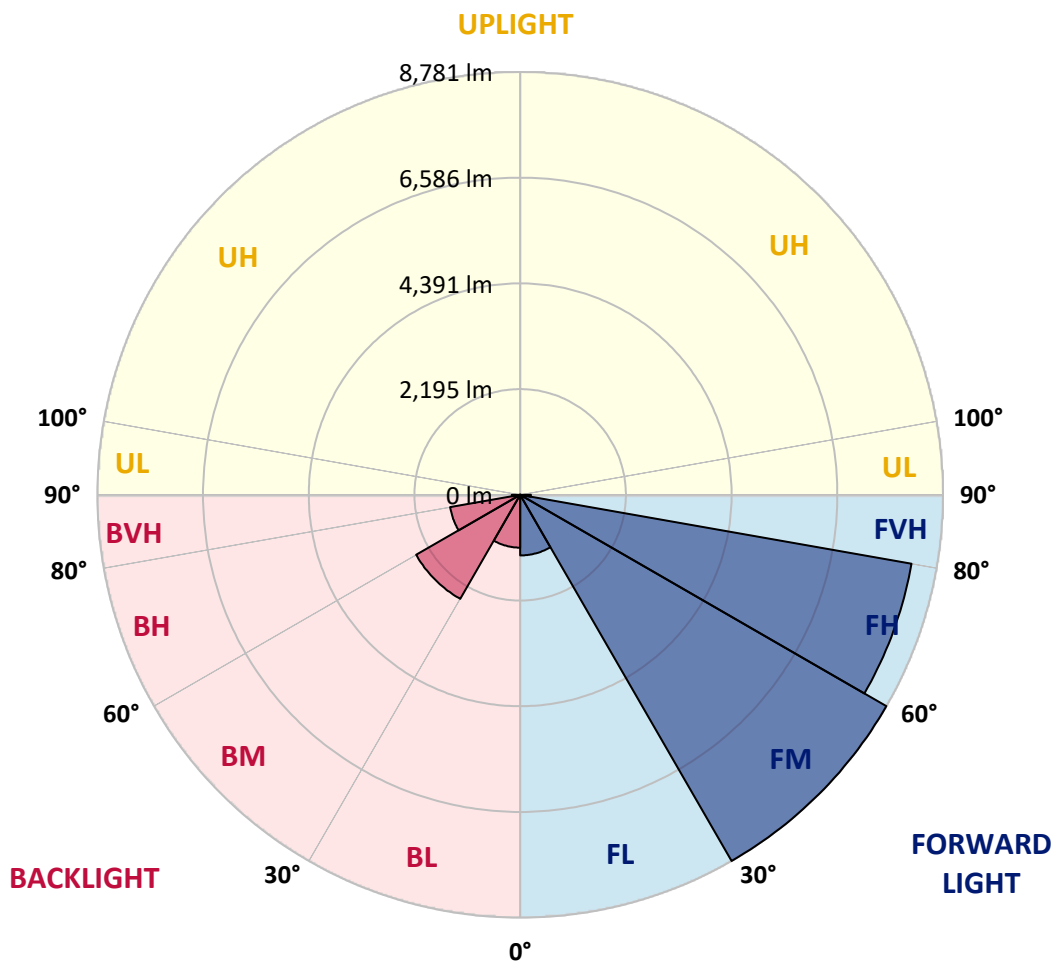
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1258.0	5.3			
FM	(30°-60°)	8781.5	37.0			
FH	(60°-80°)	8252.5	34.7			G4/12000
FVH	(80°-90°)	221.1	0.9			G2/225
BL	(0°-30°)	1097.8	4.6	B3/2500		
BM	(30°-60°)	2494.8	10.5	B2/2500		
BH	(60°-80°)	1477.1	6.2	B3/2500		G3/2500
BVH	(80°-90°)	172.2	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-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	57°	65°	75°	85°
0°	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2
2.5°	2918.4	2918.4	2926.0	2926.0	2926.0	2923.0	2913.9	2916.9	2910.8	2906.3	2898.7
5°	2859.1	2862.2	2871.3	2874.3	2878.9	2880.4	2880.4	2878.9	2880.4	2880.4	2875.9
7.5°	2777.0	2780.0	2790.7	2796.8	2810.5	2822.6	2828.7	2828.7	2836.3	2842.4	2843.9
10°	2726.8	2726.8	2732.9	2732.9	2743.5	2749.6	2769.4	2767.9	2789.2	2808.9	2818.1
12.5°	2720.7	2720.7	2717.7	2707.0	2701.0	2699.4	2719.2	2722.2	2754.2	2789.2	2805.9
15°	2740.5	2740.5	2731.4	2710.1	2687.3	2676.6	2696.4	2702.5	2737.5	2778.5	2804.4
17.5°	2804.4	2802.9	2783.1	2740.5	2701.0	2684.2	2690.3	2696.4	2728.3	2775.5	2807.4
20°	2945.8	2945.8	2903.2	2825.7	2757.2	2717.7	2708.6	2713.1	2735.9	2780.0	2821.1
22.5°	3193.7	3198.3	3122.2	2994.5	2877.4	2793.7	2757.2	2761.8	2772.4	2815.0	2860.6
25°	3558.7	3546.5	3438.5	3257.6	3075.1	2932.1	2857.6	2862.2	2862.2	2901.7	2948.8
27.5°	3945.0	3948.0	3792.9	3598.2	3357.9	3145.0	3026.4	3024.9	3023.4	3061.4	3111.6
30°	4381.5	4383.0	4203.5	3978.4	3703.2	3430.9	3253.0	3251.5	3237.8	3284.9	3350.3
32.5°	4859.0	4857.5	4649.1	4395.1	4089.5	3780.7	3549.6	3548.0	3537.4	3601.3	3680.4
35°	5388.2	5388.2	5181.4	4868.1	4538.1	4194.4	3926.7	3925.2	3931.3	4018.0	4092.5
37.5°	6025.4	6039.1	5789.7	5409.5	5049.1	4682.6	4370.8	4361.7	4316.1	4462.1	4585.2
40°	6690.0	6728.1	6469.5	6025.4	5636.1	5257.4	4913.7	4907.7	4868.1	5023.2	5222.5
42.5°	7409.4	7496.1	7208.6	6755.4	6331.1	5922.0	5576.8	5560.1	5408.0	5649.8	5961.6
45°	8352.3	8408.6	7991.9	7581.2	7181.3	6714.4	6303.8	6214.0	6061.9	6372.2	6776.7
47.5°	8994.1	8966.7	8706.6	8431.4	8174.3	7727.2	7096.1	6982.0	6796.5	7207.1	7652.7
50°	9392.5	9412.3	9266.3	9252.6	9238.9	8927.2	7990.3	7853.5	7639.0	8125.7	8645.8
52.5°	9655.6	9565.9	9591.7	9902.0	10277.6	10128.6	9001.7	8849.6	8629.1	9115.7	9702.8
55°	9546.1	9427.5	9666.3	10277.6	11161.2	11194.7	10111.9	9955.2	9766.6	10168.1	10974.2
57.5°	9092.9	9152.2	9529.4	10379.5	11765.0	12149.7	11387.8	11228.1	10857.1	11264.6	12181.7
60°	8455.7	8575.8	9152.2	10218.3	12187.8	12893.4	12788.5	12682.0	12043.3	12332.2	13450.0
62.5°	7771.3	7890.0	8598.7	9943.1	11997.7	13551.9	14163.3	14097.9	13352.7	13360.3	14254.5
65°	6760.0	6808.7	7532.6	9191.8	11469.9	14146.6	15539.6	15481.8	14604.3	14237.8	14479.6
67.5°	5105.4	5166.2	5760.8	7255.8	9864.0	13824.2	16639.2	16630.0	15357.1	14563.3	13944.3
69°	3770.1	3844.6	4329.7	5633.1	8156.1	12595.3	16690.9	16814.1	15560.9	14529.8	13039.4
70°	2758.7	2843.9	3292.6	4471.2	6793.5	11238.8	16248.3	16512.9	15483.4	14318.4	12333.8
72.5°	1172.5	1201.4	1422.0	2018.1	3446.2	6776.7	13308.6	13865.2	13983.8	12829.5	9635.8
75°	734.6	743.7	830.4	1035.7	1533.0	2802.9	8618.4	9377.3	10440.4	9953.7	6451.3
77.5°	553.6	561.2	611.4	713.3	952.0	1046.3	3998.2	4767.7	5979.8	5855.1	3210.4
80°	424.3	428.9	462.3	518.6	670.7	655.5	1297.3	1630.3	2495.6	2202.1	1136.0
82.5°	333.1	334.6	363.5	374.1	468.4	441.0	650.9	725.4	1008.3	838.0	555.1
85°	295.0	299.6	328.5	273.7	299.6	266.1	357.4	387.8	535.3	504.9	209.9
87.5°	150.6	158.2	275.3	234.2	150.6	126.2	156.6	168.8	217.5	235.7	101.9
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°	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2	2935.2
2.5°	2900.2	2901.7	2906.3	2913.9	2926.0	2941.2	2959.5	2977.7	2988.4	2996.0	2993.0
5°	2875.9	2877.4	2886.5	2900.2	2915.4	2938.2	2968.6	2991.4	3008.2	3018.8	3017.3
7.5°	2845.4	2850.0	2868.2	2883.5	2904.7	2923.0	2947.3	2968.6	2985.3	2996.0	2994.5
10°	2822.6	2827.2	2850.0	2869.8	2888.0	2891.1	2886.5	2880.4	2878.9	2886.5	2883.5
12.5°	2812.0	2821.1	2842.4	2856.1	2848.5	2819.6	2786.1	2772.4	2767.9	2783.1	2784.6
15°	2815.0	2822.6	2840.9	2831.7	2790.7	2742.0	2723.8	2734.4	2743.5	2752.7	2754.2
17.5°	2822.6	2827.2	2831.7	2798.3	2740.5	2708.6	2702.5	2691.8	2664.5	2649.2	2647.7
20°	2836.3	2842.4	2834.8	2781.6	2729.9	2687.3	2614.3	2548.9	2486.5	2453.1	2439.4
22.5°	2883.5	2888.0	2865.2	2813.5	2734.4	2596.0	2448.5	2336.0	2240.2	2188.4	2168.7
25°	2976.2	2983.8	2951.9	2886.5	2679.7	2437.9	2229.5	2077.4	1957.3	1894.9	1878.2
27.5°	3139.0	3146.6	3111.6	2941.2	2551.9	2226.5	1974.0	1823.5	1720.0	1666.8	1659.2
30°	3382.3	3392.9	3361.0	2939.7	2357.3	1957.3	1724.6	1636.4	1577.1	1540.6	1539.1
32.5°	3719.9	3759.4	3628.7	2888.0	2117.0	1685.1	1536.0	1505.6	1476.7	1452.4	1452.4
35°	4148.8	4241.5	3893.3	2780.0	1852.3	1499.5	1431.1	1402.2	1365.7	1339.8	1336.8
37.5°	4661.3	4805.8	4081.9	2588.4	1624.2	1409.8	1367.2	1320.1	1262.3	1212.1	1199.9
40°	5365.4	5398.9	4174.6	2276.7	1453.9	1361.1	1307.9	1248.6	1175.6	1119.3	1113.2
42.5°	6072.6	5963.1	4156.4	1942.1	1356.6	1317.0	1247.1	1181.7	1116.3	1069.1	1069.1
45°	6877.1	6455.8	4018.0	1606.0	1268.4	1266.8	1190.8	1128.4	1078.3	1043.3	1035.7
47.5°	7646.6	6898.4	3779.2	1358.1	1177.1	1216.6	1154.3	1104.1	1058.5	1025.0	1018.9
50°	8580.4	7410.9	3525.2	1184.7	1088.9	1172.5	1139.1	1113.2	1069.1	1011.3	1005.3
52.5°	9508.1	8010.1	3329.1	1053.9	1011.3	1137.6	1148.2	1151.3	1110.2	997.7	990.0
55°	10504.2	8650.4	3122.2	952.0	947.5	1120.8	1169.5	1166.5	1146.7	1000.7	988.5
57.5°	11451.7	9293.7	2813.5	880.5	897.3	1104.1	1174.1	1125.4	1090.4	1015.9	996.1
60°	12236.4	9825.9	2360.3	830.4	854.7	1070.6	1143.6	1070.6	1011.3	1012.9	994.6
62.5°	12618.2	9975.0	1805.2	772.6	819.7	1015.9	1099.5	1029.6	974.8	1018.9	1008.3
65°	12327.7	9550.7	1286.6	719.3	777.1	952.0	1073.7	994.6	956.6	1049.4	1037.2
67.5°	11284.4	8394.9	933.8	672.2	736.1	886.6	1025.0	962.7	938.3	1072.2	1044.8
69°	10175.7	7248.2	809.1	644.8	707.2	851.7	993.1	945.9	924.7	1040.2	1000.7
70°	9254.1	6364.6	746.7	628.1	682.8	831.9	968.8	935.3	911.0	1002.2	955.1
72.5°	6635.3	4113.8	628.1	577.9	619.0	787.8	915.5	895.8	859.3	904.9	874.5
75°	4008.9	2147.4	533.8	526.2	552.1	726.9	853.2	828.8	792.3	796.9	781.7
77.5°	1841.7	991.6	447.1	465.4	482.1	650.9	777.1	749.8	716.3	704.1	705.7
80°	807.5	579.4	374.1	396.9	406.1	585.5	695.0	664.6	628.1	693.5	643.3
82.5°	436.5	336.1	292.0	307.2	333.1	509.5	603.8	564.2	529.2	615.9	497.3
85°	176.4	171.9	197.7	212.9	231.2	366.5	504.9	463.8	421.3	377.2	368.0
87.5°	76.0	82.1	97.3	103.4	123.2	228.1	339.1	296.6	298.1	255.5	250.9
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)