

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: P270408

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270408
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-5NQ-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17748.1 lumens
Efficiency: N/A
Efficacy: 92.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

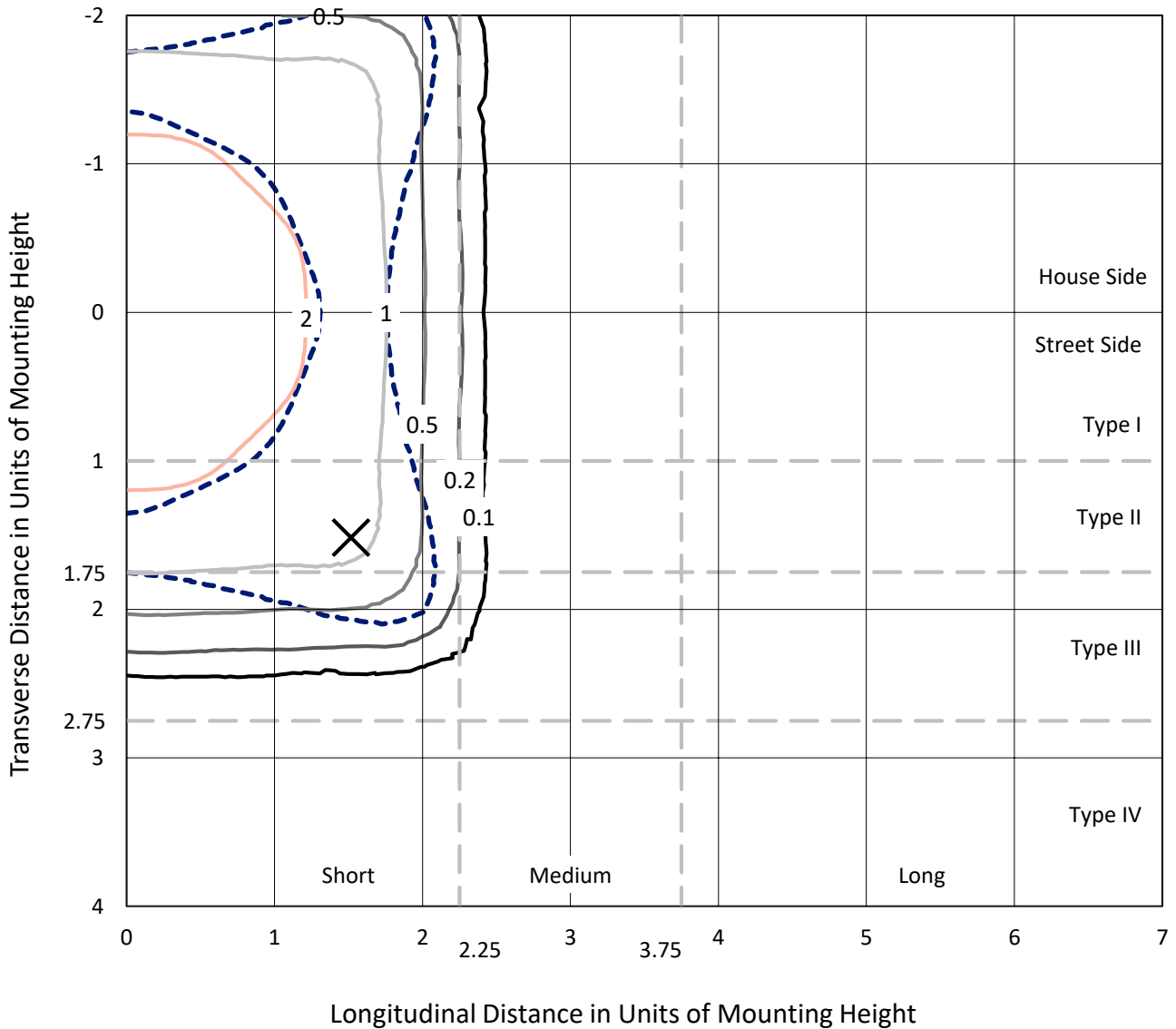
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

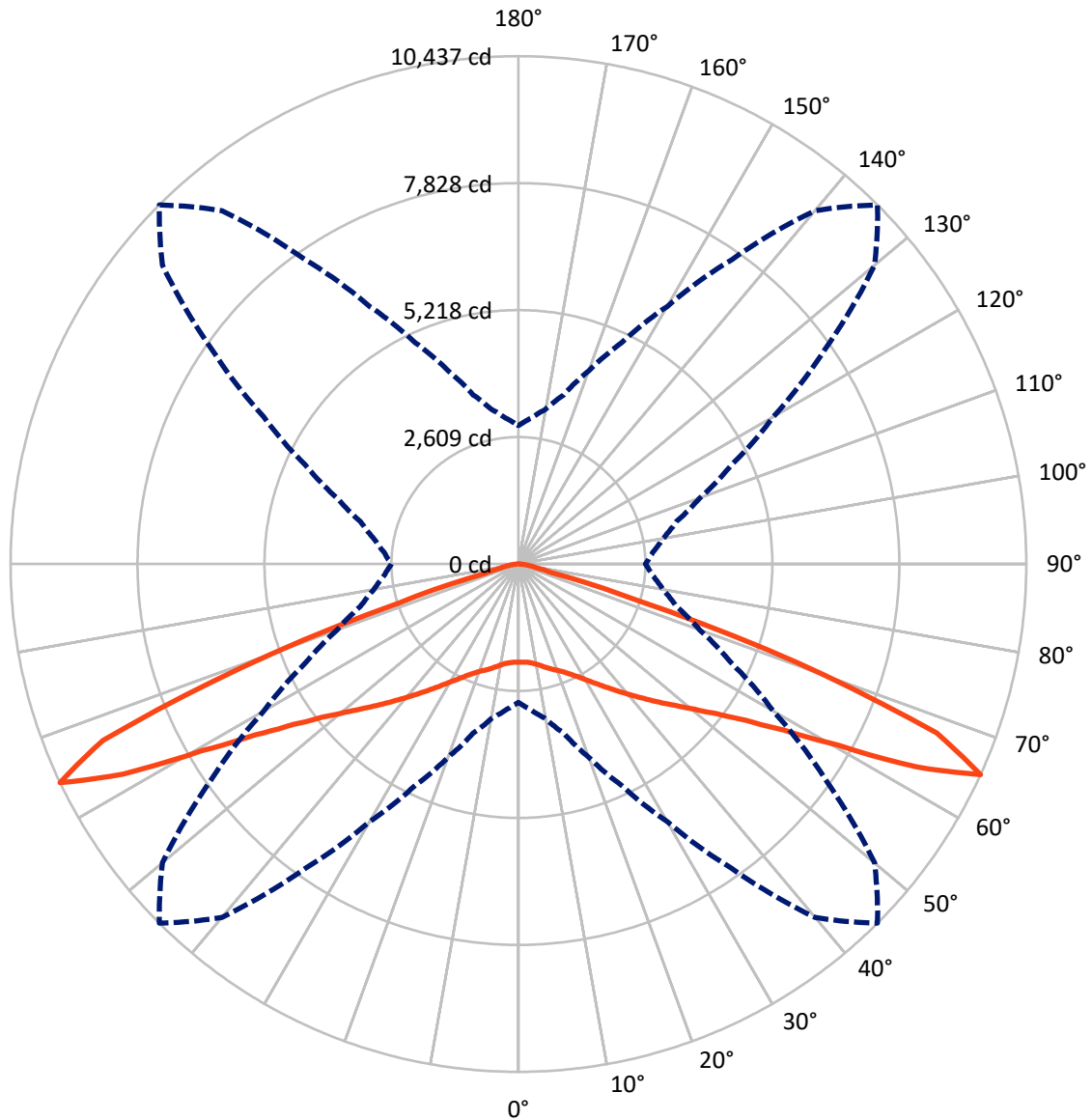
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8874.1	0.0	8874.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8874.1	0.0	8874.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	17748.1	0.0	17748.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.6	1.1
10°-20°	630.1	3.6
20°-30°	1175.4	6.6
30°-40°	1981.9	11.2
40°-50°	3219.3	18.1
50°-60°	5044.0	28.4
60°-70°	4761.3	26.8
70°-80°	641.7	3.6
80°-90°	97.7	0.6
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°	17748.1	100.0
0°-180°	17748.1	100.0

Coefficient of Utilization



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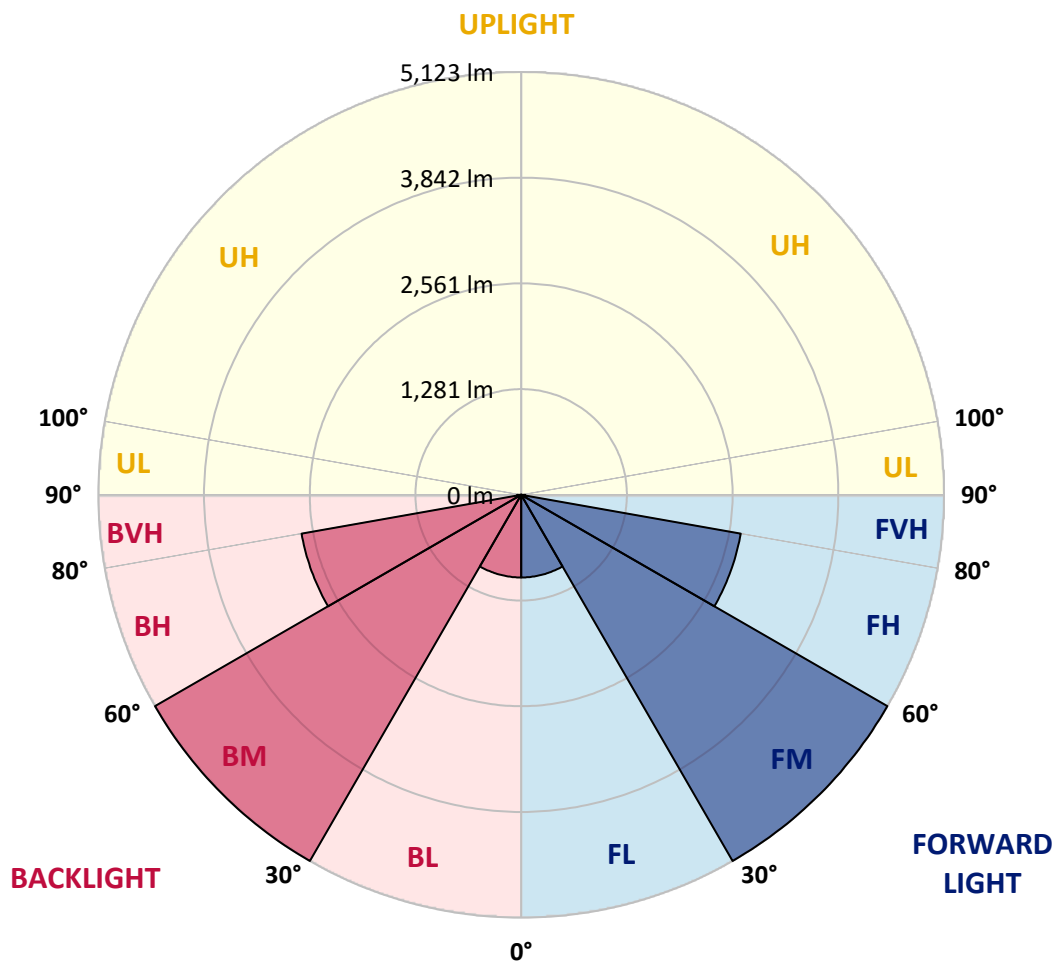
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1001.1	5.6			
FM	(30°-60°)	5122.6	28.9			
FH	(60°-80°)	2701.5	15.2			G2/5000
FVH	(80°-90°)	48.9	0.3			G1/100
BL	(0°-30°)	1001.1	5.6	B3/2500		
BM	(30°-60°)	5122.6	28.9	B4/8500		
BH	(60°-80°)	2701.5	15.2	B4/5000		G2/5000
BVH	(80°-90°)	48.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9
2.5°	2035.4	2035.4	2038.8	2037.6	2033.3	2029.9	2026.5	2022.2	2019.8	2017.8	2016.7
5°	2046.5	2046.5	2049.8	2048.7	2045.4	2040.9	2038.8	2035.4	2032.1	2029.9	2031.0
7.5°	2074.0	2075.3	2076.3	2075.3	2071.9	2068.5	2064.1	2063.0	2058.6	2055.3	2057.5
10°	2116.0	2116.0	2117.2	2118.4	2116.0	2108.4	2108.4	2106.2	2101.8	2097.4	2098.4
12.5°	2162.6	2162.6	2163.7	2163.7	2163.7	2159.3	2160.3	2159.3	2153.6	2151.5	2153.6
15°	2207.9	2209.0	2209.0	2211.2	2211.2	2212.3	2216.7	2216.7	2214.5	2213.5	2213.5
17.5°	2260.9	2263.2	2264.3	2267.6	2268.7	2270.9	2275.3	2276.5	2277.6	2274.1	2275.3
20°	2331.7	2332.8	2336.1	2337.2	2341.6	2341.6	2343.9	2342.8	2340.5	2336.1	2336.1
22.5°	2411.3	2413.6	2420.2	2420.2	2425.8	2422.4	2423.4	2420.2	2414.6	2412.4	2410.2
25°	2515.3	2518.6	2524.1	2521.9	2524.1	2518.6	2518.6	2518.6	2515.3	2511.9	2510.9
27.5°	2646.9	2641.2	2646.9	2642.4	2641.2	2636.9	2638.0	2635.7	2632.5	2631.3	2627.0
30°	2783.8	2777.3	2780.7	2781.7	2779.4	2778.4	2774.0	2770.6	2765.2	2766.2	2762.8
32.5°	2941.0	2934.3	2937.5	2938.6	2936.5	2938.6	2937.5	2929.8	2923.3	2927.7	2927.7
35°	3127.8	3123.3	3132.2	3135.4	3128.8	3125.6	3121.2	3112.3	3102.3	3108.9	3110.0
37.5°	3352.1	3346.6	3353.4	3362.1	3350.0	3343.3	3325.6	3312.4	3305.8	3309.0	3313.5
40°	3585.4	3586.6	3605.3	3607.6	3594.3	3586.6	3568.8	3548.9	3530.2	3530.2	3535.6
42.5°	3830.9	3834.2	3856.3	3864.1	3859.7	3845.3	3821.0	3796.6	3772.3	3776.7	3783.4
45°	4108.4	4103.9	4127.3	4145.9	4142.8	4138.2	4115.0	4070.8	4048.8	4047.7	4058.6
47.5°	4400.3	4409.2	4433.4	4465.6	4464.4	4453.3	4423.6	4382.7	4341.7	4345.0	4358.2
50°	4740.9	4753.0	4793.9	4826.0	4830.4	4827.0	4791.6	4744.0	4686.6	4690.1	4707.7
52.5°	5046.0	5063.7	5111.1	5177.6	5218.4	5237.3	5214.0	5169.7	5111.1	5114.5	5133.4
55°	5322.4	5349.9	5420.7	5511.5	5593.2	5669.6	5703.8	5702.7	5659.6	5669.6	5693.8
57.5°	5495.9	5534.6	5641.9	5787.8	5950.4	6104.1	6236.8	6361.6	6389.3	6441.2	6441.2
60°	5262.7	5353.3	5495.9	5745.7	6065.4	6410.2	6784.0	7147.8	7382.1	7566.8	7467.3
62.5°	4394.8	4528.5	4728.7	5058.1	5555.7	6171.4	6922.2	7768.0	8650.1	9189.8	8794.0
65°	2843.7	3011.7	3229.4	3599.9	4226.7	5019.4	6112.8	7633.1	9479.5	10436.9	9552.3
67.5°	1126.7	1240.5	1373.1	1636.4	2180.2	2958.6	4185.8	6061.0	8370.4	9273.8	8282.1
70°	538.4	557.2	582.6	639.1	775.0	1045.8	1681.5	2986.2	5133.4	6085.2	5010.6
72.5°	389.1	392.5	404.6	423.5	463.3	518.5	630.3	913.2	1770.1	2573.9	1772.3
75°	295.3	299.7	306.2	316.3	337.3	363.8	405.8	486.4	605.8	698.7	604.7
77.5°	224.4	228.9	234.4	244.2	255.4	274.3	289.7	321.8	372.5	392.5	390.3
80°	163.6	171.3	180.2	189.1	196.8	205.6	206.7	222.2	250.9	269.9	264.2
82.5°	103.9	110.5	133.8	143.6	144.8	147.1	146.0	147.1	162.6	175.8	171.3
85°	66.4	70.7	83.0	94.0	91.7	96.2	96.2	94.0	87.3	75.2	89.6
87.5°	33.1	34.2	39.9	49.8	47.5	42.0	41.0	41.0	29.9	25.4	27.7
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9	2018.9
2.5°	2013.3	2015.4	2012.3	2012.3	2011.0	2013.3	2010.0	2010.0
5°	2028.8	2032.1	2031.0	2031.0	2033.3	2035.4	2034.3	2033.3
7.5°	2056.4	2058.6	2060.8	2062.0	2064.1	2063.0	2065.3	2064.1
10°	2098.4	2096.3	2099.6	2096.3	2097.4	2095.0	2096.3	2096.3
12.5°	2151.5	2148.1	2146.1	2143.7	2143.7	2139.4	2139.4	2140.4
15°	2212.3	2206.7	2202.4	2200.2	2198.0	2198.0	2194.6	2196.8
17.5°	2272.1	2266.5	2258.8	2258.8	2255.5	2253.2	2251.1	2256.5
20°	2335.1	2329.6	2325.1	2323.9	2317.4	2315.1	2316.2	2322.8
22.5°	2407.9	2404.8	2404.8	2402.4	2398.0	2394.7	2394.7	2402.4
25°	2506.5	2499.8	2500.9	2502.0	2499.8	2499.8	2497.6	2503.0
27.5°	2627.0	2621.3	2624.7	2627.0	2624.7	2628.0	2624.7	2629.1
30°	2768.4	2765.2	2768.4	2771.7	2766.2	2766.2	2764.1	2767.3
32.5°	2937.5	2933.1	2935.4	2935.4	2927.7	2921.0	2912.1	2918.9
35°	3123.3	3117.7	3122.1	3125.6	3116.7	3110.0	3096.7	3102.3
37.5°	3328.0	3330.0	3335.5	3350.0	3347.8	3336.8	3326.8	3331.2
40°	3556.7	3567.8	3592.1	3602.1	3599.9	3588.8	3575.6	3577.7
42.5°	3815.5	3829.8	3855.3	3871.9	3864.1	3848.6	3832.0	3838.6
45°	4097.3	4119.4	4152.7	4169.3	4159.3	4142.8	4119.4	4131.7
47.5°	4395.9	4440.1	4484.2	4506.4	4503.2	4479.8	4450.1	4453.3
50°	4753.0	4811.6	4867.9	4890.1	4873.5	4838.1	4796.1	4795.1
52.5°	5197.5	5260.5	5306.8	5301.3	5260.5	5205.1	5157.6	5155.5
55°	5752.4	5773.4	5766.8	5719.2	5647.5	5561.1	5500.3	5490.4
57.5°	6423.5	6352.9	6248.9	6105.2	5943.7	5780.1	5669.6	5628.6
60°	7243.9	6924.3	6552.9	6161.6	5804.4	5536.9	5367.7	5264.8
62.5°	7921.7	6996.3	6166.0	5485.9	4929.9	4599.3	4368.3	4225.5
65°	7689.4	6044.3	4841.4	3964.7	3357.8	3016.1	2771.7	2609.2
67.5°	5940.4	4038.8	2810.4	1948.1	1477.2	1250.4	1092.2	989.6
70°	2995.0	1548.9	938.6	662.3	566.0	526.2	499.7	484.2
72.5°	878.9	587.1	487.6	431.1	397.0	372.5	357.0	349.4
75°	486.4	397.0	350.5	318.4	296.4	279.7	269.9	263.2
77.5°	335.0	288.5	265.4	244.2	226.6	214.4	206.7	200.1
80°	234.4	211.2	201.2	190.3	176.8	166.9	155.9	151.5
82.5°	155.9	146.0	143.6	134.8	127.1	116.2	96.2	89.6
85°	91.7	90.6	90.6	87.3	81.8	71.9	57.5	57.5
87.5°	32.1	33.1	34.2	36.6	35.4	29.9	24.3	23.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)