

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: P195497

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195497
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)
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-5WQ-7050
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31284 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 279
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

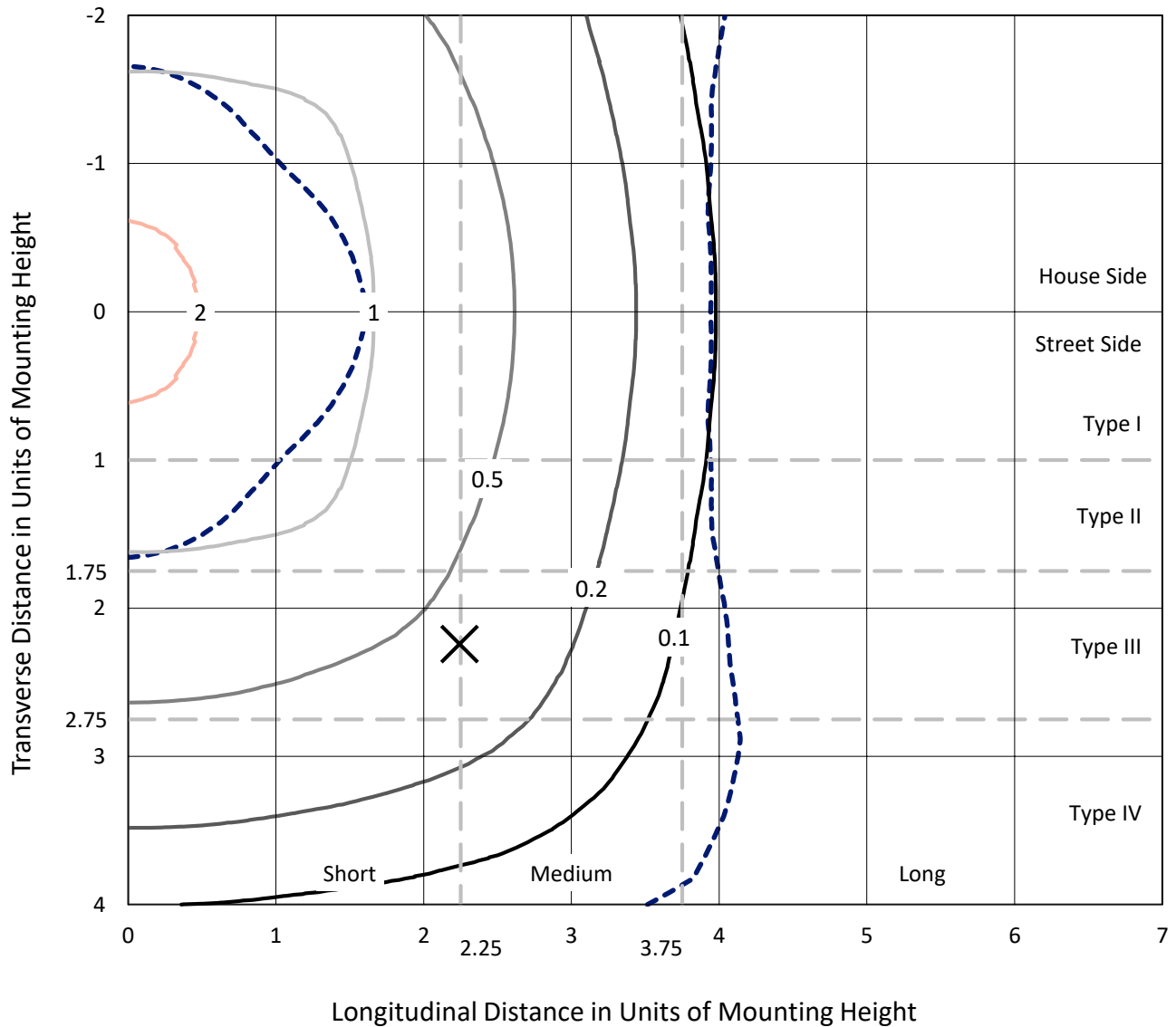


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

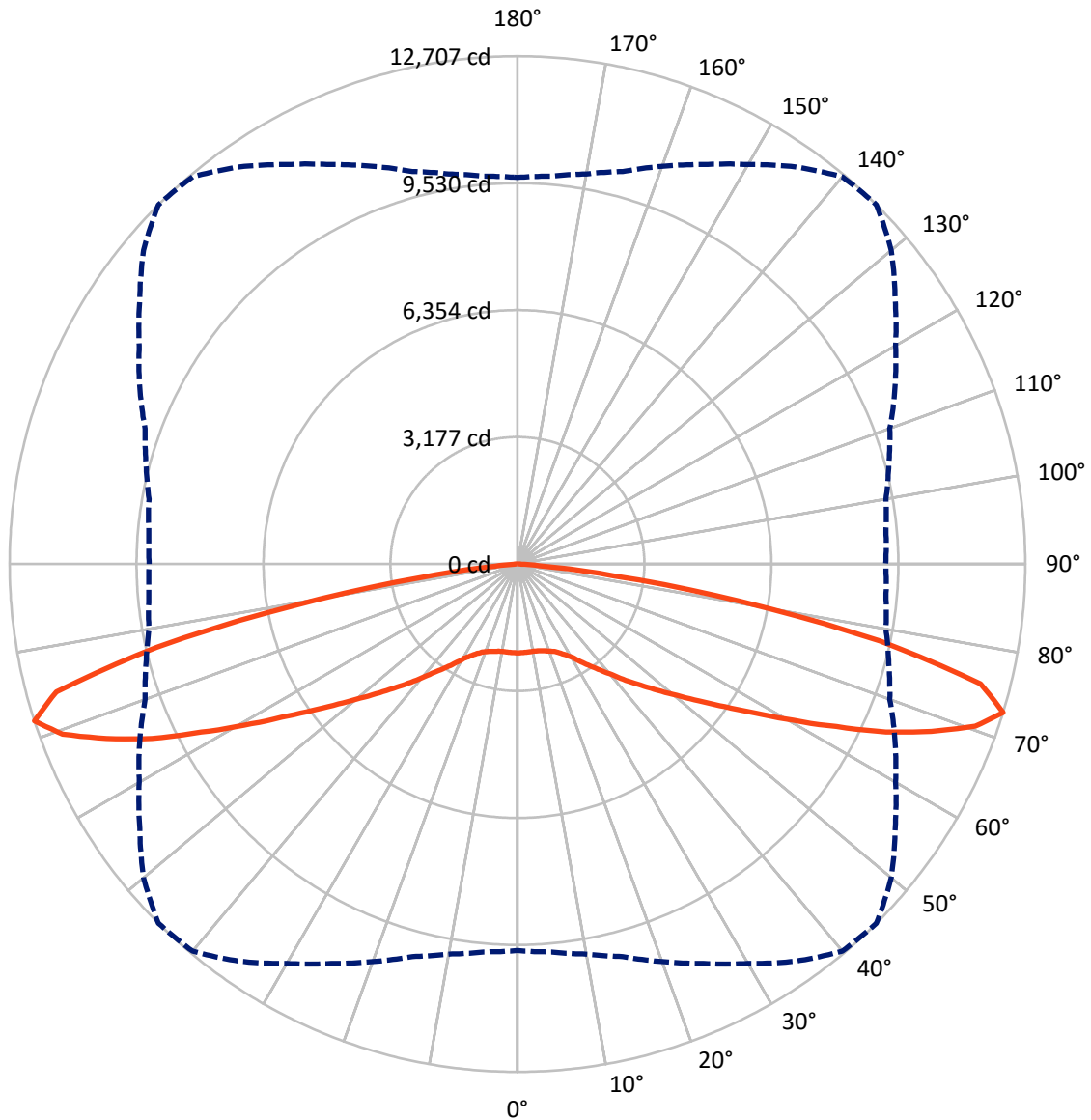


Based on 30 foot mounting height. Maximum calculated value = 2.5 fc
 Type V - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	15642.0	0.0	15642.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	15642.0	0.0	15642.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	31284.0	0.0	31284.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.3	0.7
10°-20°	642.4	2.1
20°-30°	1159.8	3.7
30°-40°	1978.3	6.3
40°-50°	3368.1	10.8
50°-60°	5420.5	17.3
60°-70°	9014.5	28.8
70°-80°	8720.4	27.9
80°-90°	767.5	2.5
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°	31284.0	100.0
0°-180°	31284.0	100.0



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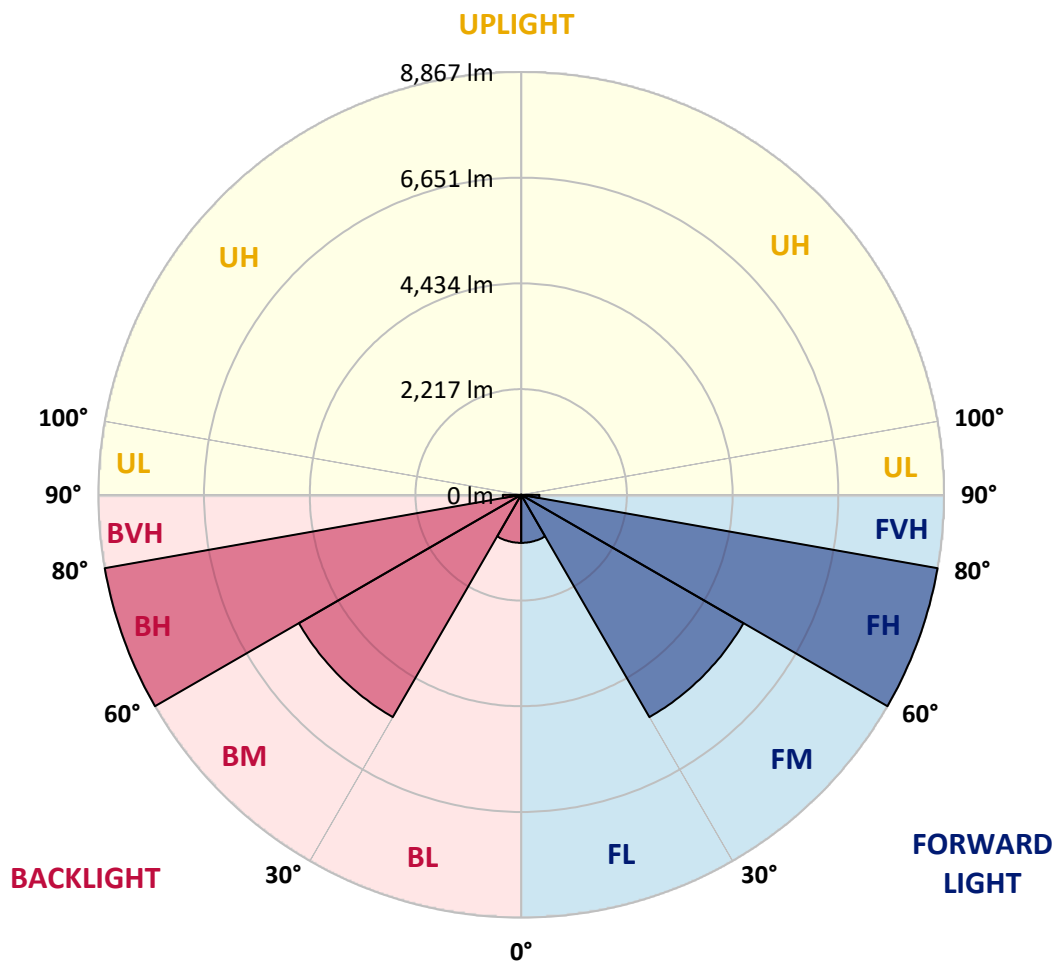
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1007.3	3.2			
FM	(30°-60°)	5383.5	17.2			
FH	(60°-80°)	8867.5	28.3			G4/12000
FVH	(80°-90°)	383.8	1.2			G3/500
BL	(0°-30°)	1007.3	3.2	B3/2500		
BM	(30°-60°)	5383.5	17.2	B4/8500		
BH	(60°-80°)	8867.5	28.3	B5		G4/12000
BVH	(80°-90°)	383.8	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G4

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1
2.5°	2241.4	2241.4	2243.3	2241.4	2237.5	2235.6	2229.8	2226.0	2222.1	2220.2	2216.4
5°	2243.3	2243.3	2245.2	2243.3	2239.5	2235.6	2231.8	2226.0	2222.1	2218.3	2216.4
7.5°	2251.0	2252.9	2254.9	2252.9	2245.2	2241.4	2235.6	2229.8	2222.1	2218.3	2214.4
10°	2266.4	2266.4	2266.4	2264.5	2258.7	2251.0	2243.3	2237.5	2227.9	2218.3	2212.5
12.5°	2278.0	2279.9	2279.9	2276.0	2268.3	2258.7	2251.0	2245.2	2237.5	2229.8	2224.1
15°	2295.3	2295.3	2293.4	2285.7	2274.1	2266.4	2262.6	2260.6	2258.7	2254.9	2249.1
17.5°	2330.0	2328.0	2322.3	2310.7	2297.2	2291.5	2287.6	2287.6	2287.6	2285.7	2281.8
20°	2380.0	2380.0	2372.3	2353.1	2341.5	2335.7	2330.0	2330.0	2330.0	2324.2	2318.4
22.5°	2460.9	2462.8	2451.3	2428.2	2412.8	2401.2	2393.5	2387.7	2382.0	2378.1	2368.5
25°	2570.7	2568.7	2555.3	2526.4	2514.8	2503.3	2487.9	2478.2	2470.5	2464.8	2453.2
27.5°	2686.2	2684.3	2668.9	2643.8	2636.1	2618.8	2607.3	2593.8	2584.1	2574.5	2563.0
30°	2834.5	2824.8	2813.3	2794.0	2790.2	2776.7	2761.3	2742.0	2726.6	2711.2	2697.8
32.5°	2967.3	2967.3	2950.0	2940.4	2948.1	2942.3	2944.2	2932.7	2923.0	2917.3	2903.8
35°	3152.2	3152.2	3144.5	3132.9	3134.9	3121.4	3119.5	3121.4	3129.1	3129.1	3113.7
37.5°	3398.7	3402.5	3377.5	3373.6	3364.0	3344.8	3335.1	3339.0	3356.3	3365.9	3344.8
40°	3704.8	3712.5	3704.8	3679.8	3668.3	3635.5	3616.3	3616.3	3629.7	3639.4	3631.7
42.5°	4007.2	4020.6	4007.2	3987.9	3978.3	3953.2	3943.6	3951.3	3968.6	3980.2	3968.6
45°	4344.1	4353.8	4336.4	4313.3	4301.8	4288.3	4282.5	4288.3	4307.5	4319.1	4315.2
47.5°	4675.3	4688.8	4667.6	4658.0	4658.0	4644.5	4659.9	4675.3	4692.7	4719.6	4708.1
50°	4998.8	5016.2	5002.7	5004.6	5020.0	5045.0	5073.9	5104.7	5135.6	5164.4	5168.3
52.5°	5287.7	5314.6	5316.6	5351.2	5399.4	5437.9	5518.7	5586.1	5659.3	5684.3	5672.8
55°	5591.9	5628.5	5676.6	5730.6	5807.6	5886.5	6023.2	6144.6	6240.8	6300.5	6290.9
57.5°	6027.1	6063.7	6113.8	6202.3	6317.9	6425.7	6612.5	6801.2	6947.5	7038.0	6993.7
60°	6591.3	6629.8	6695.3	6789.6	6939.8	7086.2	7342.3	7613.8	7841.0	7945.0	7864.1
62.5°	7338.4	7375.0	7417.4	7542.5	7710.1	7898.8	8220.3	8568.9	8857.7	8957.8	8844.2
65°	8403.3	8447.6	8461.0	8563.1	8726.8	8902.0	9248.6	9641.4	9970.7	10134.4	9907.2
67.5°	9602.9	9620.3	9674.2	9793.6	9961.1	10119.0	10392.4	10764.1	11079.9	11170.4	10927.7
70°	10305.8	10340.4	10434.8	10600.4	10800.6	11049.0	11347.5	11748.0	12106.2	12148.6	11840.5
72.5°	9670.3	9741.6	9909.1	10167.1	10586.9	11027.9	11542.0	12133.1	12647.3	12707.0	12212.1
75°	7756.3	7837.2	8037.4	8320.5	8817.3	9472.0	10215.3	11103.0	11873.2	11971.4	11316.7
77.5°	4134.2	4234.4	4525.1	4906.4	5615.0	6481.5	7376.9	8389.8	9044.5	9265.9	8794.2
80°	1041.7	1095.7	1236.2	1459.6	1939.1	2638.1	3410.2	4500.1	5312.7	5657.4	5312.7
82.5°	404.4	444.8	483.3	510.3	556.5	652.8	901.2	1469.2	1979.5	2437.8	2110.4
85°	156.0	165.6	238.8	271.5	271.5	298.5	342.8	404.4	500.7	546.9	458.3
87.5°	61.6	67.4	82.8	127.1	130.9	115.5	123.2	138.6	105.9	88.6	100.1
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1	2224.1
2.5°	2214.4	2212.5	2208.7	2210.6	2208.7	2208.7	2208.7	2208.7
5°	2212.5	2212.5	2208.7	2208.7	2208.7	2210.6	2208.7	2208.7
7.5°	2210.6	2208.7	2204.8	2202.9	2202.9	2201.0	2201.0	2201.0
10°	2206.7	2202.9	2199.0	2197.1	2197.1	2193.2	2193.2	2193.2
12.5°	2216.4	2210.6	2206.7	2204.8	2204.8	2204.8	2206.7	2206.7
15°	2243.3	2231.8	2226.0	2224.1	2226.0	2229.8	2231.8	2233.7
17.5°	2272.2	2260.6	2251.0	2247.2	2249.1	2254.9	2260.6	2264.5
20°	2308.8	2299.2	2287.6	2283.8	2283.8	2291.5	2295.3	2301.1
22.5°	2360.8	2353.1	2343.4	2337.7	2333.8	2343.4	2349.2	2353.1
25°	2443.6	2435.9	2428.2	2422.4	2420.5	2430.1	2433.9	2435.9
27.5°	2553.3	2545.6	2541.8	2539.9	2534.1	2537.9	2543.7	2541.8
30°	2695.8	2701.6	2695.8	2695.8	2686.2	2690.1	2686.2	2682.3
32.5°	2886.5	2880.7	2863.4	2851.8	2838.3	2838.3	2832.5	2826.8
35°	3077.1	3057.8	3048.2	3054.0	3048.2	3052.1	3042.4	3032.8
37.5°	3302.4	3290.8	3288.9	3306.2	3302.4	3306.2	3306.2	3292.8
40°	3600.9	3593.2	3606.6	3635.5	3647.1	3645.1	3649.0	3631.7
42.5°	3943.6	3930.1	3935.9	3960.9	3974.4	3978.3	3976.3	3960.9
45°	4286.4	4290.2	4290.2	4317.2	4330.7	4338.4	4324.9	4319.1
47.5°	4673.4	4679.2	4665.7	4683.0	4686.9	4700.4	4688.8	4679.2
50°	5120.1	5099.0	5068.2	5073.9	5073.9	5070.1	5056.6	5045.0
52.5°	5618.9	5570.7	5513.0	5493.7	5472.5	5451.3	5424.4	5403.2
55°	6186.9	6104.1	6000.1	5952.0	5911.6	5863.4	5801.8	5780.6
57.5°	6845.5	6703.0	6564.3	6477.7	6373.7	6310.2	6231.2	6227.4
60°	7627.3	7434.7	7190.2	7061.1	6957.2	6882.1	6822.4	6799.3
62.5°	8530.4	8199.2	7935.4	7796.7	7675.4	7629.2	7554.1	7563.7
65°	9456.6	9119.6	8863.5	8751.8	8638.2	8607.4	8538.1	8563.1
67.5°	10459.8	10182.5	9901.4	9797.4	9693.4	9662.6	9591.4	9612.6
70°	11359.1	11006.7	10687.0	10482.9	10305.8	10163.3	10072.8	10036.2
72.5°	11538.1	10927.7	10425.1	9914.9	9620.3	9362.2	9256.3	9215.9
75°	10367.4	9420.0	8703.7	8104.8	7773.6	7398.1	7357.7	7301.8
77.5°	8064.4	6986.0	6119.5	5349.3	4904.5	4446.2	4288.3	4168.9
80°	4810.1	3697.1	2865.3	2008.4	1638.7	1319.0	1240.1	1157.3
82.5°	1721.5	1103.4	743.3	579.6	518.0	477.5	446.7	406.3
85°	415.9	350.5	331.2	300.4	296.5	252.3	179.1	159.8
87.5°	132.9	121.3	123.2	117.5	123.2	92.4	75.1	67.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)