

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: P196917

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196917
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-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 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: 16669 lumens
Efficiency: N/A
Efficacy: 87.3 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

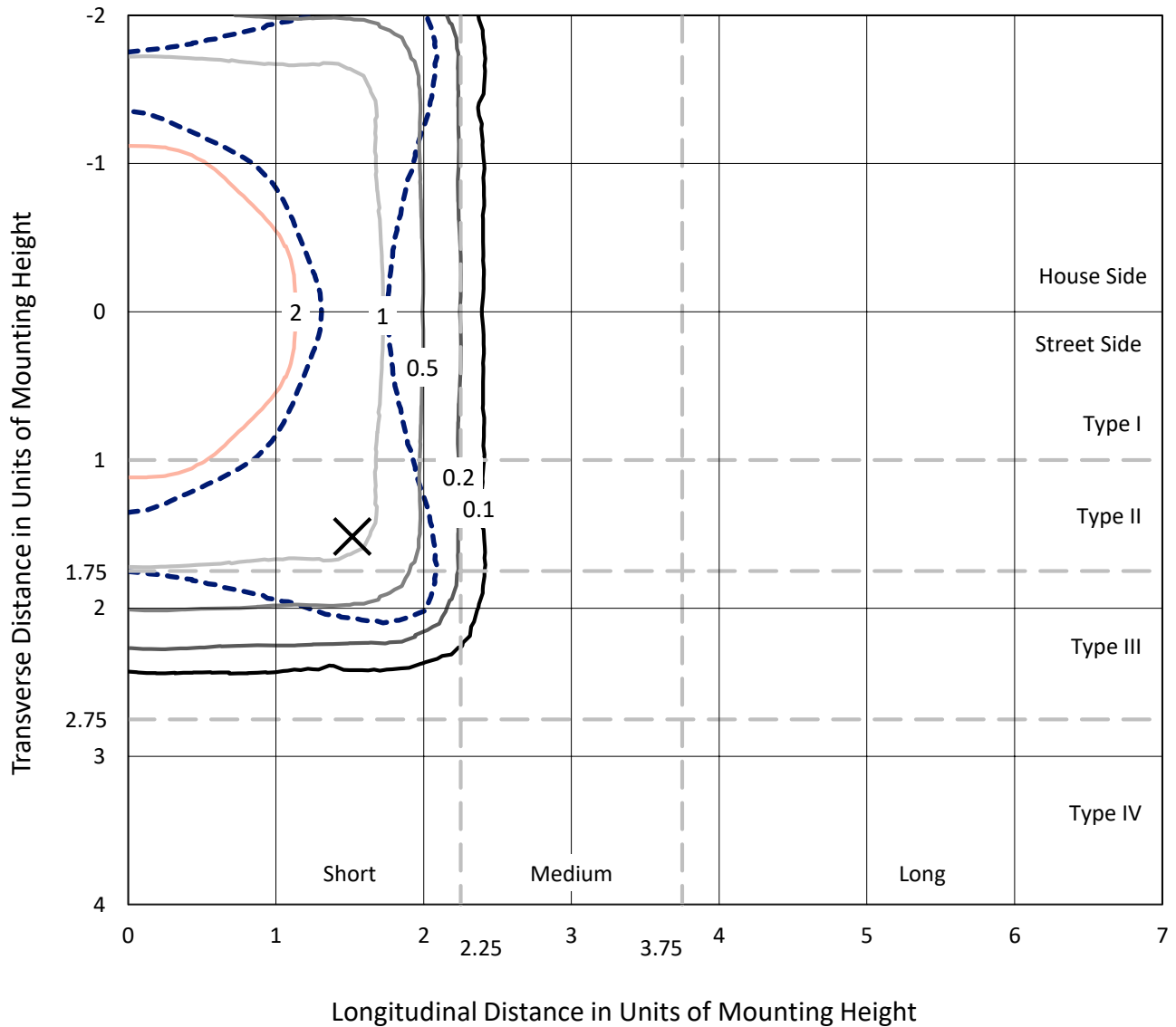
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

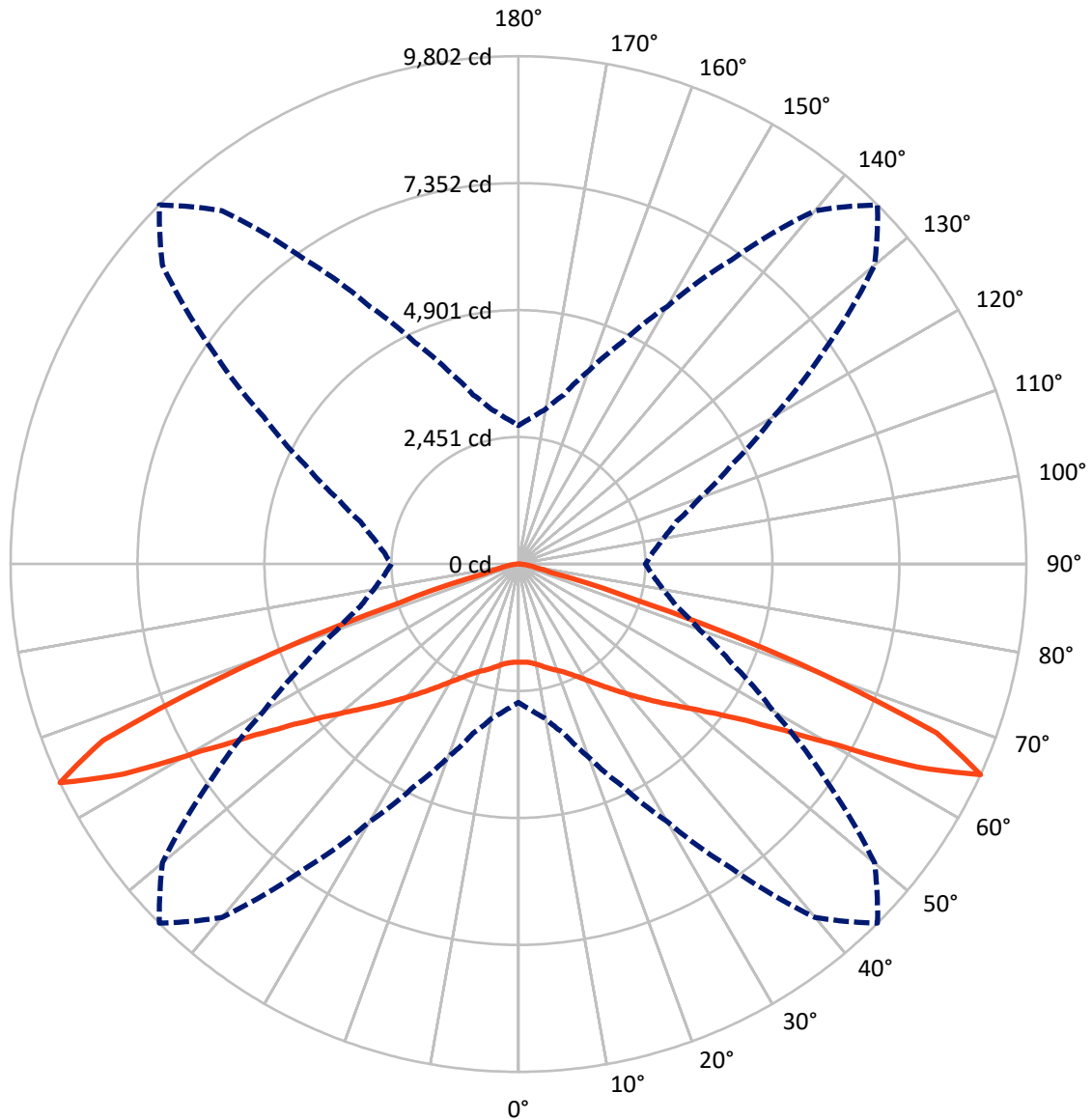
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3 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	8334.5	0.0	8334.5
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	8334.5	0.0	8334.5
	% Fixture	50.0	0.0	50.0
Total	Lumens	16669.0	0.0	16669.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.6	1.1
10°-20°	591.8	3.6
20°-30°	1104.0	6.6
30°-40°	1861.4	11.2
40°-50°	3023.5	18.1
50°-60°	4737.3	28.4
60°-70°	4471.8	26.8
70°-80°	602.7	3.6
80°-90°	91.8	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°	16669.0	100.0
0°-180°	16669.0	100.0



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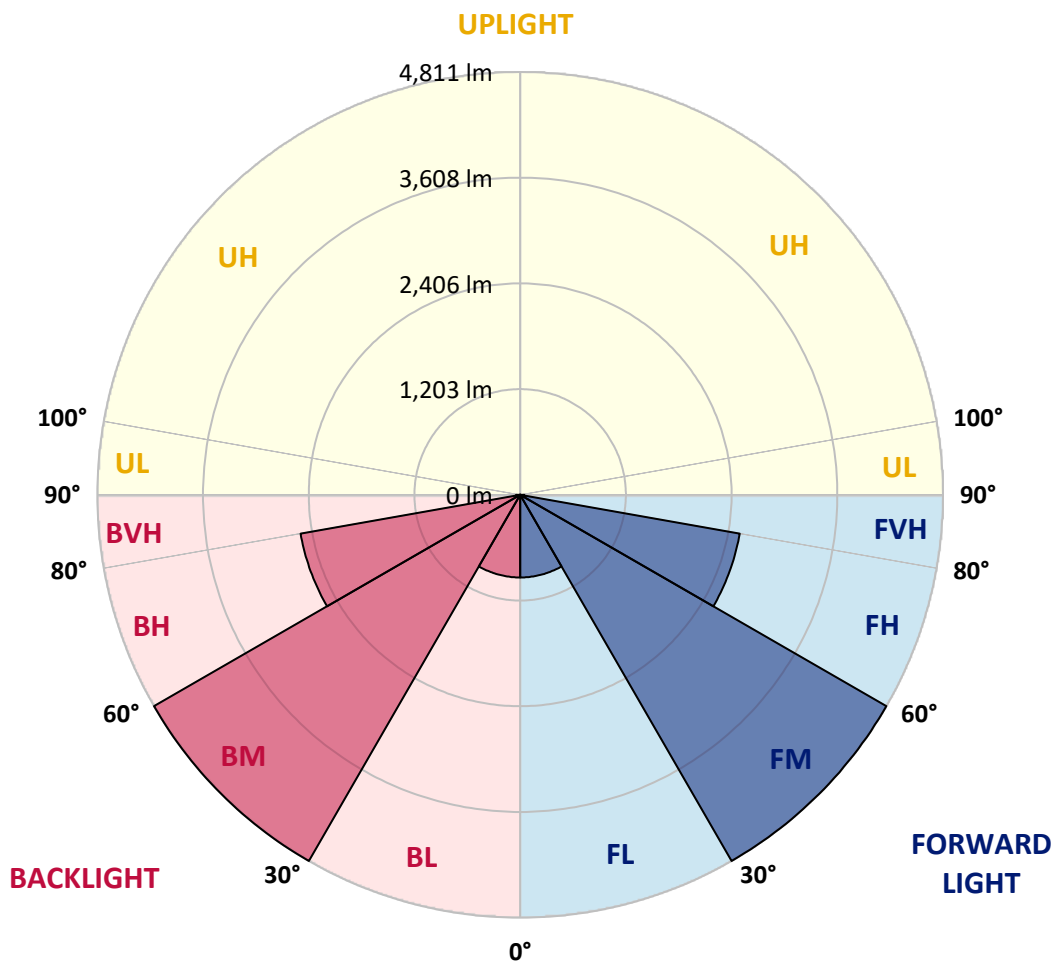
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	940.2	5.6			
FM (30°-60°)	4811.2	28.9			
FH (60°-80°)	2537.2	15.2			G2/5000
FVH (80°-90°)	45.9	0.3			G1/100
BL (0°-30°)	940.2	5.6	B2/1000		
BM (30°-60°)	4811.2	28.9	B3/5000		
BH (60°-80°)	2537.2	15.2	B4/5000		G2/5000
BVH (80°-90°)	45.9	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°	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1
2.5°	1911.7	1911.7	1914.8	1913.7	1909.6	1906.5	1903.3	1899.2	1897.1	1895.0	1894.0
5°	1922.0	1922.0	1925.2	1924.1	1921.0	1916.8	1914.8	1911.7	1908.5	1906.5	1907.5
7.5°	1948.0	1949.0	1950.1	1949.0	1945.9	1942.8	1938.7	1937.6	1933.5	1930.3	1932.4
10°	1987.5	1987.5	1988.5	1989.5	1987.5	1980.2	1980.2	1978.1	1974.0	1969.8	1970.8
12.5°	2031.1	2031.1	2032.1	2032.1	2032.1	2028.0	2029.0	2028.0	2022.8	2020.7	2022.8
15°	2073.6	2074.7	2074.7	2076.8	2076.8	2077.8	2081.9	2081.9	2079.9	2078.8	2078.8
17.5°	2123.5	2125.6	2126.6	2129.7	2130.8	2132.8	2137.0	2138.0	2139.1	2135.9	2137.0
20°	2189.9	2191.0	2194.1	2195.1	2199.3	2199.3	2201.4	2200.3	2198.2	2194.1	2194.1
22.5°	2264.7	2266.8	2273.0	2273.0	2278.2	2275.1	2276.1	2273.0	2267.8	2265.7	2263.7
25°	2362.3	2365.4	2370.6	2368.5	2370.6	2365.4	2365.4	2365.4	2362.3	2359.2	2358.2
27.5°	2485.9	2480.7	2485.9	2481.7	2480.7	2476.5	2477.6	2475.5	2472.4	2471.3	2467.2
30°	2614.6	2608.4	2611.5	2612.6	2610.5	2609.4	2605.3	2602.2	2597.0	2598.0	2594.9
32.5°	2762.1	2755.9	2759.0	2760.0	2757.9	2760.0	2759.0	2751.7	2745.5	2749.6	2749.6
35°	2937.6	2933.4	2941.7	2944.8	2938.6	2935.5	2931.3	2923.0	2913.7	2919.9	2921.0
37.5°	3148.4	3143.2	3149.4	3157.7	3146.3	3140.1	3123.4	3111.0	3104.8	3107.9	3112.0
40°	3367.5	3368.5	3386.2	3388.2	3375.8	3368.5	3351.9	3333.2	3315.5	3315.5	3320.7
42.5°	3598.0	3601.1	3621.9	3629.1	3625.0	3611.5	3588.6	3565.8	3542.9	3547.1	3553.3
45°	3858.6	3854.5	3876.3	3893.9	3890.8	3886.7	3864.8	3823.3	3802.5	3801.5	3811.9
47.5°	4132.7	4141.1	4163.9	4194.0	4193.0	4182.6	4154.6	4116.1	4077.7	4080.8	4093.3
50°	4452.6	4464.0	4502.4	4532.5	4536.7	4533.6	4500.3	4455.7	4401.7	4404.8	4421.4
52.5°	4739.2	4755.8	4800.4	4862.7	4901.1	4918.8	4897.0	4855.5	4800.4	4803.5	4821.2
55°	4998.8	5024.7	5091.2	5176.3	5253.2	5324.8	5357.0	5356.0	5315.5	5324.8	5347.6
57.5°	5161.8	5198.1	5298.8	5435.9	5588.6	5732.9	5857.5	5974.8	6000.8	6049.6	6049.6
60°	4942.7	5027.8	5161.8	5396.5	5696.5	6020.5	6371.5	6713.1	6933.3	7106.7	7013.2
62.5°	4127.6	4253.2	4441.1	4750.6	5217.9	5796.2	6501.3	7295.6	8124.3	8631.0	8259.3
65°	2670.7	2828.5	3033.1	3381.0	3969.7	4714.2	5741.2	7169.0	8903.1	9802.3	8971.6
67.5°	1058.1	1165.1	1289.7	1536.8	2047.7	2778.7	3931.3	5692.4	7861.6	8709.9	7778.5
70°	505.7	523.3	547.2	600.2	727.9	982.3	1579.4	2804.7	4821.2	5715.2	4705.9
72.5°	365.5	368.6	380.0	397.7	435.1	487.0	591.9	857.7	1662.4	2417.3	1664.5
75°	277.2	281.4	287.6	297.0	316.7	341.6	381.1	456.9	569.0	656.3	568.0
77.5°	210.8	214.9	220.1	229.5	239.9	257.5	272.1	302.2	349.9	368.6	366.5
80°	153.7	160.9	169.3	177.6	184.8	193.1	194.2	208.7	235.7	253.4	248.2
82.5°	97.6	103.8	125.6	135.0	136.0	138.1	137.1	138.1	152.6	165.1	160.9
85°	62.3	66.5	77.9	88.3	86.2	90.3	90.3	88.3	82.0	70.6	84.1
87.5°	31.2	32.2	37.4	46.7	44.7	39.5	38.4	38.4	28.0	23.9	26.0
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1	1896.1
2.5°	1890.9	1893.0	1889.8	1889.8	1888.8	1890.9	1887.8	1887.8
5°	1905.4	1908.5	1907.5	1907.5	1909.6	1911.7	1910.6	1909.6
7.5°	1931.4	1933.5	1935.5	1936.6	1938.7	1937.6	1939.7	1938.7
10°	1970.8	1968.8	1971.9	1968.8	1969.8	1967.7	1968.8	1968.8
12.5°	2020.7	2017.6	2015.5	2013.4	2013.4	2009.3	2009.3	2010.3
15°	2077.8	2072.6	2068.4	2066.4	2064.3	2064.3	2061.2	2063.3
17.5°	2133.9	2128.7	2121.4	2121.4	2118.3	2116.2	2114.1	2119.3
20°	2193.1	2187.9	2183.7	2182.7	2176.4	2174.4	2175.4	2181.6
22.5°	2261.6	2258.5	2258.5	2256.4	2252.2	2249.1	2249.1	2256.4
25°	2354.0	2347.8	2348.8	2349.9	2347.8	2347.8	2345.7	2350.9
27.5°	2467.2	2462.0	2465.1	2467.2	2465.1	2468.2	2465.1	2469.3
30°	2600.1	2597.0	2600.1	2603.2	2598.0	2598.0	2595.9	2599.1
32.5°	2759.0	2754.8	2756.9	2756.9	2749.6	2743.4	2735.1	2741.3
35°	2933.4	2928.2	2932.4	2935.5	2927.2	2921.0	2908.5	2913.7
37.5°	3125.5	3127.6	3132.8	3146.3	3144.2	3133.8	3124.5	3128.6
40°	3340.5	3350.8	3373.7	3383.0	3381.0	3370.6	3358.1	3360.2
42.5°	3583.4	3596.9	3620.8	3636.4	3629.1	3614.6	3599.0	3605.2
45°	3848.2	3869.0	3900.1	3915.7	3906.4	3890.8	3869.0	3880.4
47.5°	4128.6	4170.1	4211.7	4232.4	4229.3	4207.5	4179.5	4182.6
50°	4464.0	4519.0	4572.0	4592.7	4577.2	4543.9	4504.5	4503.4
52.5°	4881.4	4940.6	4984.2	4979.0	4940.6	4888.7	4844.0	4842.0
55°	5402.7	5422.4	5416.2	5371.5	5304.0	5223.0	5165.9	5156.6
57.5°	6033.0	5966.5	5868.9	5733.9	5582.3	5428.6	5324.8	5286.4
60°	6803.5	6503.4	6154.5	5786.9	5451.5	5200.2	5041.3	4944.8
62.5°	7440.0	6570.9	5791.0	5152.4	4630.1	4319.7	4102.6	3968.7
65°	7221.9	5676.8	4547.1	3723.6	3153.6	2832.7	2603.2	2450.6
67.5°	5579.2	3793.2	2639.6	1829.6	1387.3	1174.4	1025.9	929.3
70°	2813.0	1454.8	881.6	622.0	531.6	494.3	469.3	454.8
72.5°	825.5	551.4	457.9	405.0	372.8	349.9	335.4	328.1
75°	456.9	372.8	329.2	299.1	278.3	262.7	253.4	247.1
77.5°	314.6	271.0	249.2	229.5	212.9	201.4	194.2	187.9
80°	220.1	198.3	189.0	178.6	166.1	156.8	146.4	142.3
82.5°	146.4	137.1	135.0	126.7	119.4	109.0	90.3	84.1
85°	86.2	85.1	85.1	82.0	76.8	67.5	54.0	54.0
87.5°	30.1	31.2	32.2	34.3	33.2	28.0	22.8	21.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)