

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: P195945

Luminaire Tested: **NAV-AF-03-D-UNV-5NQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195945
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15390.3 lumens
Efficiency: N/A
Efficacy: 124.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

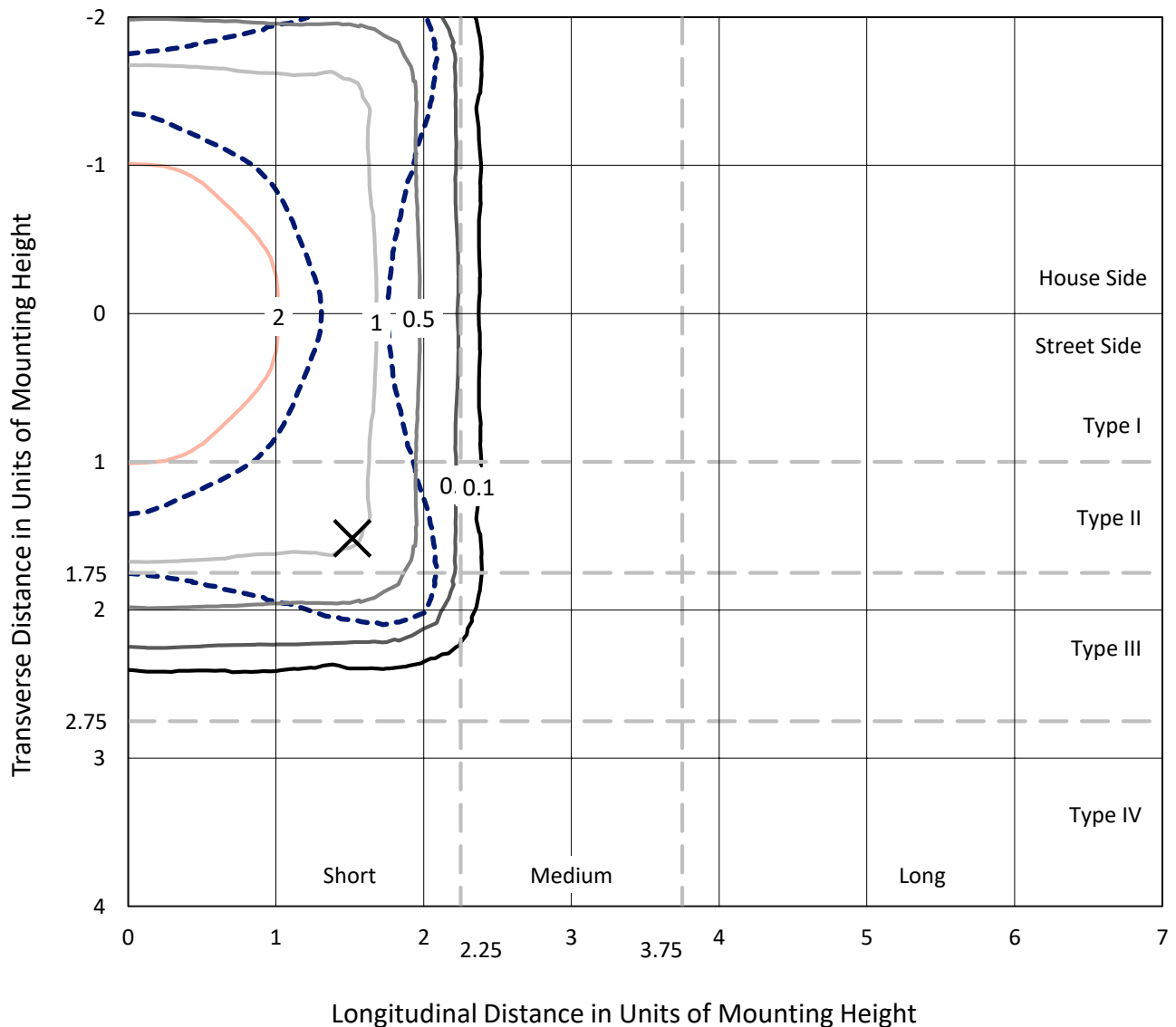
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

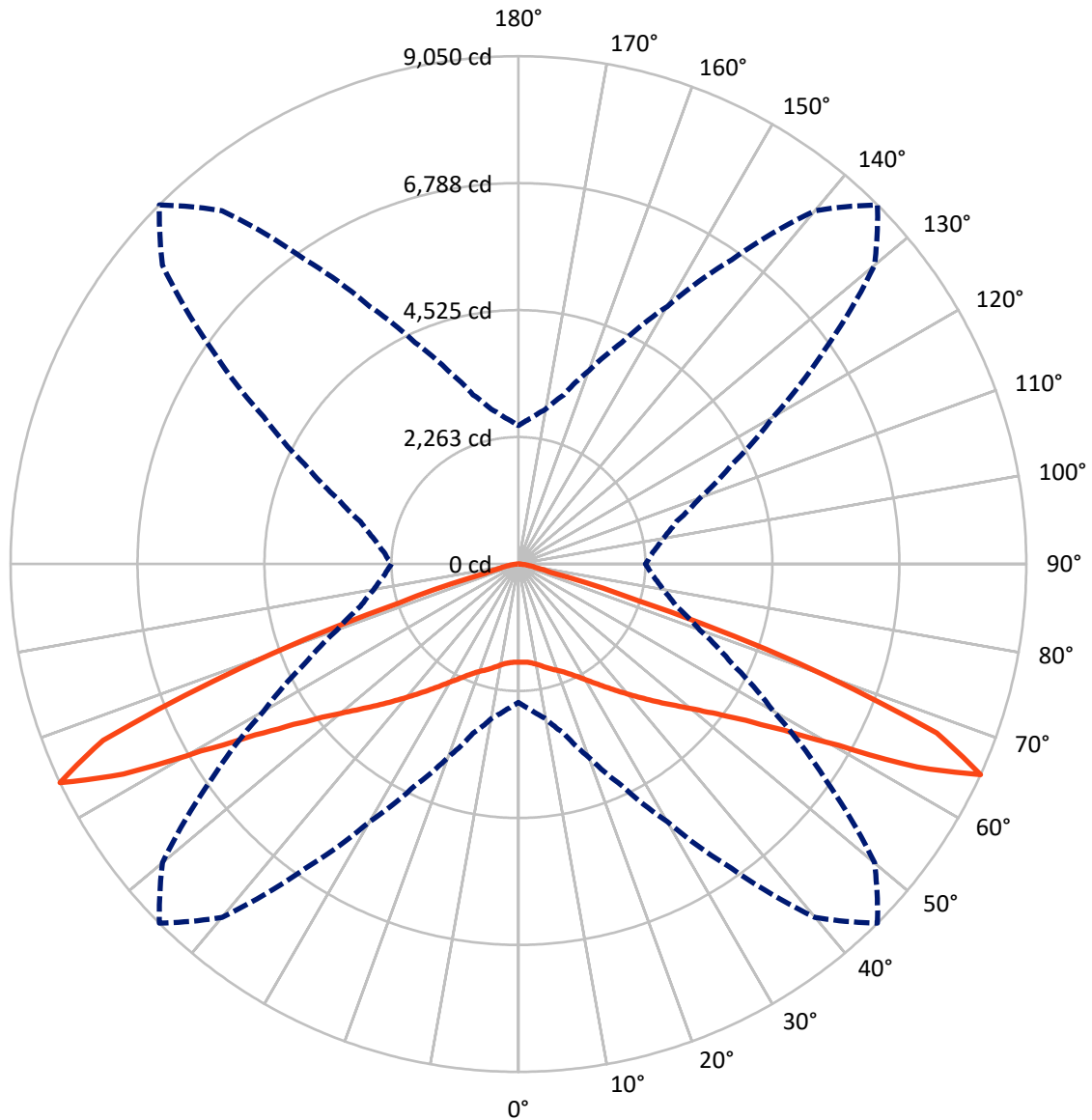
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 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	7695.1	0.0	7695.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7695.1	0.0	7695.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	15390.3	0.0	15390.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.5	1.1
10°-20°	546.4	3.6
20°-30°	1019.3	6.6
30°-40°	1718.7	11.2
40°-50°	2791.6	18.1
50°-60°	4373.9	28.4
60°-70°	4128.8	26.8
70°-80°	556.4	3.6
80°-90°	84.8	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°	15390.3	100.0
0°-180°	15390.3	100.0



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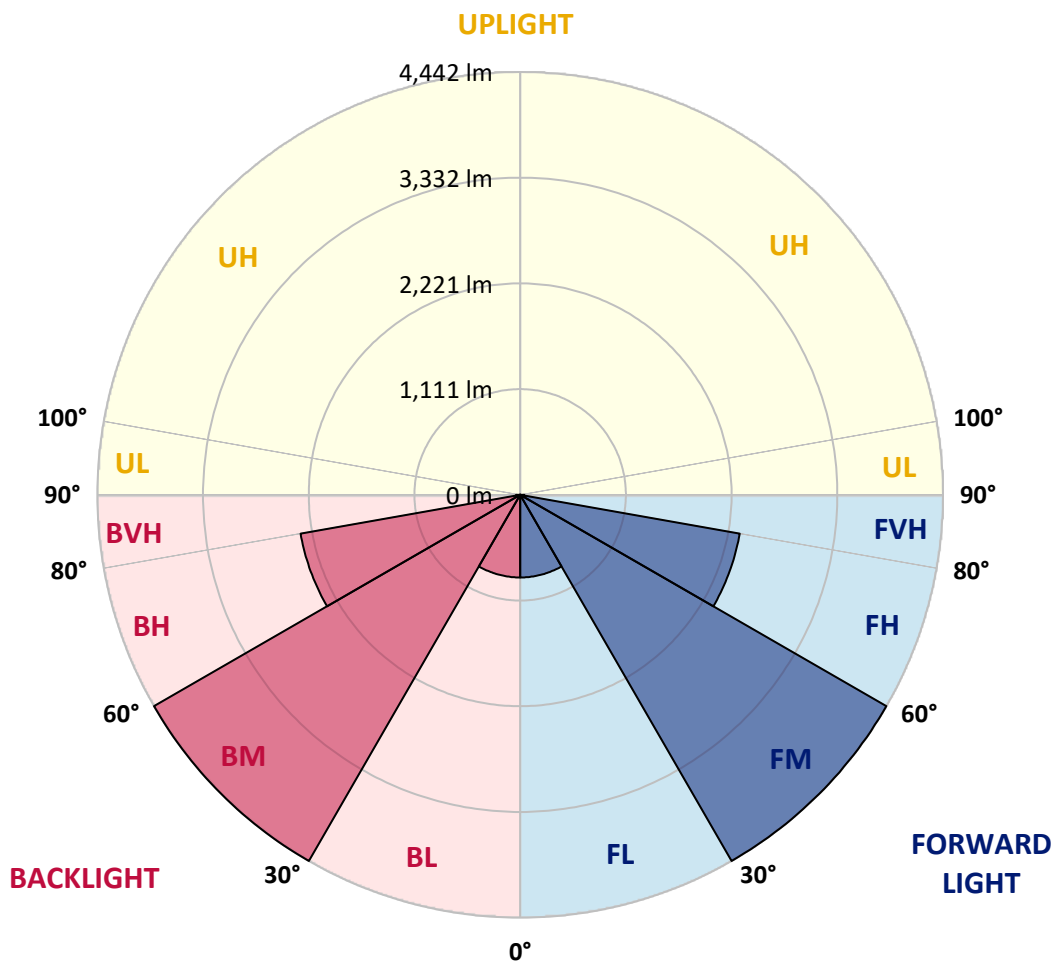
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	868.1	5.6			
FM	(30°-60°)	4442.1	28.9			
FH	(60°-80°)	2342.6	15.2			G2/5000
FVH	(80°-90°)	42.4	0.3			G1/100
BL	(0°-30°)	868.1	5.6	B2/1000		
BM	(30°-60°)	4442.1	28.9	B3/5000		
BH	(60°-80°)	2342.6	15.2	B3/2500		G2/5000
BVH	(80°-90°)	42.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7
2.5°	1765.0	1765.0	1767.9	1766.9	1763.1	1760.2	1757.3	1753.5	1751.6	1749.7	1748.7
5°	1774.6	1774.6	1777.5	1776.6	1773.6	1769.8	1767.9	1765.0	1762.1	1760.2	1761.2
7.5°	1798.6	1799.5	1800.5	1799.5	1796.6	1793.7	1790.0	1788.9	1785.2	1782.3	1784.2
10°	1835.0	1835.0	1836.0	1836.9	1835.0	1828.3	1828.3	1826.4	1822.5	1818.7	1819.6
12.5°	1875.3	1875.3	1876.2	1876.2	1876.2	1872.4	1873.3	1872.4	1867.6	1865.7	1867.6
15°	1914.6	1915.6	1915.6	1917.4	1917.4	1918.4	1922.2	1922.2	1920.3	1919.4	1919.4
17.5°	1960.6	1962.5	1963.5	1966.3	1967.3	1969.2	1973.1	1974.0	1975.0	1972.0	1973.1
20°	2022.0	2022.9	2025.7	2026.8	2030.6	2030.6	2032.5	2031.6	2029.6	2025.7	2025.7
22.5°	2091.0	2092.9	2098.7	2098.7	2103.4	2100.5	2101.6	2098.7	2093.9	2091.9	2090.0
25°	2181.1	2184.0	2188.8	2186.9	2188.8	2184.0	2184.0	2184.0	2181.1	2178.2	2177.2
27.5°	2295.2	2290.4	2295.2	2291.3	2290.4	2286.6	2287.5	2285.6	2282.7	2281.8	2277.9
30°	2414.1	2408.3	2411.2	2412.1	2410.3	2409.3	2405.5	2402.6	2397.8	2398.7	2395.9
32.5°	2550.2	2544.5	2547.4	2548.3	2546.3	2548.3	2547.4	2540.6	2534.9	2538.7	2538.7
35°	2712.3	2708.4	2716.0	2718.9	2713.2	2710.3	2706.5	2698.9	2690.2	2695.9	2696.9
37.5°	2906.8	2902.0	2907.8	2915.5	2905.0	2899.1	2883.8	2872.3	2866.6	2869.5	2873.3
40°	3109.2	3110.1	3126.4	3128.3	3116.8	3110.1	3094.7	3077.5	3061.2	3061.2	3066.0
42.5°	3321.9	3324.9	3344.0	3350.8	3346.9	3334.4	3313.3	3292.3	3271.2	3275.0	3280.7
45°	3562.6	3558.7	3578.9	3595.2	3592.3	3588.5	3568.4	3530.0	3510.9	3509.8	3519.5
47.5°	3815.7	3823.4	3844.5	3872.3	3871.4	3861.7	3835.9	3800.4	3764.9	3767.7	3779.3
50°	4111.0	4121.6	4157.1	4184.8	4188.7	4185.8	4155.1	4113.9	4064.0	4066.9	4082.3
52.5°	4375.6	4390.9	4432.1	4489.7	4525.1	4541.5	4521.3	4483.0	4432.1	4435.0	4451.4
55°	4615.2	4639.3	4700.7	4779.2	4850.2	4916.3	4946.1	4945.0	4907.7	4916.3	4937.4
57.5°	4765.8	4799.4	4892.4	5018.9	5159.9	5293.2	5408.1	5516.5	5540.5	5585.5	5585.5
60°	4563.5	4642.2	4765.8	4982.5	5259.6	5558.7	5882.7	6198.2	6401.4	6561.5	6475.2
62.5°	3810.9	3926.9	4100.5	4386.1	4817.6	5351.6	6002.6	6736.0	7501.1	7968.9	7625.7
65°	2465.8	2611.6	2800.4	3121.6	3665.2	4352.6	5300.8	6619.0	8220.1	9050.4	8283.3
67.5°	976.9	1075.7	1190.7	1418.9	1890.6	2565.6	3629.7	5255.7	7258.4	8041.7	7181.8
70°	466.9	483.2	505.2	554.1	672.1	906.9	1458.2	2589.5	4451.4	5276.8	4344.9
72.5°	337.5	340.3	350.9	367.2	401.7	449.7	546.5	791.9	1534.9	2231.9	1536.9
75°	255.9	259.8	265.6	274.2	292.4	315.4	351.9	421.9	525.4	605.9	524.5
77.5°	194.7	198.5	203.3	211.9	221.5	237.7	251.1	279.0	323.0	340.3	338.4
80°	141.9	148.6	156.3	164.0	170.6	178.3	179.3	192.7	217.6	233.9	229.1
82.5°	90.1	95.9	116.0	124.6	125.6	127.5	126.5	127.5	141.0	152.4	148.6
85°	57.5	61.4	71.9	81.5	79.6	83.4	83.4	81.5	75.7	65.2	77.6
87.5°	28.7	29.8	34.5	43.2	41.2	36.4	35.5	35.5	25.9	22.1	23.9
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7	1750.7
2.5°	1745.9	1747.7	1744.8	1744.8	1743.9	1745.9	1743.0	1743.0
5°	1759.3	1762.1	1761.2	1761.2	1763.1	1765.0	1764.1	1763.1
7.5°	1783.2	1785.2	1787.1	1788.0	1790.0	1788.9	1790.9	1790.0
10°	1819.6	1817.8	1820.6	1817.8	1818.7	1816.8	1817.8	1817.8
12.5°	1865.7	1862.8	1860.8	1859.0	1859.0	1855.1	1855.1	1856.0
15°	1918.4	1913.6	1909.7	1907.9	1906.0	1906.0	1903.1	1904.9
17.5°	1970.2	1965.4	1958.6	1958.6	1955.8	1953.8	1952.0	1956.8
20°	2024.8	2020.0	2016.2	2015.2	2009.5	2007.5	2008.6	2014.3
22.5°	2088.0	2085.2	2085.2	2083.3	2079.5	2076.6	2076.6	2083.3
25°	2173.5	2167.6	2168.7	2169.6	2167.6	2167.6	2165.8	2170.6
27.5°	2277.9	2273.1	2276.0	2277.9	2276.0	2278.9	2276.0	2279.9
30°	2400.7	2397.8	2400.7	2403.5	2398.7	2398.7	2396.8	2399.6
32.5°	2547.4	2543.5	2545.4	2545.4	2538.7	2532.9	2525.3	2531.0
35°	2708.4	2703.6	2707.4	2710.3	2702.6	2696.9	2685.3	2690.2
37.5°	2885.7	2887.7	2892.5	2905.0	2903.0	2893.4	2884.8	2888.6
40°	3084.2	3093.8	3114.9	3123.5	3121.6	3112.0	3100.5	3102.4
42.5°	3308.5	3321.0	3343.1	3357.4	3350.8	3337.3	3323.0	3328.7
45°	3553.0	3572.2	3601.0	3615.3	3606.7	3592.3	3572.2	3582.8
47.5°	3811.9	3850.2	3888.5	3907.8	3904.9	3884.8	3858.9	3861.7
50°	4121.6	4172.4	4221.2	4240.4	4226.0	4195.3	4158.9	4158.0
52.5°	4506.9	4561.6	4601.8	4597.0	4561.6	4513.7	4472.4	4470.5
55°	4988.2	5006.4	5000.7	4959.5	4897.2	4822.4	4769.6	4761.0
57.5°	5570.2	5508.8	5418.7	5294.1	5154.1	5012.2	4916.3	4880.9
60°	6281.5	6004.5	5682.4	5343.0	5033.3	4801.3	4654.6	4565.4
62.5°	6869.2	6066.8	5346.8	4757.2	4274.9	3988.3	3787.9	3664.2
65°	6667.9	5241.3	4198.3	3437.9	2911.6	2615.4	2403.5	2262.6
67.5°	5151.2	3502.2	2437.1	1689.3	1280.8	1084.3	947.3	858.1
70°	2597.2	1343.1	814.0	574.3	490.9	456.3	433.3	419.9
72.5°	762.2	509.1	422.8	373.9	344.2	323.0	309.6	303.0
75°	421.9	344.2	303.9	276.1	257.0	242.5	233.9	228.2
77.5°	290.5	250.2	230.1	211.9	196.5	186.0	179.3	173.5
80°	203.3	183.1	174.5	164.9	153.4	144.7	135.1	131.3
82.5°	135.1	126.5	124.6	116.9	110.3	100.7	83.4	77.6
85°	79.6	78.7	78.7	75.7	71.0	62.3	49.8	49.8
87.5°	27.8	28.7	29.8	31.6	30.7	25.9	21.1	20.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)