

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: P195971

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195971
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-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 4000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 25856.1 lumens
Efficiency: N/A
Efficacy: 123.1 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 - G3

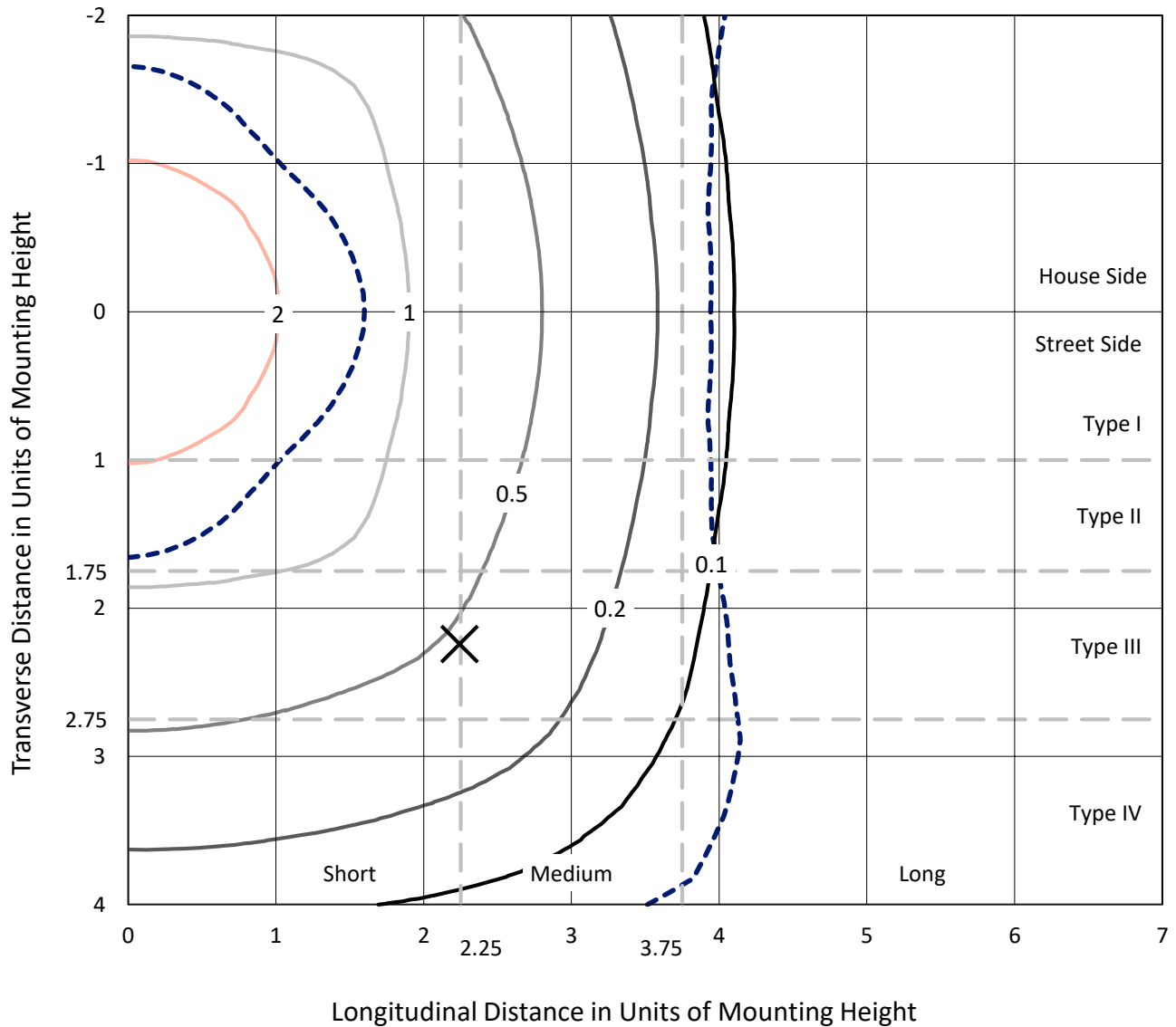
Input Watts (W): 210
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

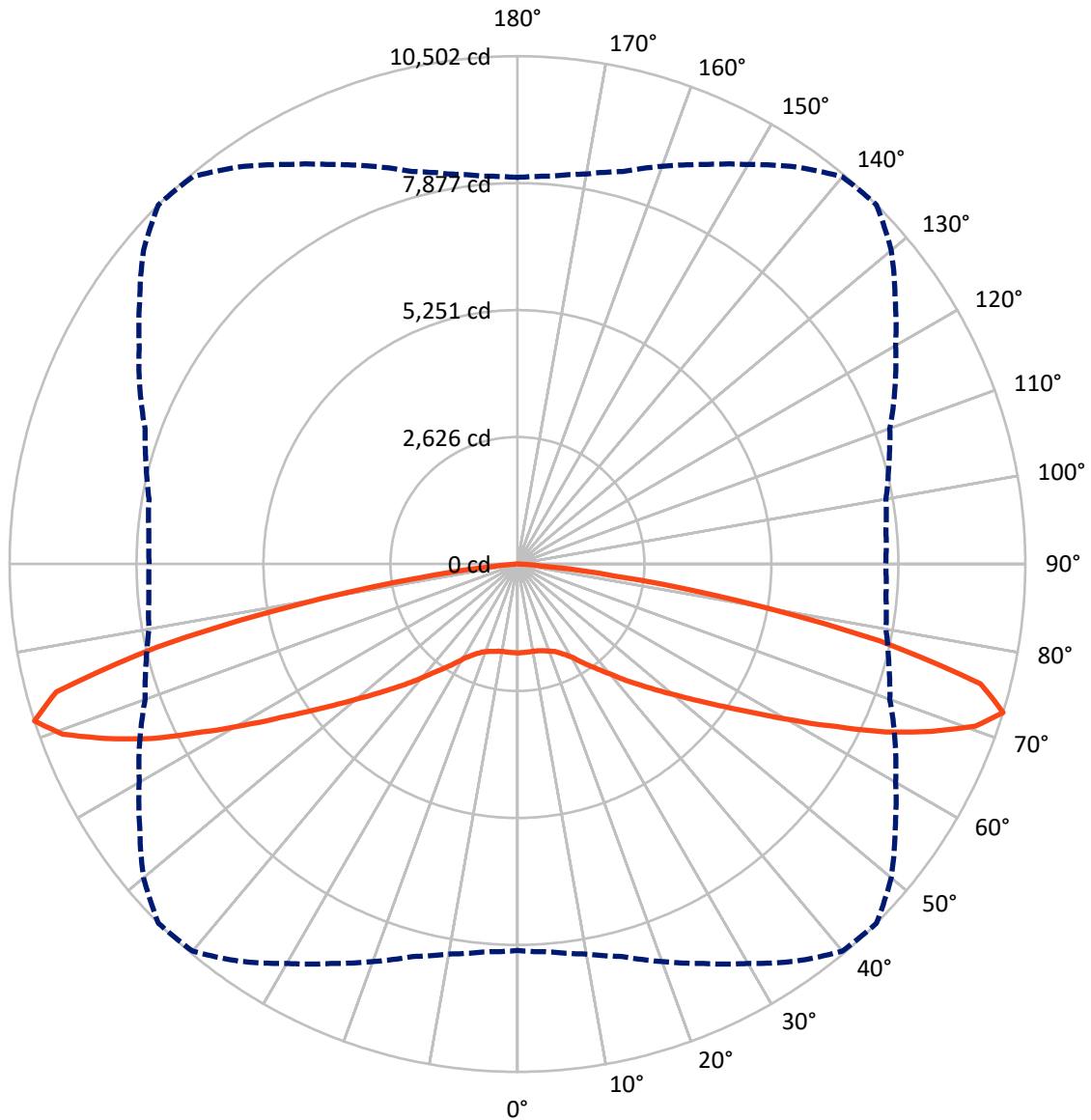
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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	12928.1	0.0	12928.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	12928.1	0.0	12928.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	25856.1	0.0	25856.1
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.5	0.7
10°-20°	531.0	2.1
20°-30°	958.6	3.7
30°-40°	1635.1	6.3
40°-50°	2783.8	10.8
50°-60°	4480.1	17.3
60°-70°	7450.4	28.8
70°-80°	7207.4	27.9
80°-90°	634.3	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°	25856.1	100.0
0°-180°	25856.1	100.0



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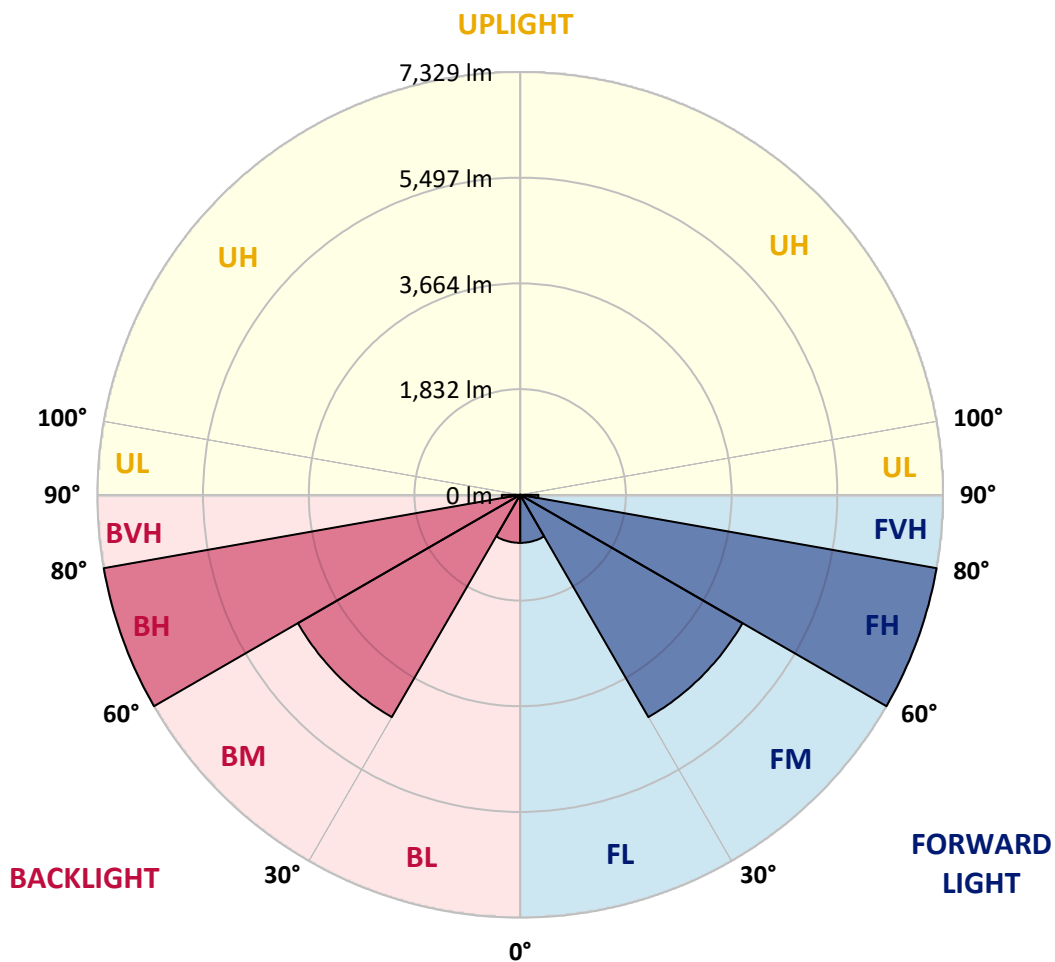
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	832.5	3.2			
FM	(30°-60°)	4449.4	17.2			
FH	(60°-80°)	7328.9	28.3			G3/7500
FVH	(80°-90°)	317.2	1.2			G3/500
BL	(0°-30°)	832.5	3.2	B2/1000		
BM	(30°-60°)	4449.4	17.2	B3/5000		
BH	(60°-80°)	7328.9	28.3	B5		G3/7500
BVH	(80°-90°)	317.2	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-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1
2.5°	1852.5	1852.5	1854.1	1852.5	1849.3	1847.8	1842.9	1839.8	1836.6	1835.0	1831.8
5°	1854.1	1854.1	1855.6	1854.1	1850.9	1847.8	1844.6	1839.8	1836.6	1833.4	1831.8
7.5°	1860.4	1862.1	1863.6	1862.1	1855.6	1852.5	1847.8	1842.9	1836.6	1833.4	1830.3
10°	1873.2	1873.2	1873.2	1871.6	1866.8	1860.4	1854.1	1849.3	1841.3	1833.4	1828.6
12.5°	1882.7	1884.4	1884.4	1881.1	1874.8	1866.8	1860.4	1855.6	1849.3	1842.9	1838.1
15°	1897.1	1897.1	1895.4	1889.1	1879.6	1873.2	1870.0	1868.4	1866.8	1863.6	1858.9
17.5°	1925.7	1924.1	1919.4	1909.7	1898.7	1893.9	1890.7	1890.7	1890.7	1889.1	1885.9
20°	1967.1	1967.1	1960.7	1944.8	1935.2	1930.5	1925.7	1925.7	1925.7	1920.9	1916.2
22.5°	2033.9	2035.6	2026.0	2006.8	1994.1	1984.6	1978.2	1973.5	1968.7	1965.5	1957.5
25°	2124.7	2123.0	2111.9	2088.0	2078.5	2068.9	2056.2	2048.3	2041.9	2037.1	2027.6
27.5°	2220.1	2218.6	2205.8	2185.1	2178.8	2164.5	2154.8	2143.7	2135.8	2127.8	2118.3
30°	2342.7	2334.7	2325.2	2309.2	2306.0	2294.9	2282.2	2266.2	2253.6	2240.8	2229.7
32.5°	2452.5	2452.5	2438.2	2430.2	2436.6	2431.8	2433.4	2423.9	2415.9	2411.1	2399.9
35°	2605.3	2605.3	2598.9	2589.4	2590.9	2579.8	2578.2	2579.8	2586.2	2586.2	2573.4
37.5°	2809.0	2812.2	2791.5	2788.3	2780.4	2764.4	2756.4	2759.6	2773.9	2781.9	2764.4
40°	3062.0	3068.4	3062.0	3041.3	3031.8	3004.7	2988.9	2988.9	3000.0	3007.9	3001.5
42.5°	3311.9	3323.1	3311.9	3295.9	3288.1	3267.3	3259.4	3265.8	3280.1	3289.6	3280.1
45°	3590.5	3598.3	3584.0	3565.0	3555.4	3544.2	3539.5	3544.2	3560.2	3569.7	3566.5
47.5°	3864.2	3875.2	3857.8	3849.8	3849.8	3838.7	3851.4	3864.2	3878.5	3900.7	3891.2
50°	4131.5	4145.8	4134.7	4136.3	4149.0	4169.8	4193.6	4219.1	4244.5	4268.4	4271.5
52.5°	4370.3	4392.6	4394.1	4422.7	4462.5	4494.3	4561.2	4616.9	4677.4	4698.1	4688.5
55°	4621.7	4652.0	4691.8	4736.3	4800.0	4865.2	4978.2	5078.4	5158.0	5207.3	5199.5
57.5°	4981.4	5011.6	5053.0	5126.2	5221.7	5310.9	5465.2	5621.1	5742.1	5816.9	5780.3
60°	5447.7	5479.5	5533.7	5611.6	5735.8	5856.7	6068.3	6292.8	6480.6	6566.5	6499.6
62.5°	6065.2	6095.5	6130.4	6233.9	6372.4	6528.3	6794.1	7082.2	7320.8	7403.6	7309.7
65°	6945.3	6981.8	6993.0	7077.4	7212.6	7357.5	7643.9	7968.6	8240.8	8376.0	8188.2
67.5°	7936.8	7951.1	7995.7	8094.3	8232.8	8363.3	8589.3	8896.4	9157.5	9232.2	9031.7
70°	8517.7	8546.3	8624.3	8761.2	8926.7	9132.0	9378.7	9709.7	10005.7	10040.8	9786.1
72.5°	7992.5	8051.3	8189.8	8403.1	8750.0	9114.5	9539.4	10028.0	10452.9	10502.2	10093.3
75°	6410.5	6477.4	6642.9	6876.9	7287.4	7828.5	8442.8	9176.6	9813.2	9894.3	9353.2
77.5°	3417.0	3499.7	3740.0	4055.1	4640.8	5357.0	6097.0	6934.2	7475.2	7658.2	7268.4
80°	861.0	905.5	1021.7	1206.4	1602.7	2180.3	2818.5	3719.3	4390.9	4675.8	4390.9
82.5°	334.2	367.6	399.5	421.8	459.9	539.5	744.8	1214.3	1636.0	2014.8	1744.2
85°	128.9	136.9	197.3	224.4	224.4	246.6	283.3	334.2	413.8	451.9	378.8
87.5°	50.9	55.8	68.4	105.1	108.2	95.4	101.9	114.6	87.6	73.2	82.8
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°	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1	1838.1
2.5°	1830.3	1828.6	1825.5	1827.0	1825.5	1825.5	1825.5	1825.5
5°	1828.6	1828.6	1825.5	1825.5	1825.5	1827.0	1825.5	1825.5
7.5°	1827.0	1825.5	1822.3	1820.6	1820.6	1819.1	1819.1	1819.1
10°	1823.8	1820.6	1817.5	1815.9	1815.9	1812.7	1812.7	1812.7
12.5°	1831.8	1827.0	1823.8	1822.3	1822.3	1822.3	1823.8	1823.8
15°	1854.1	1844.6	1839.8	1838.1	1839.8	1842.9	1844.6	1846.1
17.5°	1877.9	1868.4	1860.4	1857.3	1858.9	1863.6	1868.4	1871.6
20°	1908.2	1900.2	1890.7	1887.5	1887.5	1893.9	1897.1	1901.9
22.5°	1951.2	1944.8	1936.9	1932.0	1928.9	1936.9	1941.7	1944.8
25°	2019.6	2013.3	2006.8	2002.1	2000.5	2008.5	2011.6	2013.3
27.5°	2110.3	2104.0	2100.7	2099.2	2094.4	2097.6	2102.4	2100.7
30°	2228.1	2232.9	2228.1	2228.1	2220.1	2223.3	2220.1	2216.9
32.5°	2385.6	2380.9	2366.6	2357.0	2345.8	2345.8	2341.1	2336.3
35°	2543.2	2527.3	2519.3	2524.1	2519.3	2522.5	2514.5	2506.6
37.5°	2729.4	2719.8	2718.3	2732.6	2729.4	2732.6	2732.6	2721.5
40°	2976.1	2969.7	2980.9	3004.7	3014.3	3012.7	3015.9	3001.5
42.5°	3259.4	3248.3	3253.0	3273.7	3284.8	3288.1	3286.4	3273.7
45°	3542.7	3545.9	3545.9	3568.2	3579.3	3585.6	3574.5	3569.7
47.5°	3862.6	3867.4	3856.2	3870.5	3873.7	3884.9	3875.2	3867.4
50°	4231.7	4214.3	4188.8	4193.6	4193.6	4190.4	4179.3	4169.8
52.5°	4644.0	4604.2	4556.4	4540.6	4523.0	4505.5	4483.3	4465.7
55°	5113.4	5045.0	4959.1	4919.3	4885.9	4846.1	4795.2	4777.7
57.5°	5657.7	5540.0	5425.4	5353.8	5267.9	5215.3	5150.0	5146.9
60°	6303.9	6144.8	5942.6	5836.0	5750.1	5688.0	5638.7	5619.6
62.5°	7050.3	6776.5	6558.5	6444.0	6343.7	6305.5	6243.5	6251.4
65°	7815.9	7537.3	7325.7	7233.4	7139.5	7114.0	7056.7	7077.4
67.5°	8645.0	8415.8	8183.5	8097.5	8011.5	7986.1	7927.3	7944.7
70°	9388.2	9097.0	8832.8	8664.1	8517.7	8399.9	8325.1	8294.9
72.5°	9536.3	9031.7	8616.3	8194.6	7951.1	7737.8	7650.3	7616.9
75°	8568.6	7785.6	7193.6	6698.6	6424.8	6114.5	6081.1	6034.9
77.5°	6665.1	5773.9	5057.8	4421.2	4053.5	3674.7	3544.2	3445.6
80°	3975.6	3055.7	2368.1	1659.9	1354.4	1090.2	1024.9	956.5
82.5°	1422.8	912.0	614.3	479.0	428.1	394.7	369.2	335.8
85°	343.7	289.7	273.7	248.3	245.1	208.5	148.0	132.1
87.5°	109.8	100.2	101.9	97.1	101.9	76.4	62.1	55.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)