

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: P270486

Luminaire Tested: **NAV-AF-04-D-UNV-5NQ-7027-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270486  
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-04-D-UNV-5NQ-7027-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14357.1 lumens  
Efficiency: N/A  
Efficacy: 111.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G2

Input Watts (W): 129  
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

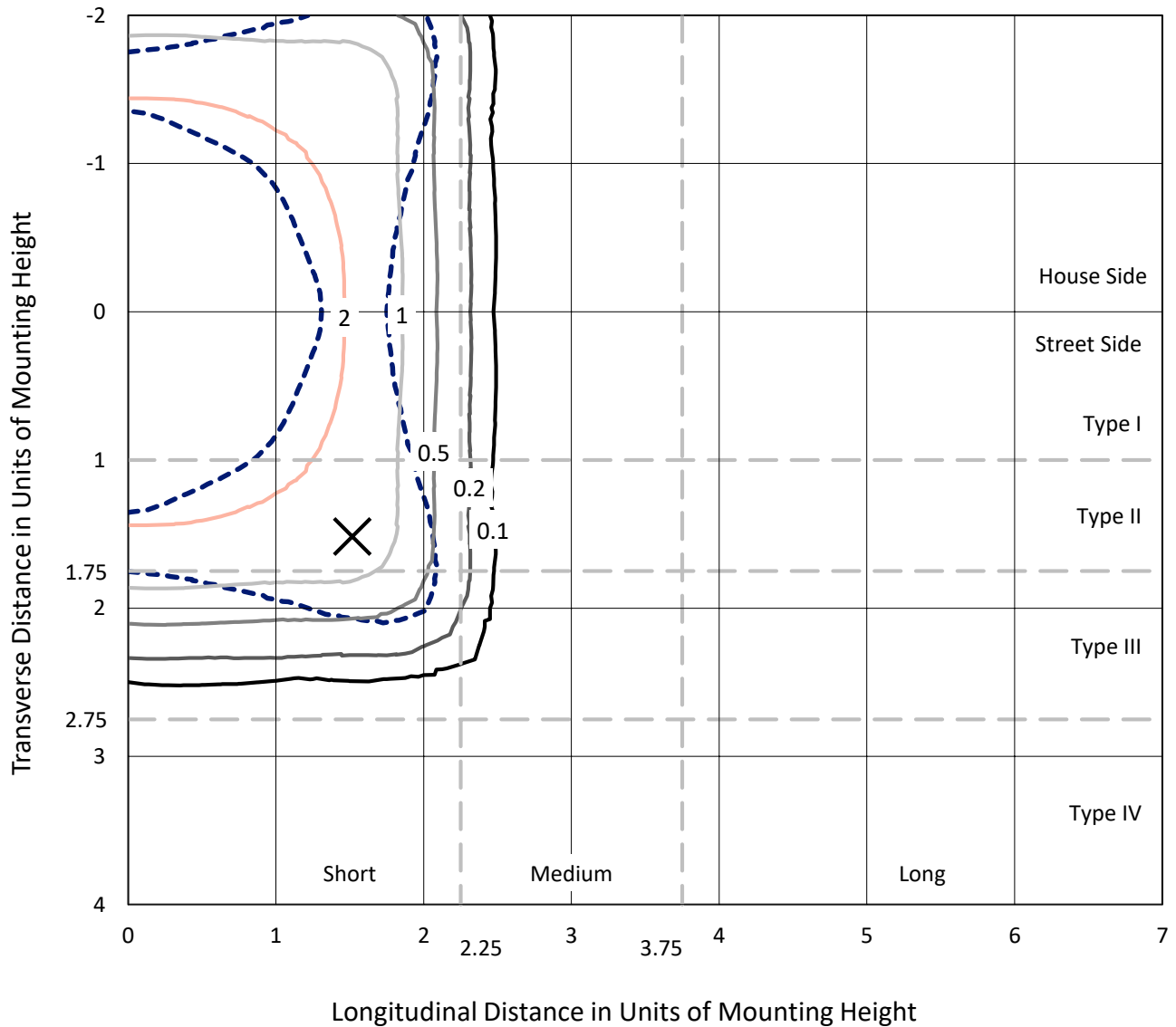


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### Iso-Footcandle Lines of Horizontal Illumination

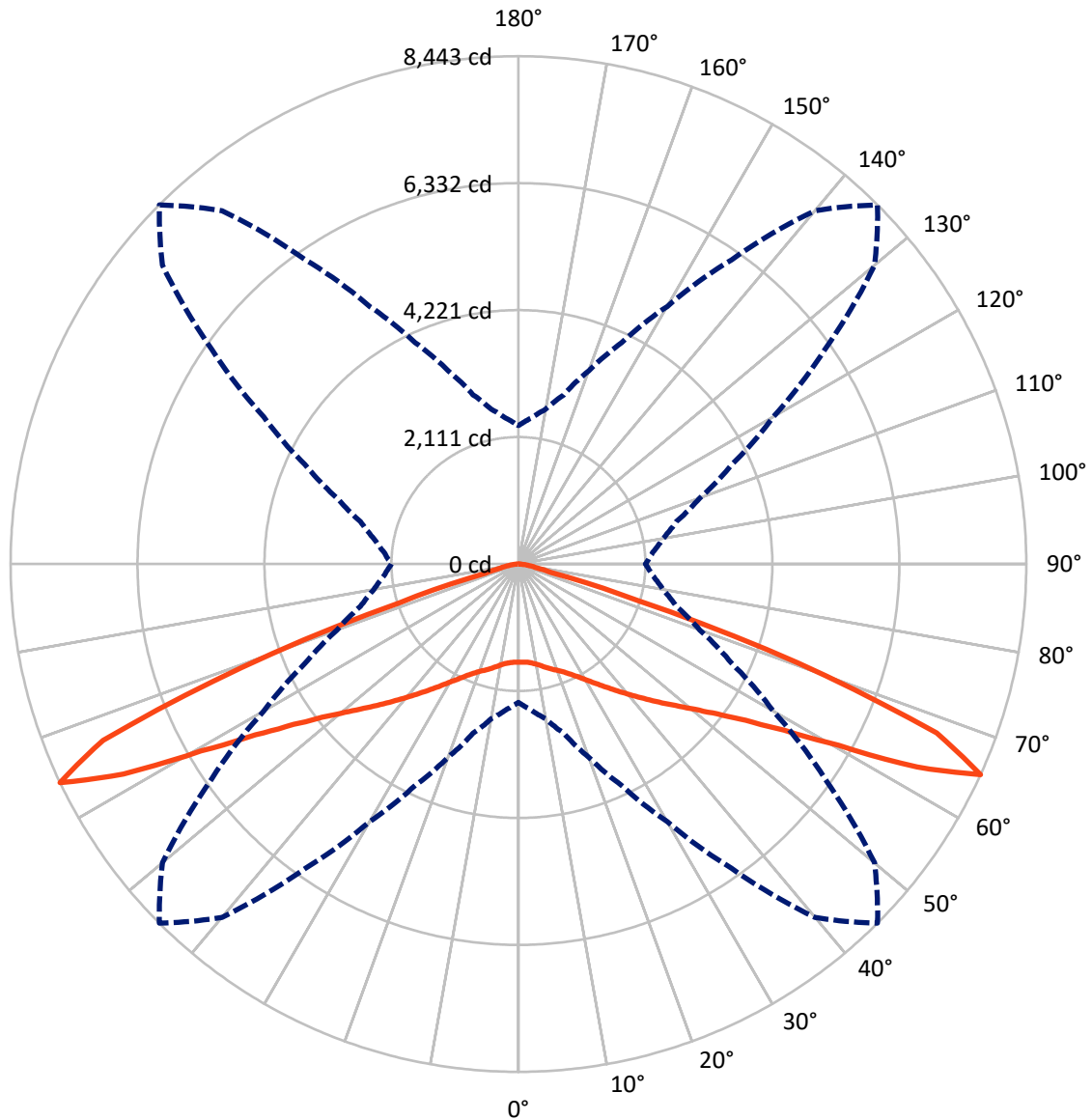
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.1 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
<b>House Side</b>	Lumens	7178.6	0.0	7178.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	7178.6	0.0	7178.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	14357.1	0.0	14357.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.0	1.1
10°-20°	509.7	3.6
20°-30°	950.9	6.6
30°-40°	1603.3	11.2
40°-50°	2604.2	18.1
50°-60°	4080.3	28.4
60°-70°	3851.6	26.8
70°-80°	519.1	3.6
80°-90°	79.1	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°	14357.1	100.0
0°-180°	14357.1	100.0



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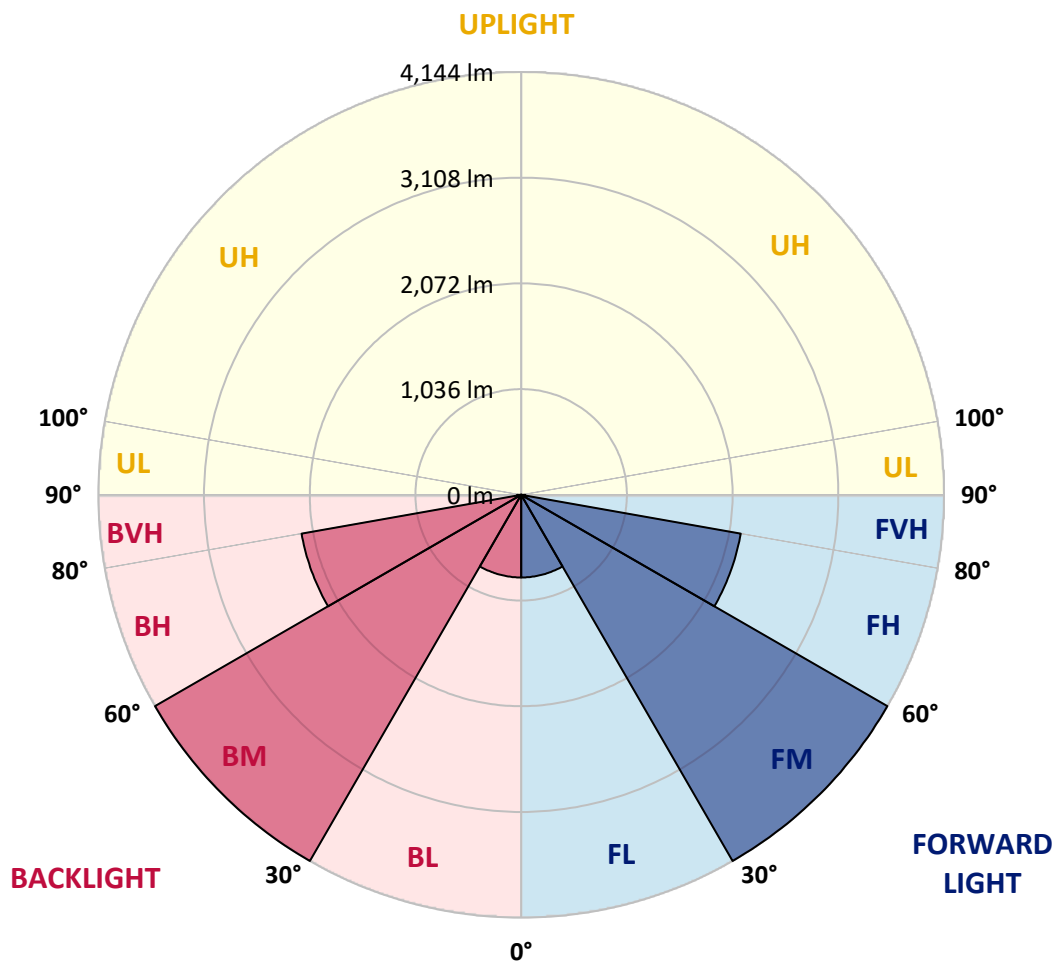
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	809.8	5.6			
FM (30°-60°)	4143.9	28.9			
FH (60°-80°)	2185.3	15.2			G2/5000
FVH (80°-90°)	39.5	0.3			G1/100
BL (0°-30°)	809.8	5.6	B2/1000		
BM (30°-60°)	4143.9	28.9	B3/5000		
BH (60°-80°)	2185.3	15.2	B3/2500		G2/5000
BVH (80°-90°)	39.5	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°	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1
2.5°	1646.6	1646.6	1649.2	1648.3	1644.7	1642.0	1639.3	1635.9	1633.9	1632.2	1631.3
5°	1655.4	1655.4	1658.1	1657.3	1654.6	1650.9	1649.2	1646.6	1643.9	1642.0	1642.9
7.5°	1677.9	1678.8	1679.7	1678.8	1676.1	1673.4	1669.8	1669.0	1665.3	1662.7	1664.4
10°	1711.8	1711.8	1712.7	1713.5	1711.8	1705.5	1705.5	1703.7	1700.2	1696.5	1697.4
12.5°	1749.4	1749.4	1750.3	1750.3	1750.3	1746.7	1747.7	1746.7	1742.3	1740.5	1742.3
15°	1786.0	1787.0	1787.0	1788.7	1788.7	1789.7	1793.1	1793.1	1791.4	1790.5	1790.5
17.5°	1828.9	1830.7	1831.6	1834.2	1835.2	1837.0	1840.5	1841.4	1842.3	1839.6	1840.5
20°	1886.3	1887.1	1889.8	1890.8	1894.3	1894.3	1896.1	1895.2	1893.4	1889.8	1889.8
22.5°	1950.6	1952.3	1957.8	1957.8	1962.3	1959.6	1960.5	1957.8	1953.3	1951.5	1949.7
25°	2034.8	2037.4	2041.8	2040.1	2041.8	2037.4	2037.4	2037.4	2034.8	2032.0	2031.1
27.5°	2141.1	2136.6	2141.1	2137.5	2136.6	2133.0	2134.0	2132.1	2129.5	2128.5	2125.0
30°	2252.1	2246.7	2249.4	2250.3	2248.4	2247.5	2244.0	2241.4	2236.8	2237.7	2235.1
32.5°	2379.0	2373.6	2376.3	2377.3	2375.4	2377.3	2376.3	2370.1	2364.7	2368.3	2368.3
35°	2530.2	2526.6	2533.7	2536.5	2531.1	2528.4	2524.7	2517.6	2509.5	2515.0	2515.9
37.5°	2711.8	2707.2	2712.6	2719.8	2709.8	2704.5	2690.2	2679.6	2674.2	2676.8	2680.5
40°	2900.4	2901.3	2916.4	2918.4	2907.5	2901.3	2887.1	2871.0	2855.7	2855.7	2860.2
42.5°	3099.0	3101.7	3119.5	3125.8	3122.1	3110.7	3090.9	3071.2	3051.5	3055.1	3060.5
45°	3323.5	3319.9	3338.6	3353.8	3351.1	3347.7	3328.8	3293.0	3275.1	3274.2	3283.1
47.5°	3559.5	3566.7	3586.5	3612.4	3611.5	3602.6	3578.4	3545.3	3512.2	3514.9	3525.6
50°	3835.0	3844.8	3878.0	3903.9	3907.4	3904.8	3876.1	3837.6	3791.1	3793.9	3808.2
52.5°	4081.9	4096.2	4134.5	4188.3	4221.3	4236.5	4217.8	4182.0	4134.5	4137.4	4152.5
55°	4305.4	4327.9	4385.0	4458.4	4524.6	4586.2	4614.1	4613.2	4578.2	4586.2	4606.0
57.5°	4445.9	4477.2	4563.8	4682.0	4813.5	4937.8	5045.2	5146.2	5168.5	5210.6	5210.6
60°	4257.2	4330.5	4445.9	4648.0	4906.5	5185.5	5487.7	5782.0	5971.7	6121.1	6040.6
62.5°	3555.1	3663.3	3825.3	4091.7	4494.2	4992.3	5599.7	6283.7	6997.4	7434.0	7113.8
65°	2300.3	2436.3	2612.5	2912.0	3419.2	4060.3	4944.9	6174.7	7668.2	8442.8	7727.3
67.5°	911.3	1003.4	1110.8	1323.7	1763.7	2393.4	3386.0	4902.9	6771.2	7501.9	6699.6
70°	435.6	450.8	471.3	517.0	626.9	846.1	1360.4	2415.6	4152.5	4922.5	4053.2
72.5°	314.9	317.6	327.3	342.6	374.8	419.5	509.8	738.8	1431.9	2082.1	1433.7
75°	238.8	242.4	247.8	255.7	272.7	294.3	328.2	393.5	490.1	565.3	489.1
77.5°	181.5	185.1	189.6	197.6	206.6	221.8	234.3	260.2	301.4	317.6	315.8
80°	132.4	138.6	145.7	152.9	159.2	166.4	167.3	179.8	203.0	218.2	213.7
82.5°	84.1	89.4	108.2	116.3	117.1	118.9	118.0	118.9	131.5	142.2	138.6
85°	53.7	57.2	67.1	76.0	74.2	77.9	77.9	76.0	70.6	60.8	72.5
87.5°	26.8	27.7	32.2	40.2	38.4	34.0	33.1	33.1	24.2	20.7	22.4
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°	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1	1633.1
2.5°	1628.6	1630.5	1627.8	1627.8	1626.8	1628.6	1625.9	1625.9
5°	1641.2	1643.9	1642.9	1642.9	1644.7	1646.6	1645.7	1644.7
7.5°	1663.5	1665.3	1667.1	1668.1	1669.8	1669.0	1670.7	1669.8
10°	1697.4	1695.7	1698.3	1695.7	1696.5	1694.8	1695.7	1695.7
12.5°	1740.5	1737.7	1736.0	1734.2	1734.2	1730.6	1730.6	1731.6
15°	1789.7	1785.1	1781.6	1779.8	1777.9	1777.9	1775.3	1777.0
17.5°	1837.9	1833.4	1827.2	1827.2	1824.5	1822.8	1821.0	1825.4
20°	1888.9	1884.5	1880.8	1880.0	1874.7	1872.7	1873.7	1879.1
22.5°	1948.0	1945.2	1945.2	1943.5	1939.9	1937.1	1937.1	1943.5
25°	2027.6	2022.2	2023.1	2023.9	2022.2	2022.2	2020.4	2024.8
27.5°	2125.0	2120.4	2123.2	2125.0	2123.2	2125.8	2123.2	2126.7
30°	2239.5	2236.8	2239.5	2242.2	2237.7	2237.7	2235.9	2238.5
32.5°	2376.3	2372.8	2374.5	2374.5	2368.3	2362.9	2355.7	2361.1
35°	2526.6	2522.1	2525.7	2528.4	2521.3	2515.9	2505.2	2509.5
37.5°	2692.0	2693.7	2698.2	2709.8	2708.1	2699.1	2691.1	2694.7
40°	2877.1	2886.2	2905.7	2913.8	2912.0	2903.1	2892.4	2894.2
42.5°	3086.4	3098.1	3118.6	3132.0	3125.8	3113.3	3099.8	3105.3
45°	3314.4	3332.4	3359.2	3372.6	3364.6	3351.1	3332.4	3342.2
47.5°	3556.0	3591.8	3627.5	3645.4	3642.7	3623.9	3599.8	3602.6
50°	3844.8	3892.3	3937.9	3955.7	3942.3	3913.7	3879.7	3878.8
52.5°	4204.3	4255.5	4292.9	4288.5	4255.5	4210.6	4172.2	4170.4
55°	4653.4	4670.4	4665.0	4626.5	4568.4	4498.6	4449.5	4441.4
57.5°	5196.2	5139.1	5054.9	4938.6	4808.1	4675.7	4586.2	4553.1
60°	5859.9	5601.4	5300.9	4984.2	4695.4	4478.9	4342.1	4259.0
62.5°	6408.1	5659.5	4987.8	4437.8	3987.9	3720.5	3533.7	3418.2
65°	6220.3	4889.5	3916.4	3207.2	2716.1	2439.8	2242.2	2110.7
67.5°	4805.5	3267.0	2273.5	1575.8	1194.8	1011.5	883.7	800.5
70°	2422.8	1253.0	759.2	535.7	458.0	425.6	404.2	391.8
72.5°	711.0	474.9	394.4	348.8	321.1	301.4	288.9	282.6
75°	393.5	321.1	283.5	257.5	239.7	226.3	218.2	212.9
77.5°	271.0	233.4	214.7	197.6	183.3	173.6	167.3	161.9
80°	189.6	170.8	162.8	153.8	143.1	135.0	126.1	122.4
82.5°	126.1	118.0	116.3	109.1	102.9	94.0	77.9	72.5
85°	74.2	73.3	73.3	70.6	66.1	58.1	46.5	46.5
87.5°	26.0	26.8	27.7	29.6	28.7	24.2	19.7	18.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)