

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: P196462

Luminaire Tested: **NAV-AF-04-D-UNV-5WQ-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196462
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-04-D-UNV-5WQ-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 26930.2 lumens
Efficiency: N/A
Efficacy: 104.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B5 - U0 - G4

Input Watts (W): 258
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

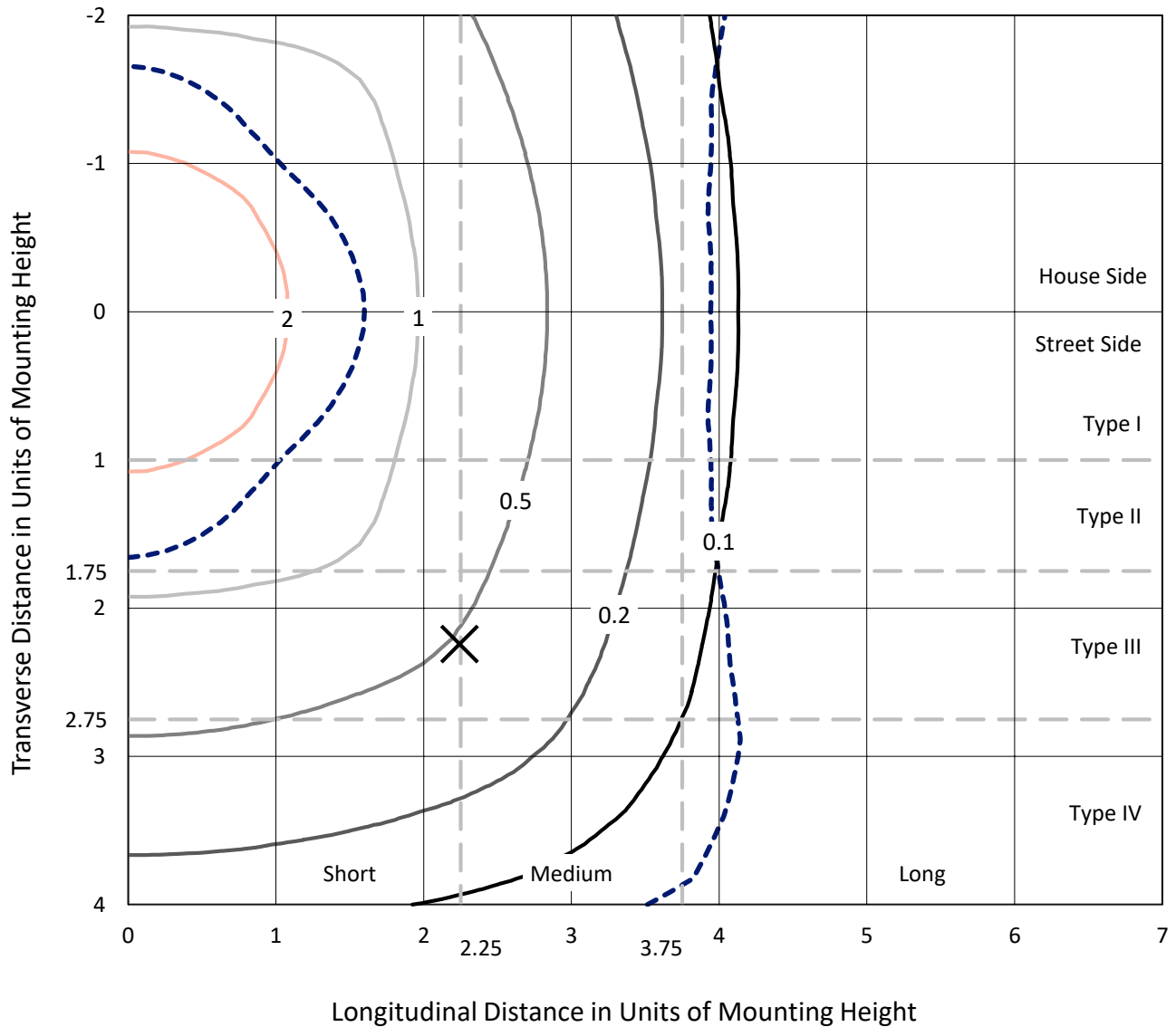


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Iso-Footcandle Lines of Horizontal Illumination

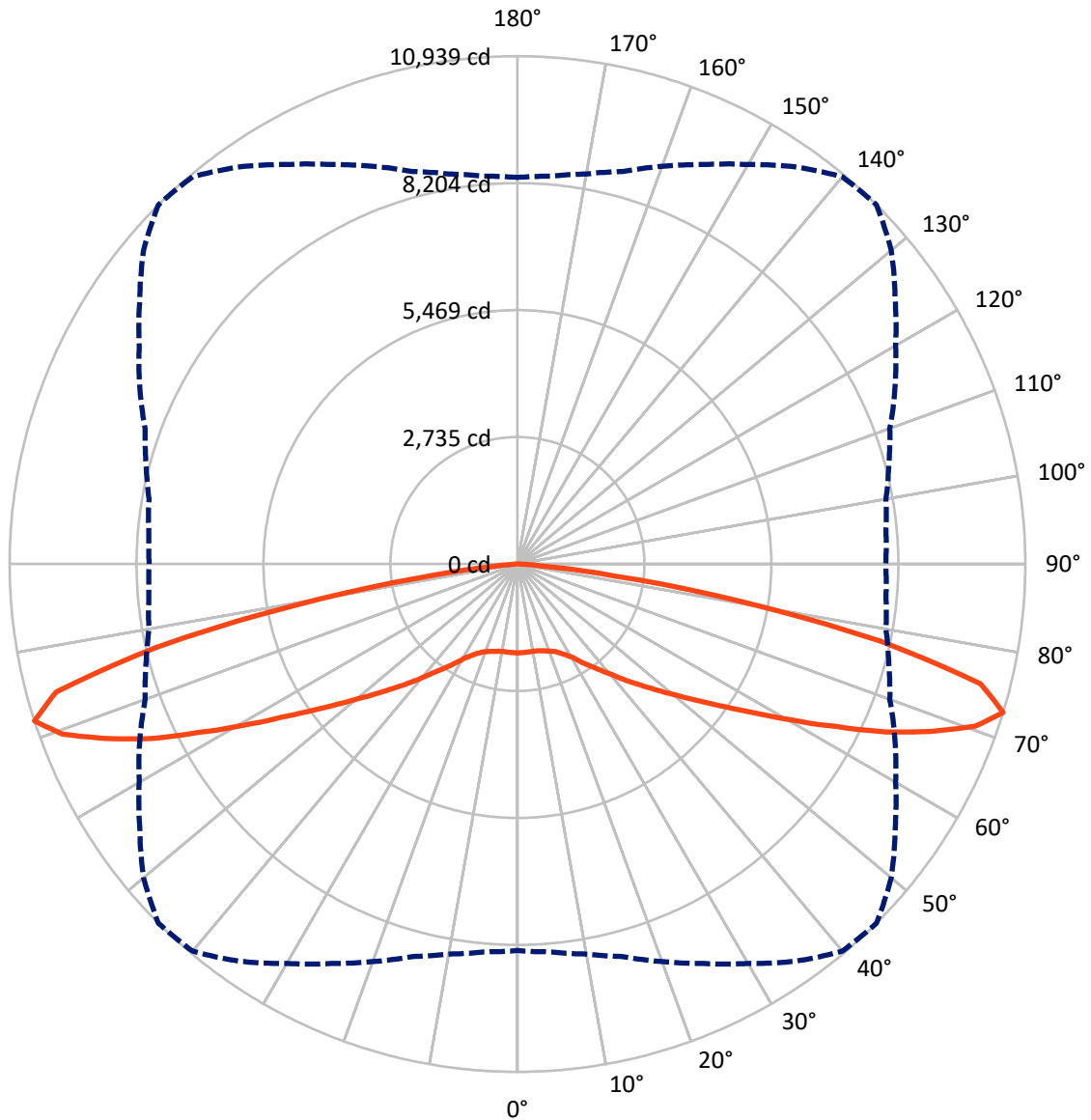
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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	13465.1	0.0	13465.1
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	13465.1	0.0	13465.1
	% Fixture	50.0	0.0	50.0
Total	Lumens	26930.2	0.0	26930.2
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.7	0.7
10°-20°	553.0	2.1
20°-30°	998.4	3.7
30°-40°	1703.0	6.3
40°-50°	2899.4	10.8
50°-60°	4666.2	17.3
60°-70°	7759.9	28.8
70°-80°	7506.8	27.9
80°-90°	660.7	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°	26930.2	100.0
0°-180°	26930.2	100.0



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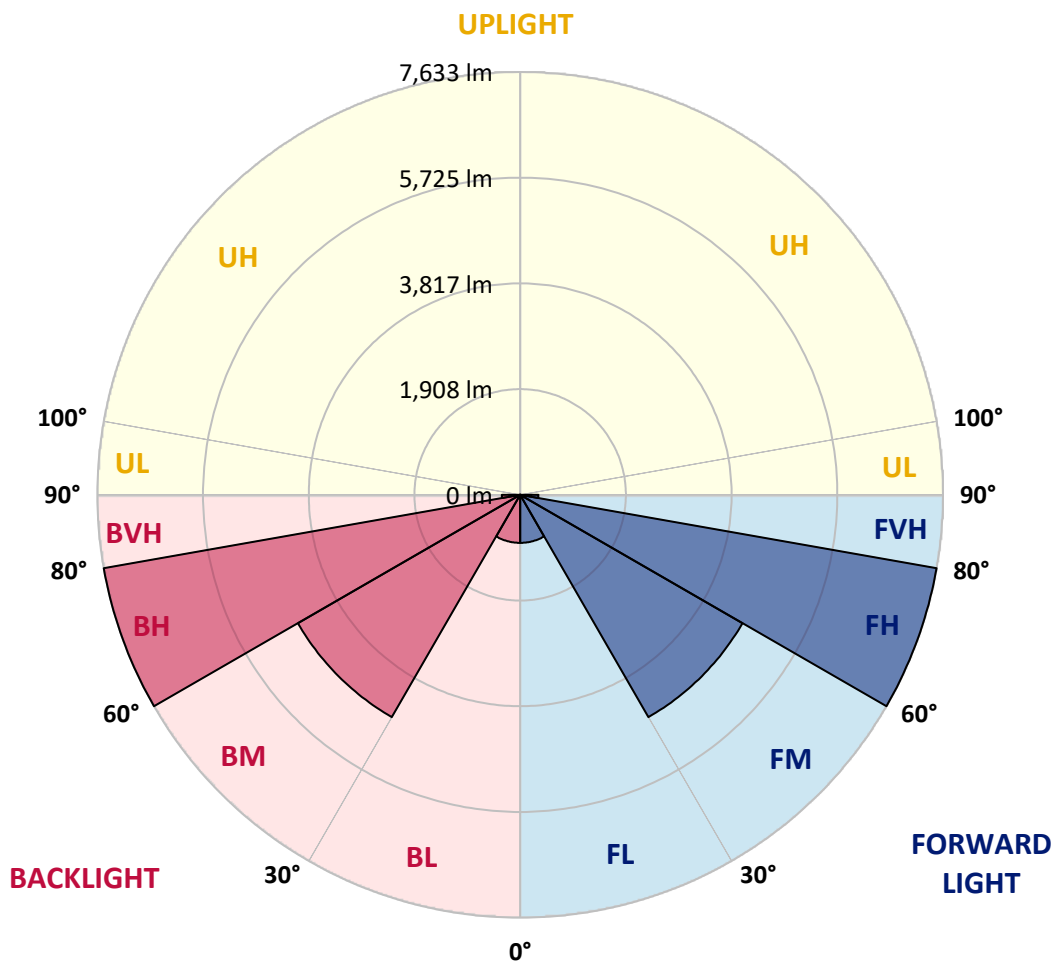
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	867.1	3.2			
FM	(30°-60°)	4634.3	17.2			
FH	(60°-80°)	7633.4	28.3			G4/12000
FVH	(80°-90°)	330.3	1.2			G3/500
BL	(0°-30°)	867.1	3.2	B2/1000		
BM	(30°-60°)	4634.3	17.2	B3/5000		
BH	(60°-80°)	7633.4	28.3	B5		G4/12000
BVH	(80°-90°)	330.3	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°	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5
2.5°	1929.4	1929.4	1931.1	1929.4	1926.1	1924.5	1919.4	1916.2	1912.9	1911.3	1907.8
5°	1931.1	1931.1	1932.8	1931.1	1927.8	1924.5	1921.3	1916.2	1912.9	1909.6	1907.8
7.5°	1937.7	1939.4	1941.1	1939.4	1932.8	1929.4	1924.5	1919.4	1912.9	1909.6	1906.2
10°	1951.1	1951.1	1951.1	1949.3	1944.4	1937.7	1931.1	1926.1	1917.8	1909.6	1904.6
12.5°	1960.9	1962.7	1962.7	1959.3	1952.7	1944.4	1937.7	1932.8	1926.1	1919.4	1914.5
15°	1975.9	1975.9	1974.2	1967.5	1957.6	1951.1	1947.6	1946.0	1944.4	1941.1	1936.1
17.5°	2005.7	2004.1	1999.1	1989.2	1977.5	1972.5	1969.3	1969.3	1969.3	1967.5	1964.3
20°	2048.8	2048.8	2042.2	2025.5	2015.7	2010.7	2005.7	2005.7	2005.7	2000.7	1995.7
22.5°	2118.4	2120.0	2110.2	2090.2	2077.0	2067.0	2060.4	2055.3	2050.5	2047.2	2038.9
25°	2212.9	2211.3	2199.6	2174.8	2164.9	2154.9	2141.6	2133.3	2126.7	2121.7	2111.8
27.5°	2312.4	2310.8	2297.4	2275.9	2269.4	2254.3	2244.4	2232.8	2224.5	2216.3	2206.3
30°	2440.0	2431.7	2421.7	2405.3	2401.8	2390.3	2377.1	2360.4	2347.2	2333.9	2322.3
32.5°	2554.4	2554.4	2539.4	2531.2	2537.8	2532.8	2534.5	2524.6	2516.2	2511.4	2499.7
35°	2713.5	2713.5	2706.9	2696.9	2698.6	2687.0	2685.4	2687.0	2693.6	2693.6	2680.3
37.5°	2925.6	2929.0	2907.5	2904.1	2895.8	2879.3	2871.0	2874.3	2889.3	2897.4	2879.3
40°	3189.3	3195.9	3189.3	3167.7	3157.7	3129.5	3113.1	3113.1	3124.6	3132.9	3126.2
42.5°	3449.6	3461.2	3449.6	3432.9	3424.6	3403.1	3394.8	3401.5	3416.3	3426.3	3416.3
45°	3739.6	3747.8	3733.0	3713.0	3703.2	3691.6	3686.5	3691.6	3708.0	3718.0	3714.7
47.5°	4024.7	4036.2	4018.0	4009.7	4009.7	3998.2	4011.5	4024.7	4039.7	4062.8	4052.9
50°	4303.1	4318.0	4306.5	4308.1	4321.4	4342.9	4367.7	4394.3	4420.8	4445.6	4449.0
52.5°	4551.7	4575.0	4576.7	4606.5	4647.9	4681.1	4750.7	4808.7	4871.8	4893.2	4883.4
55°	4813.8	4845.2	4886.6	4933.0	4999.3	5067.3	5185.0	5289.5	5372.3	5423.7	5415.4
57.5°	5188.2	5219.8	5262.9	5339.2	5438.6	5531.5	5692.2	5854.6	5980.7	6058.5	6020.4
60°	5674.0	5707.1	5763.5	5844.8	5974.0	6100.0	6320.4	6554.1	6749.8	6839.3	6769.7
62.5°	6317.2	6348.6	6385.1	6492.8	6637.1	6799.5	7076.2	7376.3	7624.9	7711.2	7613.4
65°	7233.8	7272.0	7283.6	7371.4	7512.2	7663.1	7961.5	8299.7	8583.1	8724.1	8528.3
67.5°	8266.4	8281.5	8327.8	8430.6	8574.7	8710.7	8946.1	9266.1	9537.9	9615.8	9406.9
70°	8871.6	8901.4	8982.5	9125.2	9297.5	9511.3	9768.4	10113.0	10421.3	10457.9	10192.6
72.5°	8324.5	8385.8	8530.1	8752.2	9113.6	9493.1	9935.7	10444.6	10887.1	10938.6	10512.6
75°	6676.9	6746.4	6918.9	7162.5	7590.1	8153.8	8793.6	9557.8	10220.7	10305.4	9741.8
77.5°	3558.9	3645.1	3895.4	4223.6	4833.6	5579.6	6350.2	7222.1	7785.9	7976.4	7570.2
80°	896.8	943.1	1064.1	1256.5	1669.3	2271.0	2935.6	3873.8	4573.4	4870.0	4573.4
82.5°	348.1	383.0	416.1	439.2	479.1	561.9	775.7	1264.7	1704.0	2098.6	1816.8
85°	134.3	142.6	205.5	233.7	233.7	257.0	295.0	348.1	431.0	470.8	394.5
87.5°	53.0	58.0	71.2	109.4	112.7	99.4	106.1	119.3	91.1	76.3	86.2
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°	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5	1914.5
2.5°	1906.2	1904.6	1901.3	1903.0	1901.3	1901.3	1901.3	1901.3
5°	1904.6	1904.6	1901.3	1901.3	1901.3	1903.0	1901.3	1901.3
7.5°	1903.0	1901.3	1898.0	1896.3	1896.3	1894.7	1894.7	1894.7
10°	1899.6	1896.3	1893.0	1891.3	1891.3	1888.0	1888.0	1888.0
12.5°	1907.8	1903.0	1899.6	1898.0	1898.0	1898.0	1899.6	1899.6
15°	1931.1	1921.3	1916.2	1914.5	1916.2	1919.4	1921.3	1922.9
17.5°	1956.0	1946.0	1937.7	1934.4	1936.1	1941.1	1946.0	1949.3
20°	1987.4	1979.2	1969.3	1965.9	1965.9	1972.5	1975.9	1980.9
22.5°	2032.2	2025.5	2017.3	2012.3	2009.1	2017.3	2022.3	2025.5
25°	2103.5	2096.9	2090.2	2085.3	2083.6	2091.9	2095.3	2096.9
27.5°	2198.0	2191.3	2188.0	2186.4	2181.4	2184.7	2189.7	2188.0
30°	2320.6	2325.6	2320.6	2320.6	2312.4	2315.6	2312.4	2309.0
32.5°	2484.8	2479.7	2464.9	2454.9	2443.4	2443.4	2438.3	2433.4
35°	2648.9	2632.3	2624.0	2629.0	2624.0	2627.3	2619.1	2610.8
37.5°	2842.8	2832.9	2831.2	2846.1	2842.8	2846.1	2846.1	2834.5
40°	3099.6	3093.1	3104.7	3129.5	3139.4	3137.8	3141.2	3126.2
42.5°	3394.8	3383.2	3388.1	3409.7	3421.4	3424.6	3423.0	3409.7
45°	3689.8	3693.2	3693.2	3716.4	3727.9	3734.6	3723.0	3718.0
47.5°	4023.0	4028.0	4016.4	4031.3	4034.6	4046.2	4036.2	4028.0
50°	4407.6	4389.4	4362.8	4367.7	4367.7	4364.5	4352.9	4342.9
52.5°	4836.9	4795.5	4745.6	4729.2	4710.9	4692.6	4669.5	4651.2
55°	5325.9	5254.6	5165.1	5123.7	5088.9	5047.4	4994.3	4976.1
57.5°	5892.8	5770.1	5650.8	5576.1	5486.7	5432.0	5364.0	5360.7
60°	6565.8	6400.0	6189.5	6078.4	5988.9	5924.2	5872.9	5853.0
62.5°	7343.2	7058.0	6831.0	6711.7	6607.2	6567.5	6502.8	6511.1
65°	8140.5	7850.4	7630.0	7533.9	7436.0	7409.5	7349.9	7371.4
67.5°	9004.2	8765.5	8523.5	8433.9	8344.3	8317.9	8256.5	8274.8
70°	9778.2	9474.9	9199.7	9024.0	8871.6	8748.8	8671.0	8639.4
72.5°	9932.4	9406.9	8974.3	8535.0	8281.5	8059.3	7968.2	7933.4
75°	8924.6	8109.0	7492.4	6976.9	6691.8	6368.5	6333.8	6285.6
77.5°	6942.0	6013.8	5267.8	4604.8	4221.9	3827.5	3691.6	3588.7
80°	4140.7	3182.6	2466.5	1728.9	1410.6	1135.4	1067.5	996.2
82.5°	1481.9	949.8	639.8	499.0	445.9	411.1	384.6	349.7
85°	358.1	301.7	285.0	258.6	255.2	217.1	154.2	137.5
87.5°	114.4	104.5	106.1	101.1	106.1	79.5	64.7	58.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)