

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: P195442

Luminaire Tested: **NAV-AF-04-D-UNV-5MQ-7050-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195442
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-7050-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20992 lumens
Efficiency: N/A
Efficacy: 122.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

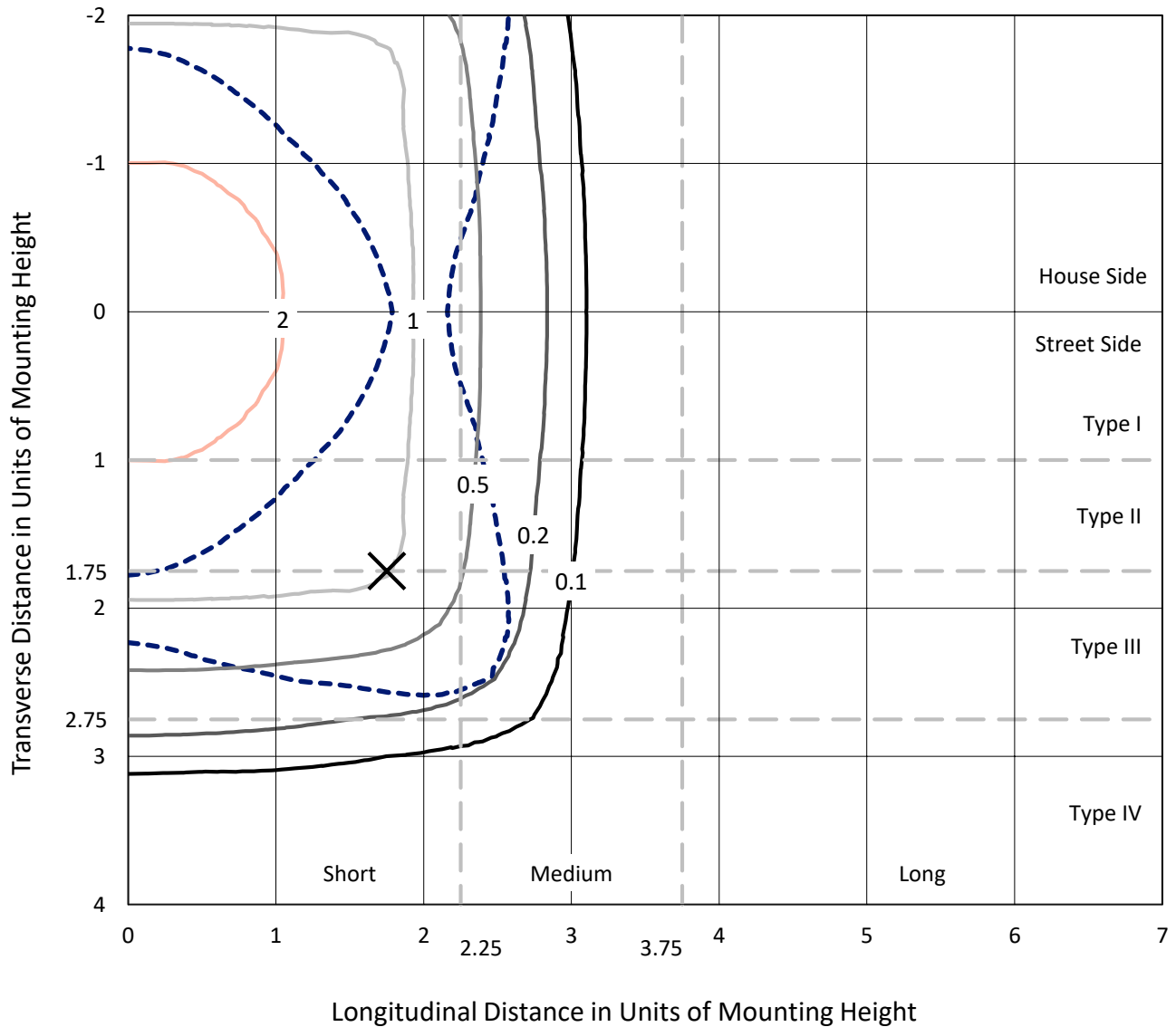
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

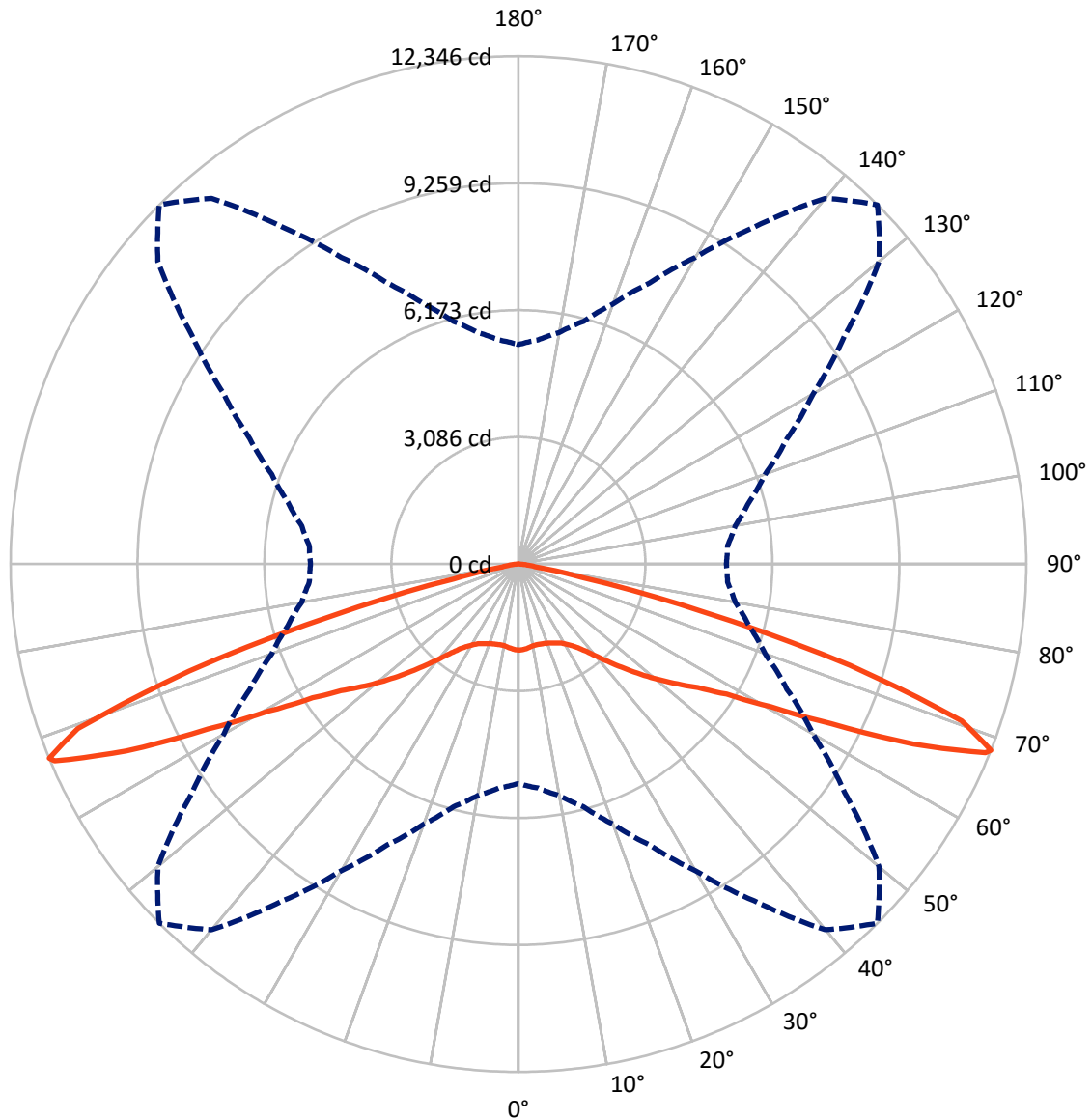
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	10496.0	0.0	10496.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	10496.0	0.0	10496.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	20992.0	0.0	20992.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.9	0.9
10°-20°	568.3	2.7
20°-30°	966.1	4.6
30°-40°	1581.0	7.5
40°-50°	2825.5	13.5
50°-60°	4771.9	22.7
60°-70°	7399.4	35.2
70°-80°	2544.1	12.1
80°-90°	139.8	0.7
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°	20992.0	100.0
0°-180°	20992.0	100.0

Coefficient of Utilization



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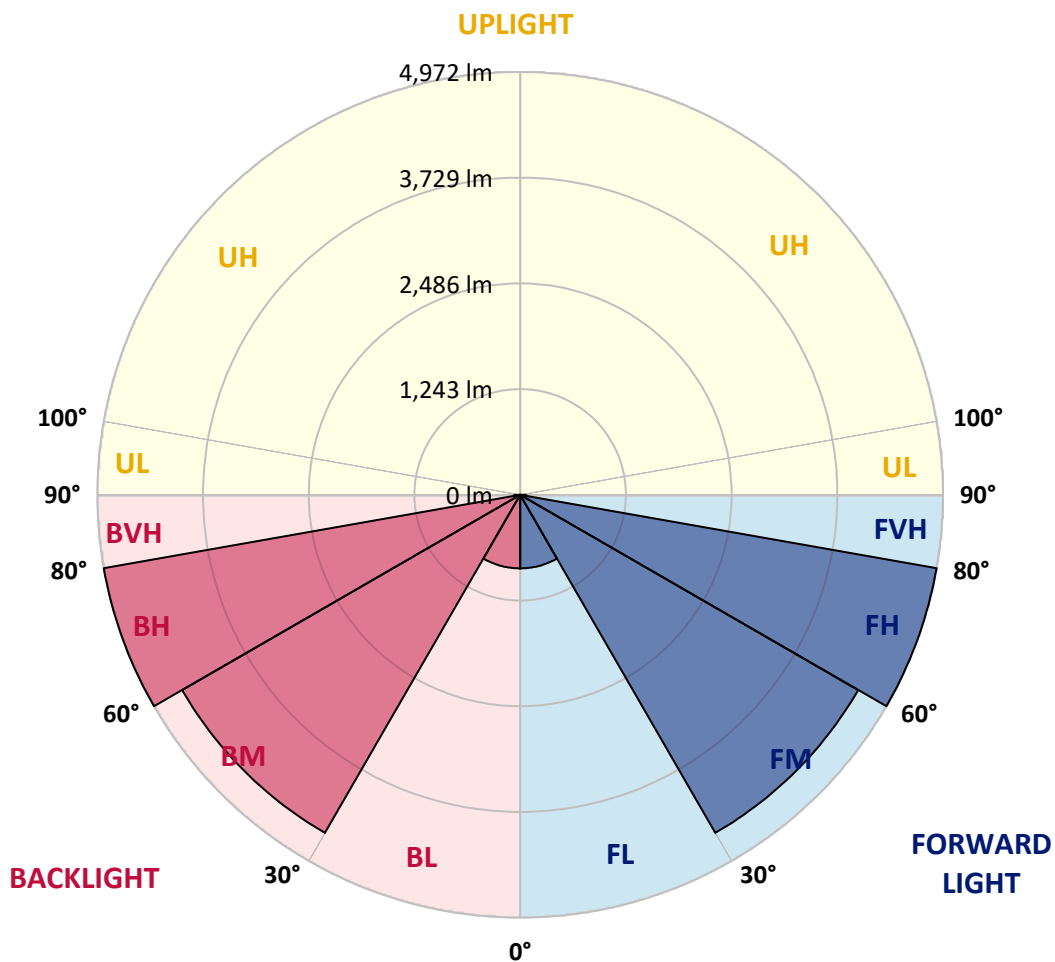
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	865.2	4.1			
FM	(30°-60°)	4589.2	21.9			
FH	(60°-80°)	4971.7	23.7			G2/5000
FVH	(80°-90°)	69.9	0.3			G1/100
BL	(0°-30°)	865.2	4.1	B2/1000		
BM	(30°-60°)	4589.2	21.9	B3/5000		
BH	(60°-80°)	4971.7	23.7	B4/5000		G2/5000
BVH	(80°-90°)	69.9	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°	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0
2.5°	2103.0	2103.0	2105.6	2104.3	2100.4	2096.6	2092.7	2088.9	2086.3	2083.7	2081.2
5°	2081.2	2081.2	2085.0	2082.4	2079.9	2076.0	2073.4	2069.6	2067.0	2064.4	2065.7
7.5°	2052.9	2055.5	2058.0	2056.7	2051.6	2050.3	2046.5	2045.2	2042.6	2038.7	2040.0
10°	2028.5	2029.7	2032.3	2031.0	2029.7	2025.9	2024.6	2023.3	2022.0	2016.9	2015.6
12.5°	2004.0	2006.6	2009.2	2010.5	2009.2	2010.5	2011.7	2013.0	2011.7	2009.2	2009.2
15°	1984.8	1987.3	1991.2	1995.0	1996.3	2004.0	2009.2	2014.3	2018.2	2019.5	2015.6
17.5°	1974.5	1978.3	1983.5	1991.2	1997.6	2006.6	2015.6	2023.3	2029.7	2031.0	2027.2
20°	1973.2	1977.0	1984.8	1993.7	2005.3	2016.9	2031.0	2042.6	2049.0	2052.9	2049.0
22.5°	1982.2	1987.3	1997.6	2009.2	2023.3	2038.7	2056.7	2069.6	2082.4	2087.6	2083.7
25°	2007.9	2013.0	2024.6	2038.7	2054.2	2073.4	2091.4	2108.2	2121.0	2127.4	2122.3
27.5°	2061.9	2063.2	2076.0	2091.4	2109.4	2126.2	2149.3	2157.0	2167.3	2173.7	2167.3
30°	2137.7	2140.3	2151.9	2176.3	2193.0	2214.8	2227.7	2235.4	2247.0	2253.4	2245.7
32.5°	2253.4	2256.0	2266.3	2289.4	2304.8	2321.5	2337.0	2342.1	2353.7	2361.4	2352.4
35°	2416.7	2421.8	2430.8	2446.2	2459.1	2471.9	2483.5	2479.7	2487.4	2497.6	2488.7
37.5°	2640.3	2639.0	2641.6	2653.2	2666.0	2673.8	2691.8	2682.8	2690.5	2699.5	2694.3
40°	2901.3	2901.3	2900.0	2920.6	2925.7	2933.4	2952.7	2941.1	2951.4	2961.7	2952.7
42.5°	3198.2	3203.4	3209.8	3226.5	3240.6	3243.2	3252.2	3247.1	3259.9	3268.9	3259.9
45°	3540.2	3547.9	3555.6	3594.1	3600.6	3605.7	3612.1	3595.4	3609.6	3617.3	3614.7
47.5°	3894.9	3909.1	3925.8	3965.6	3991.4	4002.9	4008.1	3988.8	3990.1	4001.6	4002.9
50°	4296.0	4311.4	4328.1	4373.1	4397.6	4418.1	4424.6	4402.7	4405.3	4414.3	4416.8
52.5°	4666.2	4684.2	4720.2	4780.6	4815.3	4851.3	4853.9	4826.9	4838.5	4844.9	4839.8
55°	5014.6	5037.7	5085.3	5166.3	5229.3	5300.0	5332.1	5302.5	5302.5	5297.4	5294.8
57.5°	5420.8	5446.5	5495.3	5589.2	5676.6	5778.1	5865.6	5895.1	5949.1	5967.1	5938.8
60°	6032.7	6059.7	6109.8	6233.2	6343.7	6491.6	6635.5	6752.5	6942.8	7045.6	6953.1
62.5°	6591.8	6633.0	6751.2	6967.2	7206.3	7480.1	7797.6	8023.8	8369.6	8541.9	8309.2
65°	6464.6	6548.1	6779.5	7118.9	7612.5	8206.4	8853.0	9473.8	10188.6	10554.9	10081.9
67.5°	5647.0	5717.7	5967.1	6361.7	6977.5	7796.3	8801.5	10087.0	11561.4	12247.9	11411.0
68°	5334.7	5467.1	5715.2	6107.2	6728.1	7532.8	8606.2	9994.5	11603.8	12345.6	11441.9
70°	4090.3	4137.9	4375.7	4727.9	5397.6	6186.9	7270.6	8853.0	10671.9	11435.5	10506.1
72.5°	1943.6	1971.9	2126.2	2473.2	2898.7	3541.4	4497.8	5990.2	7629.2	8423.6	7496.8
75°	712.1	718.6	754.6	836.8	996.2	1237.9	1696.8	2624.9	3885.9	4634.1	3901.4
77.5°	384.4	385.6	399.8	420.3	448.6	480.8	550.2	737.9	1190.3	1619.7	1257.2
80°	241.7	240.4	254.5	271.2	290.5	305.9	312.4	334.2	376.6	440.9	404.9
82.5°	123.4	135.0	167.1	185.1	213.4	218.5	212.1	210.8	223.7	241.7	249.4
85°	68.1	60.4	88.7	118.3	128.5	132.4	133.7	126.0	123.4	120.8	127.3
87.5°	34.7	32.1	38.6	59.1	63.0	51.4	52.7	45.0	30.9	30.9	32.1
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°	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0	2094.0
2.5°	2078.6	2079.9	2077.3	2077.3	2077.3	2078.6	2077.3	2076.0
5°	2061.9	2064.4	2064.4	2065.7	2067.0	2067.0	2067.0	2067.0
7.5°	2037.5	2038.7	2041.3	2041.3	2041.3	2041.3	2041.3	2041.3
10°	2014.3	2011.7	2010.5	2007.9	2007.9	2004.0	2005.3	2006.6
12.5°	2002.7	1997.6	1995.0	1991.2	1988.6	1984.8	1984.8	1986.0
15°	2007.9	2000.2	1992.5	1989.9	1987.3	1984.8	1982.2	1983.5
17.5°	2018.2	2009.2	2000.2	1995.0	1989.9	1986.0	1984.8	1986.0
20°	2040.0	2027.2	2013.0	2004.0	1993.7	1991.2	1987.3	1991.2
22.5°	2069.6	2054.2	2036.2	2019.5	2007.9	2002.7	1997.6	2001.5
25°	2105.6	2088.9	2070.9	2051.6	2038.7	2034.9	2028.5	2028.5
27.5°	2155.7	2141.6	2126.2	2108.2	2095.3	2091.4	2081.2	2081.2
30°	2235.4	2221.3	2207.1	2191.7	2178.9	2175.0	2162.1	2162.1
32.5°	2340.8	2325.4	2316.4	2303.5	2293.3	2286.8	2271.4	2270.1
35°	2482.2	2468.1	2466.8	2457.8	2447.5	2448.8	2433.4	2430.8
37.5°	2685.3	2673.8	2677.6	2669.9	2660.9	2668.6	2659.6	2659.6
40°	2945.0	2941.1	2945.0	2939.8	2941.1	2942.4	2934.7	2937.3
42.5°	3258.6	3248.4	3271.5	3268.9	3265.1	3275.4	3257.4	3244.5
45°	3619.9	3616.0	3639.1	3643.0	3635.3	3641.7	3609.6	3608.3
47.5°	4011.9	4011.9	4032.5	4029.9	4022.2	4023.5	3984.9	3960.5
50°	4420.7	4418.1	4438.7	4433.6	4423.3	4422.0	4382.1	4357.7
52.5°	4846.2	4846.2	4875.8	4861.6	4837.2	4825.6	4776.8	4744.6
55°	5316.7	5310.2	5319.2	5273.0	5225.4	5190.7	5130.3	5105.8
57.5°	5911.8	5837.3	5773.0	5713.9	5647.0	5605.9	5535.2	5509.5
60°	6756.4	6557.1	6471.0	6352.7	6242.2	6186.9	6093.1	6042.9
62.5°	7926.1	7595.8	7361.8	7100.9	6848.9	6671.5	6528.9	6465.9
65°	9278.5	8558.6	7963.4	7404.3	6929.9	6553.3	6343.7	6278.2
67.5°	9792.6	8471.2	7444.1	6642.0	6066.1	5617.5	5366.8	5314.1
68°	9683.4	8270.7	7203.7	6382.3	5803.9	5351.4	5102.0	5054.4
70°	8541.9	6977.5	5851.4	5033.9	4494.0	4063.3	3887.2	3811.4
72.5°	5823.1	4481.1	3437.3	2749.6	2346.0	2073.4	1911.5	1856.2
75°	2680.2	1811.2	1209.6	903.7	767.4	701.9	651.7	638.9
77.5°	781.6	568.2	488.5	452.5	425.5	402.3	385.6	384.4
80°	371.5	348.4	338.1	314.9	290.5	268.7	253.2	255.8
82.5°	249.4	243.0	243.0	219.8	181.2	155.5	128.5	115.7
85°	132.4	137.5	145.3	137.5	119.5	88.7	57.8	63.0
87.5°	45.0	51.4	54.0	52.7	47.6	36.0	27.0	27.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)