

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: P195917

Luminaire Tested: **NAV-AF-05-D-UNV-5MQ-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195917  
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-05-D-UNV-5MQ-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 21583.2 lumens  
Efficiency: N/A  
Efficacy: 133.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B5 - U0 - G3

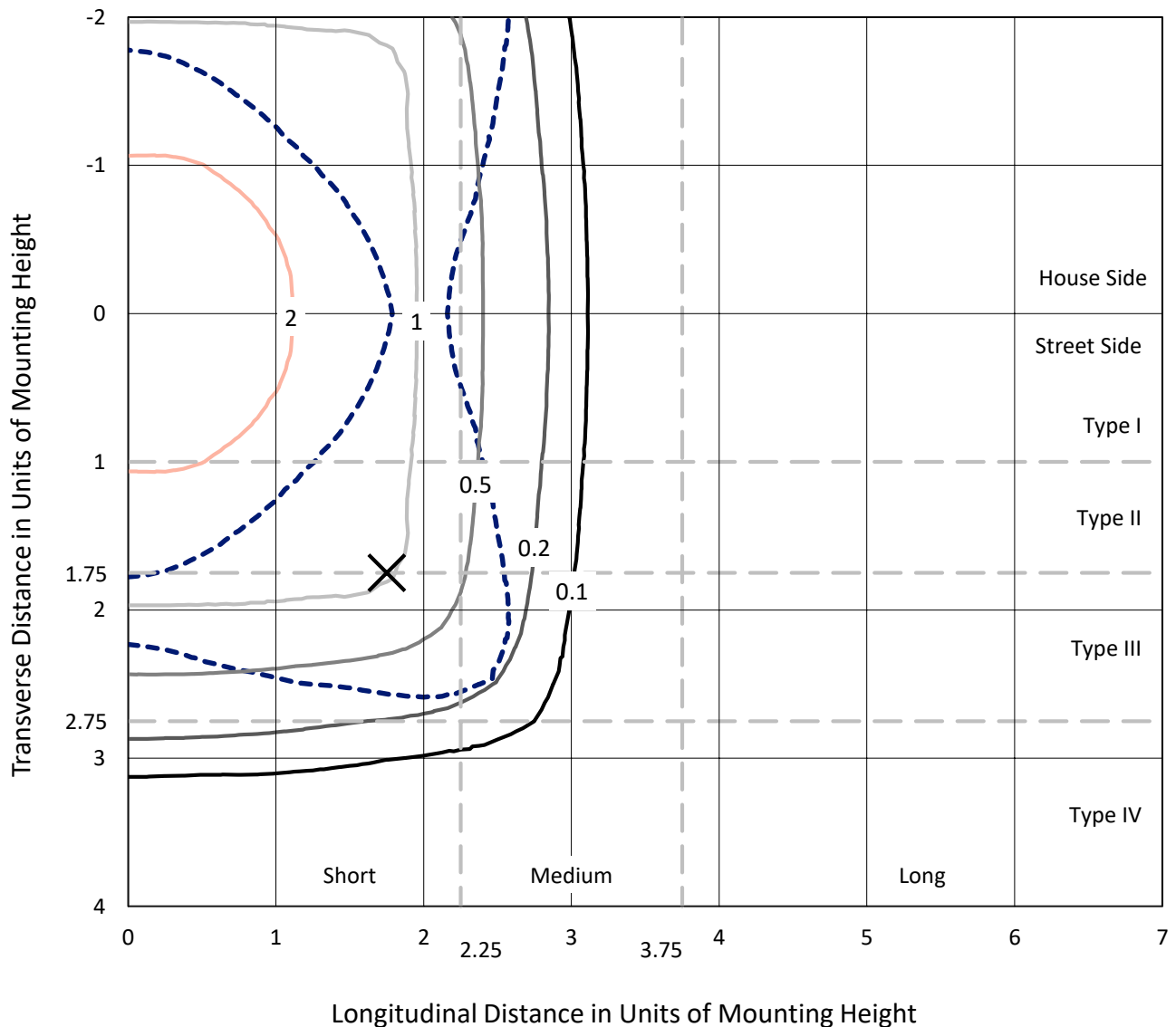
Input Watts (W): 162  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

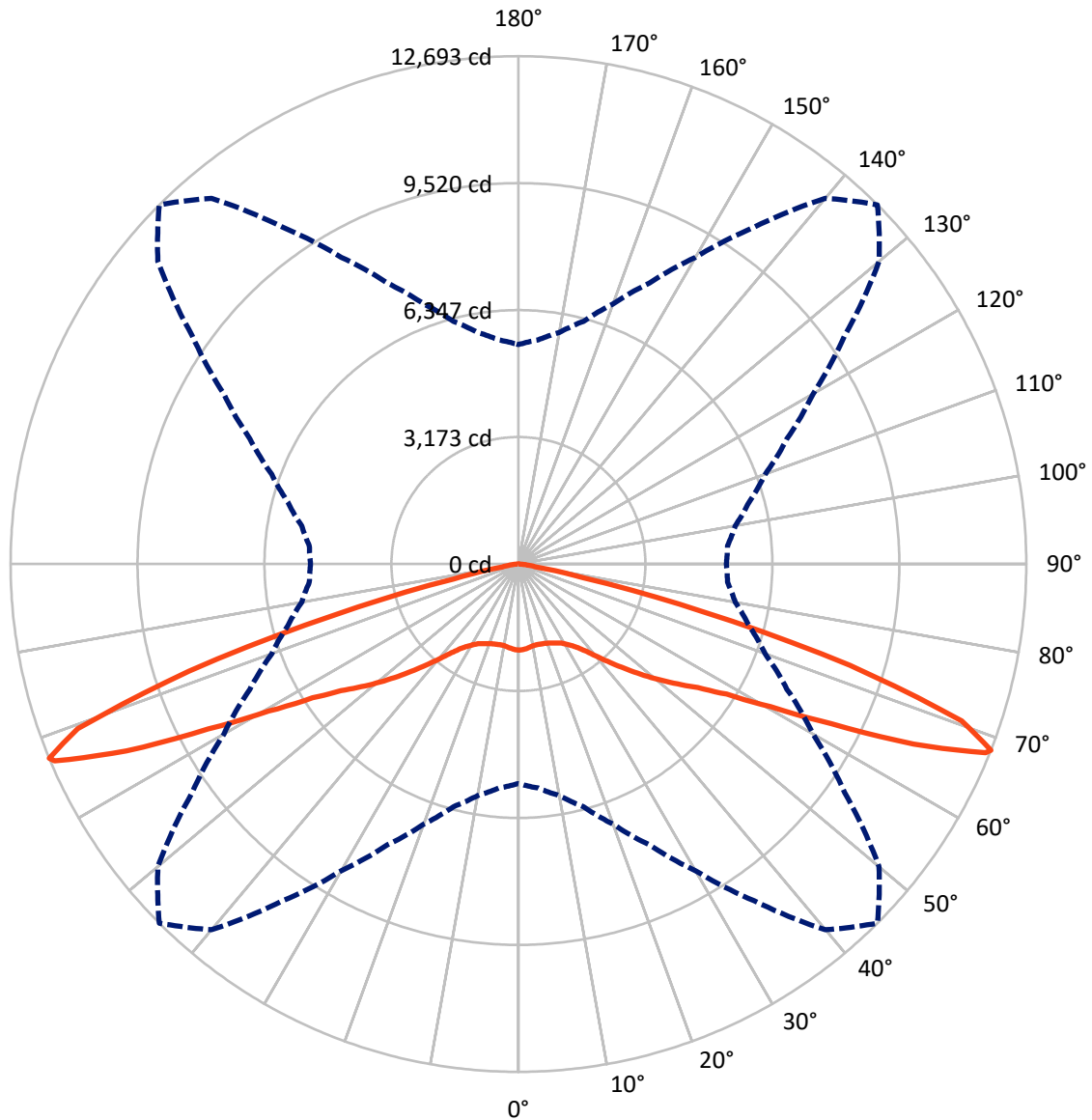
✕ Max cd  
 - - - 1/2 Max cd



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
<b>House Side</b>	Lumens	10791.6	0.0	10791.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	10791.6	0.0	10791.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	21583.2	0.0	21583.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.5	0.9
10°-20°	584.3	2.7
20°-30°	993.3	4.6
30°-40°	1625.6	7.5
40°-50°	2905.1	13.5
50°-60°	4906.2	22.7
60°-70°	7607.8	35.2
70°-80°	2615.7	12.1
80°-90°	143.7	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°	21583.2	100.0
0°-180°	21583.2	100.0



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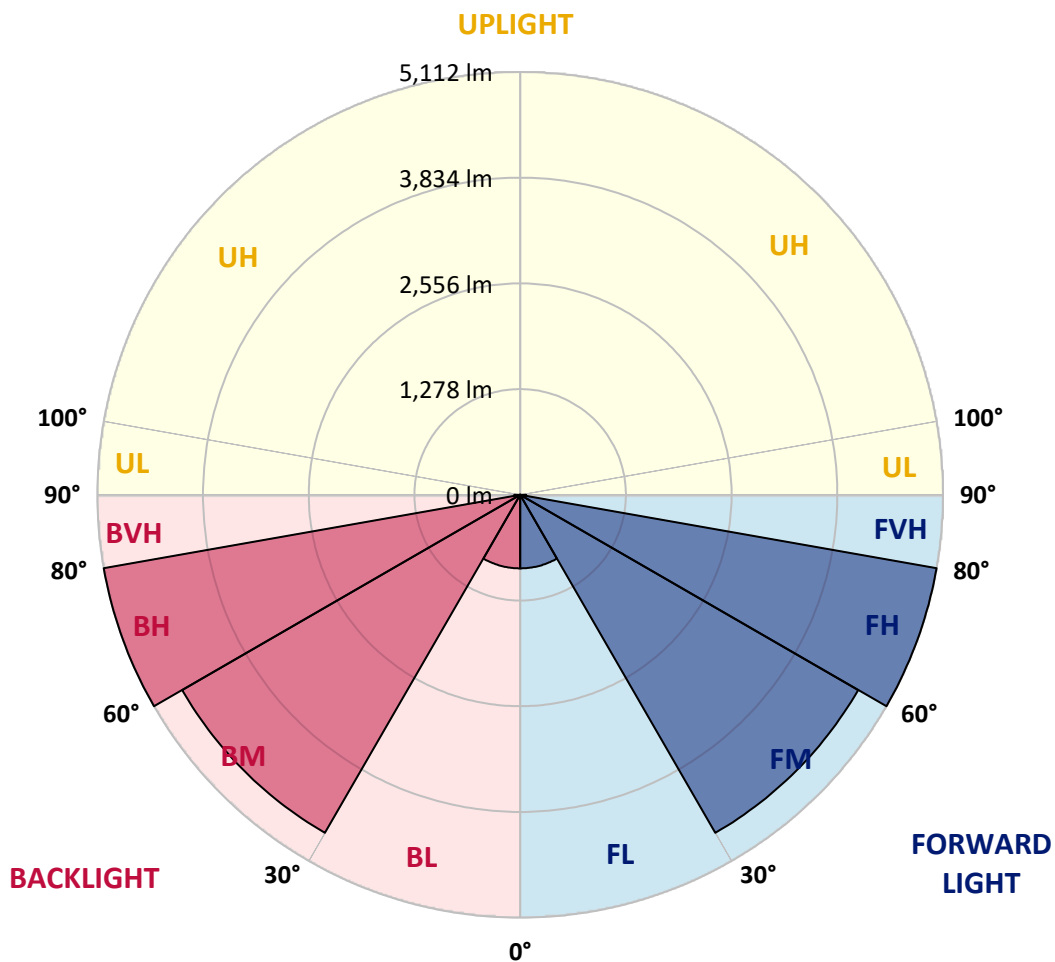
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	889.5	4.1			
FM	(30°-60°)	4718.5	21.9			
FH	(60°-80°)	5111.8	23.7			G3/7500
FVH	(80°-90°)	71.9	0.3			G1/100
BL	(0°-30°)	889.5	4.1	B2/1000		
BM	(30°-60°)	4718.5	21.9	B3/5000		
BH	(60°-80°)	5111.8	23.7	B5		G3/7500
BVH	(80°-90°)	71.9	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: 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°	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0
2.5°	2162.2	2162.2	2164.9	2163.5	2159.6	2155.7	2151.7	2147.7	2145.0	2142.5	2139.8
5°	2139.8	2139.8	2143.7	2141.1	2138.5	2134.5	2131.8	2127.8	2125.3	2122.6	2124.0
7.5°	2110.7	2113.3	2116.0	2114.6	2109.4	2108.1	2104.1	2102.8	2100.1	2096.1	2097.5
10°	2085.6	2086.9	2089.6	2088.3	2086.9	2082.9	2081.6	2080.3	2078.9	2073.7	2072.4
12.5°	2060.4	2063.1	2065.7	2067.1	2065.7	2067.1	2068.4	2069.7	2068.4	2065.7	2065.7
15°	2040.7	2043.3	2047.2	2051.2	2052.6	2060.4	2065.7	2071.1	2075.1	2076.4	2072.4
17.5°	2030.0	2034.0	2039.4	2047.2	2053.9	2063.1	2072.4	2080.3	2086.9	2088.3	2084.3
20°	2028.7	2032.7	2040.7	2049.9	2061.8	2073.7	2088.3	2100.1	2106.8	2110.7	2106.8
22.5°	2038.0	2043.3	2053.9	2065.7	2080.3	2096.1	2114.6	2127.8	2141.1	2146.4	2142.5
25°	2064.4	2069.7	2081.6	2096.1	2112.0	2131.8	2150.3	2167.5	2180.7	2187.4	2182.1
27.5°	2120.0	2121.3	2134.5	2150.3	2168.9	2186.0	2209.8	2217.8	2228.3	2234.9	2228.3
30°	2197.9	2200.6	2212.4	2237.6	2254.8	2277.2	2290.5	2298.4	2310.2	2316.9	2308.9
32.5°	2316.9	2319.5	2330.1	2353.9	2369.8	2387.0	2402.8	2408.0	2420.0	2427.9	2418.7
35°	2484.7	2490.1	2499.3	2515.1	2528.3	2541.5	2553.5	2549.5	2557.4	2568.0	2558.7
37.5°	2714.7	2713.4	2716.0	2727.9	2741.1	2749.1	2767.6	2758.3	2766.3	2775.5	2770.3
40°	2983.0	2983.0	2981.7	3002.9	3008.1	3016.1	3035.9	3023.9	3034.6	3045.1	3035.9
42.5°	3288.3	3293.6	3300.2	3317.4	3332.0	3334.5	3343.8	3338.5	3351.7	3361.0	3351.7
45°	3639.9	3647.8	3655.7	3695.4	3702.0	3707.3	3713.9	3696.7	3711.3	3719.1	3716.5
47.5°	4004.6	4019.2	4036.4	4077.4	4103.8	4115.6	4121.0	4101.1	4102.4	4114.3	4115.6
50°	4417.0	4432.9	4450.0	4496.3	4521.4	4542.5	4549.2	4526.7	4529.3	4538.6	4541.3
52.5°	4797.6	4816.2	4853.2	4915.3	4951.0	4988.0	4990.6	4962.8	4974.7	4981.4	4976.0
55°	5155.8	5179.6	5228.5	5311.8	5376.5	5449.3	5482.3	5451.9	5451.9	5446.6	5443.9
57.5°	5573.4	5599.9	5650.2	5746.6	5836.4	5940.9	6030.8	6061.2	6116.6	6135.1	6106.1
60°	6202.6	6230.3	6281.8	6408.8	6522.4	6674.4	6822.5	6942.7	7138.4	7244.0	7148.9
62.5°	6777.5	6819.8	6941.3	7163.4	7409.2	7690.7	8017.2	8249.8	8605.4	8782.4	8543.3
65°	6646.6	6732.6	6970.5	7319.4	7826.9	8437.5	9102.3	9740.6	10475.5	10852.2	10365.9
67.5°	5806.1	5878.8	6135.1	6541.0	7174.0	8015.9	9049.4	10371.1	11887.1	12592.8	11732.4
68°	5485.0	5621.0	5876.1	6279.3	6917.6	7745.0	8848.5	10276.0	11930.7	12693.3	11764.1
70°	4205.6	4254.5	4498.9	4861.1	5549.7	6361.2	7475.3	9102.3	10972.5	11757.5	10802.0
72.5°	1998.3	2027.4	2186.0	2542.9	2980.4	3641.2	4624.6	6159.0	7844.1	8660.9	7707.9
75°	732.2	738.8	775.8	860.4	1024.3	1272.8	1744.6	2698.9	3995.4	4764.6	4011.3
77.5°	395.2	396.5	411.0	432.2	461.2	494.3	565.7	758.6	1223.9	1665.3	1292.6
80°	248.5	247.1	261.7	278.9	298.7	314.6	321.2	343.6	387.3	453.4	416.3
82.5°	126.8	138.8	171.9	190.3	219.4	224.6	218.1	216.8	230.0	248.5	256.5
85°	70.1	62.1	91.1	121.6	132.2	136.2	137.5	129.5	126.8	124.2	130.8
87.5°	35.7	33.0	39.7	60.8	64.8	52.9	54.2	46.2	31.7	31.7	33.0
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°	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0	2153.0
2.5°	2137.1	2138.5	2135.8	2135.8	2135.8	2137.1	2135.8	2134.5
5°	2120.0	2122.6	2122.6	2124.0	2125.3	2125.3	2125.3	2125.3
7.5°	2094.8	2096.1	2098.8	2098.8	2098.8	2098.8	2098.8	2098.8
10°	2071.1	2068.4	2067.1	2064.4	2064.4	2060.4	2061.8	2063.1
12.5°	2059.2	2053.9	2051.2	2047.2	2044.6	2040.7	2040.7	2042.0
15°	2064.4	2056.5	2048.6	2045.9	2043.3	2040.7	2038.0	2039.4
17.5°	2075.1	2065.7	2056.5	2051.2	2045.9	2042.0	2040.7	2042.0
20°	2097.5	2084.3	2069.7	2060.4	2049.9	2047.2	2043.3	2047.2
22.5°	2127.8	2112.0	2093.5	2076.4	2064.4	2059.2	2053.9	2057.9
25°	2164.9	2147.7	2129.2	2109.4	2096.1	2092.2	2085.6	2085.6
27.5°	2216.4	2201.9	2186.0	2167.5	2154.3	2150.3	2139.8	2139.8
30°	2298.4	2283.8	2269.3	2253.5	2240.3	2236.3	2223.1	2223.1
32.5°	2406.8	2390.9	2381.6	2368.4	2357.8	2351.3	2335.4	2334.1
35°	2552.2	2537.6	2536.3	2527.0	2516.5	2517.8	2501.9	2499.3
37.5°	2760.9	2749.1	2753.1	2745.1	2735.9	2743.8	2734.6	2734.6
40°	3027.9	3023.9	3027.9	3022.6	3023.9	3025.3	3017.4	3020.0
42.5°	3350.5	3339.8	3363.7	3361.0	3357.0	3367.6	3349.1	3335.8
45°	3721.8	3717.8	3741.6	3745.6	3737.7	3744.3	3711.3	3709.9
47.5°	4124.9	4124.9	4146.0	4143.5	4135.5	4136.8	4097.1	4072.1
50°	4545.2	4542.5	4563.7	4558.5	4547.8	4546.5	4505.6	4480.4
52.5°	4982.7	4982.7	5013.1	4998.5	4973.4	4961.5	4911.3	4878.2
55°	5466.4	5459.8	5469.0	5421.4	5372.5	5336.8	5274.7	5249.7
57.5°	6078.4	6001.7	5935.6	5874.8	5806.1	5763.8	5691.1	5664.7
60°	6946.7	6741.9	6653.3	6531.6	6418.0	6361.2	6264.7	6213.1
62.5°	8149.3	7809.7	7569.2	7300.9	7041.8	6859.4	6712.7	6648.0
65°	9539.7	8799.6	8187.7	7612.8	7125.1	6737.9	6522.4	6455.0
67.5°	10068.4	8709.8	7653.7	6829.0	6236.9	5775.7	5518.0	5463.8
68°	9956.1	8503.6	7406.6	6562.0	5967.3	5502.0	5245.7	5196.8
70°	8782.4	7174.0	6016.2	5175.6	4620.6	4177.8	3996.7	3918.7
72.5°	5987.1	4607.4	3534.1	2827.0	2412.0	2131.8	1965.3	1908.5
75°	2755.6	1862.2	1243.7	929.1	789.0	721.6	670.1	656.8
77.5°	803.5	584.2	502.3	465.2	437.5	413.7	396.5	395.2
80°	382.0	358.1	347.6	323.8	298.7	276.2	260.3	263.0
82.5°	256.5	249.8	249.8	226.0	186.4	159.9	132.2	119.0
85°	136.2	141.4	149.4	141.4	123.0	91.1	59.4	64.8
87.5°	46.2	52.9	55.5	54.2	48.9	37.0	27.7	27.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)