

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: P195067

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-7060-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195067
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-AFL-7060-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6866 lumens
Efficiency: N/A
Efficacy: 102.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 67
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

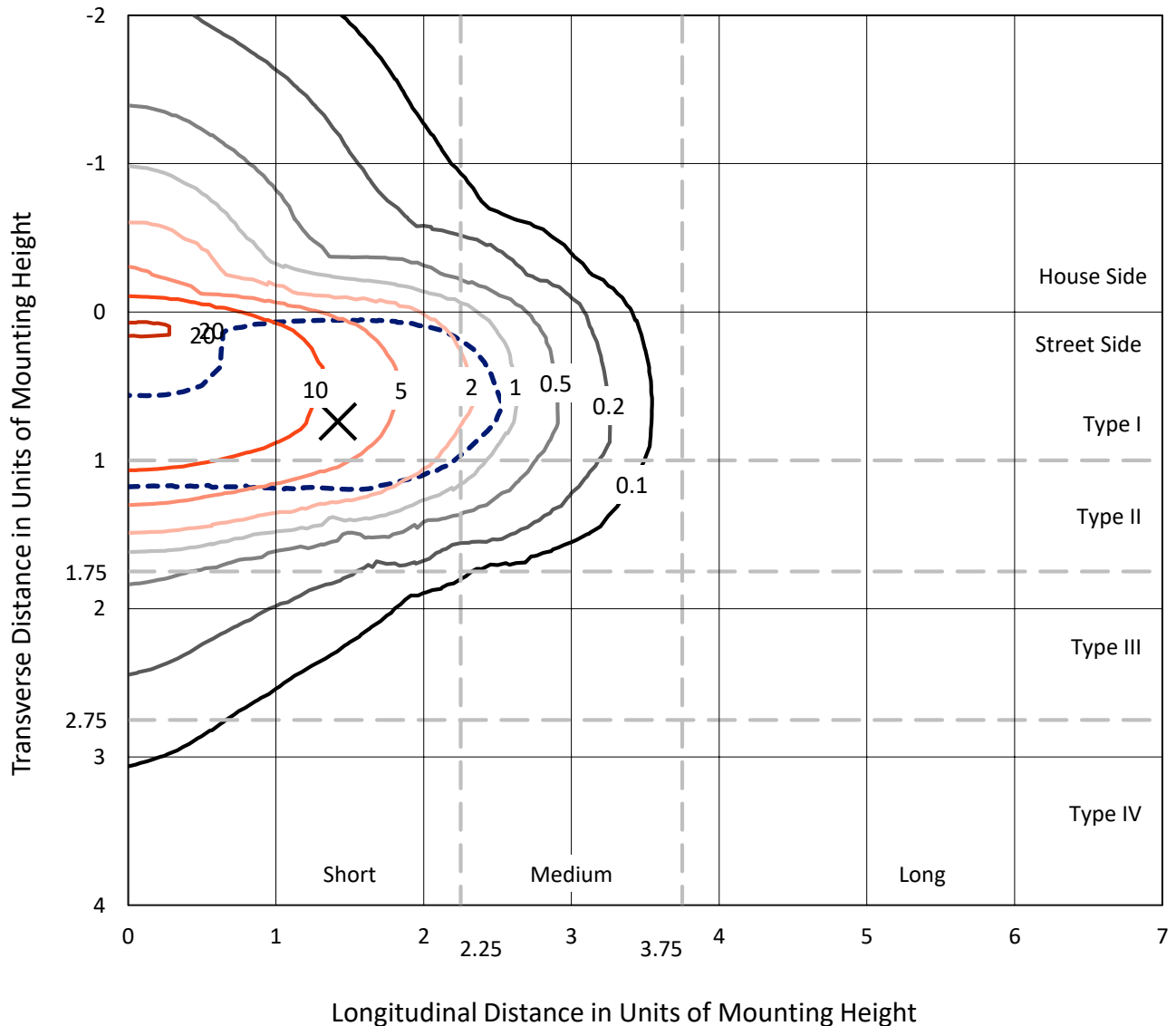


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Iso-Footcandle Lines of Horizontal Illumination

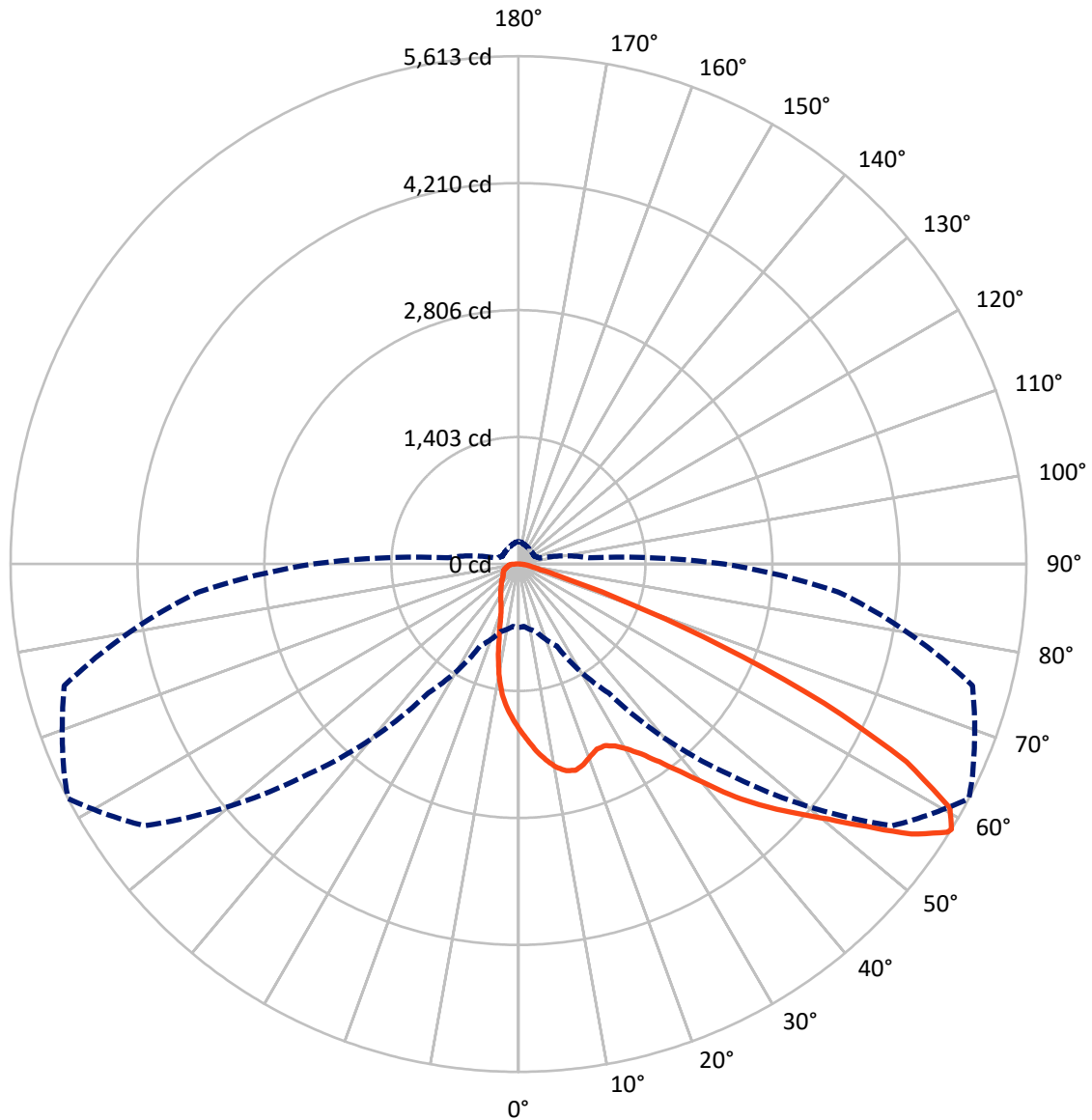
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 21.5 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral - - - Horizontal Cone Through 58-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1054.2	0.0	1054.2
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	5811.8	0.0	5811.8
	% Fixture	84.6	0.0	84.6
Total	Lumens	6866.0	0.0	6866.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.9	2.4
10°-20°	413.5	6.0
20°-30°	670.2	9.8
30°-40°	1070.0	15.6
40°-50°	1556.3	22.7
50°-60°	1628.6	23.7
60°-70°	992.8	14.5
70°-80°	277.6	4.0
80°-90°	93.1	1.4
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°	6866.0	100.0
0°-180°	6866.0	100.0

Coefficient of Utilization



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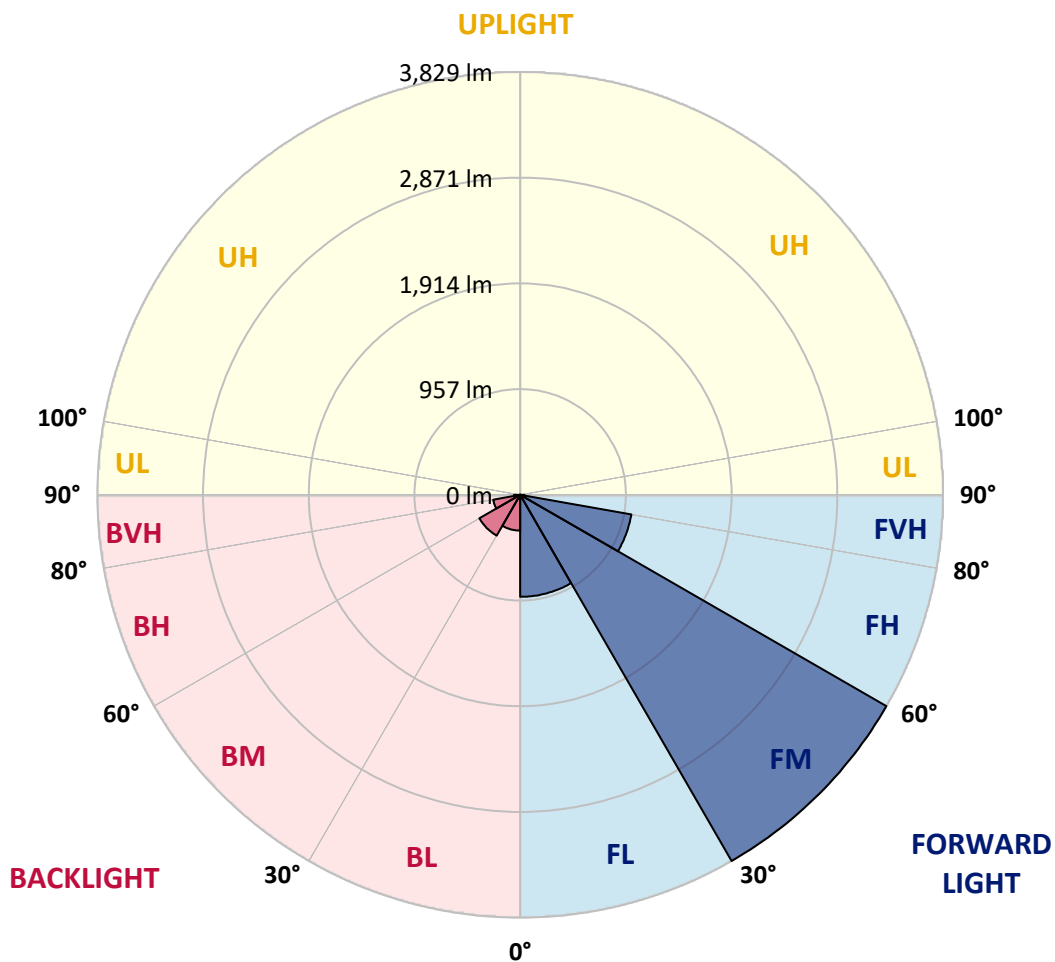
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	923.5	13.5			
FM	(30°-60°)	3828.6	55.8			
FH	(60°-80°)	1022.3	14.9			G1/1800
FVH	(80°-90°)	37.4	0.5			G1/100
BL	(0°-30°)	324.1	4.7	B1/500		
BM	(30°-60°)	426.3	6.2	B1/1000		
BH	(60°-80°)	248.2	3.6	B1/500		G1/500
BVH	(80°-90°)	55.6	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2
2.5°	2080.8	2079.5	2061.9	2050.3	2036.6	2004.8	1973.1	1949.5	1937.5	1891.5	1846.9
5°	2252.9	2247.7	2237.8	2225.4	2207.4	2167.5	2117.3	2073.9	2056.7	1975.2	1893.3
7.5°	2161.9	2170.0	2200.5	2234.8	2270.9	2273.4	2237.8	2186.3	2167.5	2058.5	1938.3
10°	1910.0	1906.6	1944.7	2011.7	2130.6	2248.1	2306.9	2281.6	2261.9	2137.4	1983.4
12.5°	1833.6	1832.7	1839.2	1856.3	1931.0	2092.4	2289.3	2344.3	2337.4	2221.1	2031.4
15°	1856.8	1857.6	1857.2	1859.4	1880.0	1956.8	2191.1	2365.3	2386.7	2303.9	2080.3
17.5°	1931.0	1928.0	1918.6	1908.3	1911.3	1938.7	2085.1	2329.2	2393.6	2377.7	2121.5
20°	2045.6	2045.6	2020.3	1991.5	1972.6	1978.6	2040.9	2267.4	2361.8	2440.4	2152.4
22.5°	2189.3	2191.5	2154.2	2101.8	2058.9	2042.6	2066.2	2221.5	2323.2	2498.3	2179.9
25°	2367.9	2367.4	2312.9	2237.8	2170.0	2131.0	2130.6	2223.7	2311.2	2566.1	2208.7
27.5°	2588.8	2568.7	2505.2	2398.3	2302.6	2243.0	2215.9	2277.7	2336.5	2649.4	2247.3
30°	2838.2	2817.6	2734.3	2597.0	2467.4	2380.3	2335.7	2371.3	2413.8	2755.3	2305.6
32.5°	3084.9	3089.6	2991.8	2836.9	2670.4	2547.7	2481.6	2503.5	2533.1	2884.9	2384.6
35°	3446.2	3445.8	3317.9	3124.4	2926.6	2756.6	2673.0	2684.5	2711.6	3067.7	2495.3
37.5°	3715.7	3711.4	3629.0	3457.8	3235.1	3031.3	2910.3	2912.0	2935.1	3297.3	2641.2
40°	3743.2	3742.3	3741.9	3717.4	3565.1	3372.8	3221.4	3190.0	3199.5	3541.1	2796.1
42.5°	3533.3	3564.7	3654.8	3792.9	3835.4	3734.6	3591.3	3521.3	3500.7	3820.8	2960.0
45°	3234.2	3250.1	3408.0	3718.7	3971.5	4074.4	3966.7	3819.1	3783.9	4092.9	3093.5
47.5°	3095.2	3088.3	3179.7	3518.3	3958.2	4344.8	4352.5	4110.5	4050.8	4327.6	3207.2
50°	2797.0	2788.0	2903.4	3223.5	3813.1	4479.1	4748.6	4428.0	4317.7	4550.8	3310.2
52.5°	2202.6	2194.1	2349.0	2761.4	3488.7	4428.9	5082.4	4817.7	4629.7	4765.7	3406.3
55°	1433.2	1434.1	1581.7	2007.0	2823.1	4136.2	5239.1	5267.8	5057.1	4980.7	3484.0
57.5°	789.1	781.8	887.0	1148.3	1942.2	3471.5	5108.6	5592.2	5482.4	5165.3	3540.2
58°	701.6	693.0	774.1	999.4	1741.3	3284.0	5043.0	5612.8	5536.9	5195.7	3548.3
60°	499.9	485.3	472.9	563.4	1003.3	2367.9	4605.3	5479.4	5552.7	5256.7	3540.6
62.5°	421.4	404.7	360.0	356.6	472.5	1158.2	3641.9	4812.1	5017.6	5116.3	3416.2
65°	391.4	374.6	315.8	294.8	320.5	499.9	2252.0	3715.7	3990.3	4628.4	3102.9
67.5°	369.9	350.2	287.1	259.6	264.8	299.1	955.6	2430.1	2748.5	3609.3	2489.3
70°	350.6	328.7	264.3	232.6	228.3	227.4	373.3	1268.9	1575.7	2361.8	1667.5
72.5°	328.7	307.2	244.2	210.3	200.8	184.5	224.4	524.4	718.8	1157.8	764.3
75°	296.9	279.4	221.9	191.8	175.5	149.8	165.6	251.5	309.8	443.3	354.9
77.5°	261.3	247.2	199.1	176.4	154.5	122.3	126.6	170.4	191.4	249.7	205.5
80°	184.9	190.1	173.8	155.3	136.0	98.7	97.4	124.9	137.3	167.8	138.2
82.5°	127.4	131.3	141.6	122.7	109.9	76.8	71.7	86.7	93.1	101.3	66.9
85°	91.0	88.4	98.3	88.0	80.7	48.9	45.9	54.9	58.8	61.8	32.2
87.5°	55.4	54.9	56.6	45.5	42.1	24.9	22.7	26.2	27.9	27.0	15.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2	1833.2
2.5°	1830.2	1809.1	1763.2	1726.3	1686.4	1656.0	1625.5	1608.3	1589.4	1578.7	1577.4
5°	1850.3	1807.4	1709.6	1618.6	1525.1	1441.0	1358.6	1297.6	1247.9	1219.5	1217.8
7.5°	1872.7	1805.3	1654.2	1496.8	1330.3	1164.6	1018.3	914.9	848.4	817.5	815.3
10°	1889.8	1796.3	1586.9	1341.8	1077.9	859.1	726.1	665.1	645.0	639.8	639.0
12.5°	1910.4	1789.8	1501.9	1143.2	823.9	654.0	613.6	609.8	614.1	616.6	617.1
15°	1929.7	1777.4	1387.3	923.0	645.0	584.5	585.3	593.5	602.0	605.9	606.3
17.5°	1938.7	1746.9	1236.7	727.3	564.3	553.1	563.0	573.7	581.5	584.5	584.5
20°	1938.7	1698.0	1062.1	589.2	522.2	524.4	536.4	544.5	546.3	543.7	542.4
22.5°	1930.6	1637.5	892.1	514.1	487.9	496.1	505.5	499.9	479.7	464.3	461.3
25°	1923.3	1565.8	728.6	468.2	457.9	468.6	464.7	426.5	395.6	379.8	377.2
27.5°	1911.3	1479.2	592.2	430.4	428.7	437.3	399.1	362.2	346.7	338.1	336.4
30°	1908.3	1385.2	495.6	396.9	399.9	387.9	344.1	332.1	328.7	324.0	321.8
32.5°	1918.1	1291.2	435.1	369.5	372.5	333.0	316.3	318.0	317.5	311.5	309.4
35°	1945.2	1199.8	396.5	344.6	336.0	298.2	300.4	305.5	305.5	298.2	295.7
37.5°	1992.4	1114.8	372.0	323.6	293.9	280.2	285.8	292.7	292.7	287.5	285.4
40°	2042.6	1032.0	353.6	306.8	267.3	267.8	273.3	278.5	280.6	281.5	279.8
42.5°	2088.1	946.2	333.9	288.8	255.3	258.3	260.9	264.8	273.8	279.8	278.9
45°	2114.7	859.9	312.4	266.5	247.2	248.5	247.6	254.5	265.2	274.2	274.2
47.5°	2139.1	789.1	294.8	244.2	239.0	239.0	236.4	243.3	253.2	263.9	264.8
50°	2162.3	743.2	282.4	227.0	228.7	227.4	226.6	233.0	246.3	259.2	261.3
52.5°	2185.9	727.8	271.2	214.6	218.0	216.3	217.1	226.1	241.2	254.5	256.6
55°	2219.0	737.6	259.6	206.0	207.7	207.3	210.7	221.0	234.3	247.6	248.5
57.5°	2259.7	773.7	249.7	199.5	197.8	200.4	206.0	215.8	228.7	244.6	245.9
58°	2267.9	782.3	248.0	197.8	195.7	199.5	205.1	214.6	227.9	244.6	245.9
60°	2280.3	812.7	243.7	194.4	188.4	195.2	202.1	211.6	226.1	246.7	249.3
62.5°	2220.2	818.8	242.4	190.5	180.7	189.2	197.4	208.1	224.4	254.0	259.6
65°	2012.1	757.0	233.4	184.1	174.2	184.5	193.1	205.5	229.6	275.9	278.5
67.5°	1615.2	628.7	211.6	174.2	166.9	178.9	189.7	205.5	231.7	279.4	281.1
70°	1110.5	472.5	184.1	163.5	158.3	172.1	188.4	210.3	224.4	264.3	259.2
72.5°	580.2	328.7	161.3	151.0	148.0	166.1	200.8	205.5	215.8	246.7	241.6
75°	292.2	223.6	142.0	136.9	136.5	163.9	224.9	197.8	206.8	232.2	243.3
77.5°	172.5	175.1	126.6	123.6	125.7	160.1	225.3	190.1	196.5	213.7	225.7
80°	118.0	144.6	114.6	113.7	115.4	147.2	207.7	180.7	184.5	202.1	215.0
82.5°	66.5	79.8	100.4	106.0	105.1	120.6	179.4	164.4	169.1	239.0	252.7
85°	32.2	48.1	84.1	99.1	89.7	80.2	145.9	145.9	147.2	171.2	173.4
87.5°	12.0	21.5	56.6	78.5	62.7	48.1	99.1	103.4	115.0	118.4	121.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)