

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: P196987

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-8030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196987
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-8030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5603 lumens
Efficiency: N/A
Efficacy: 83.6 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

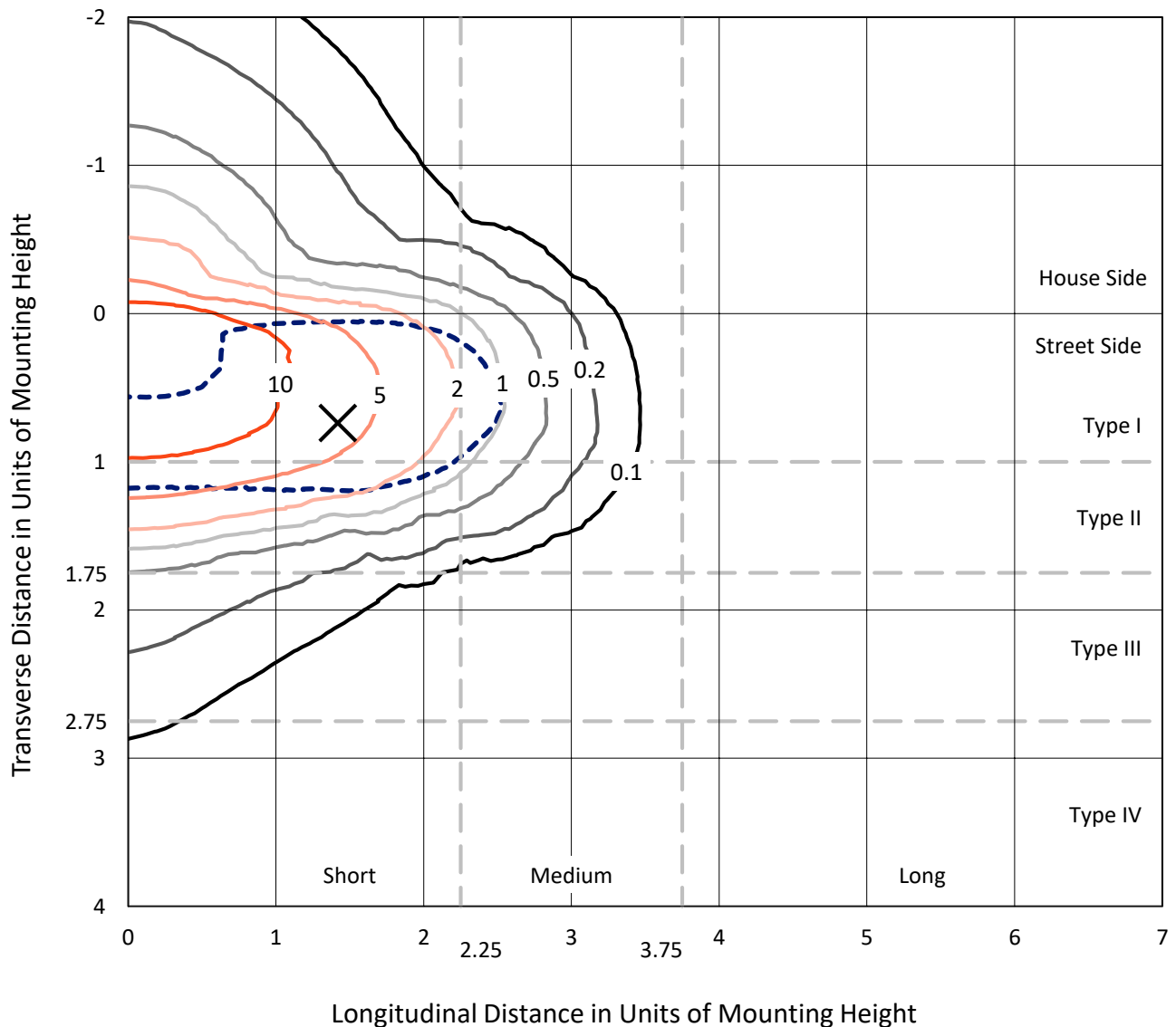
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

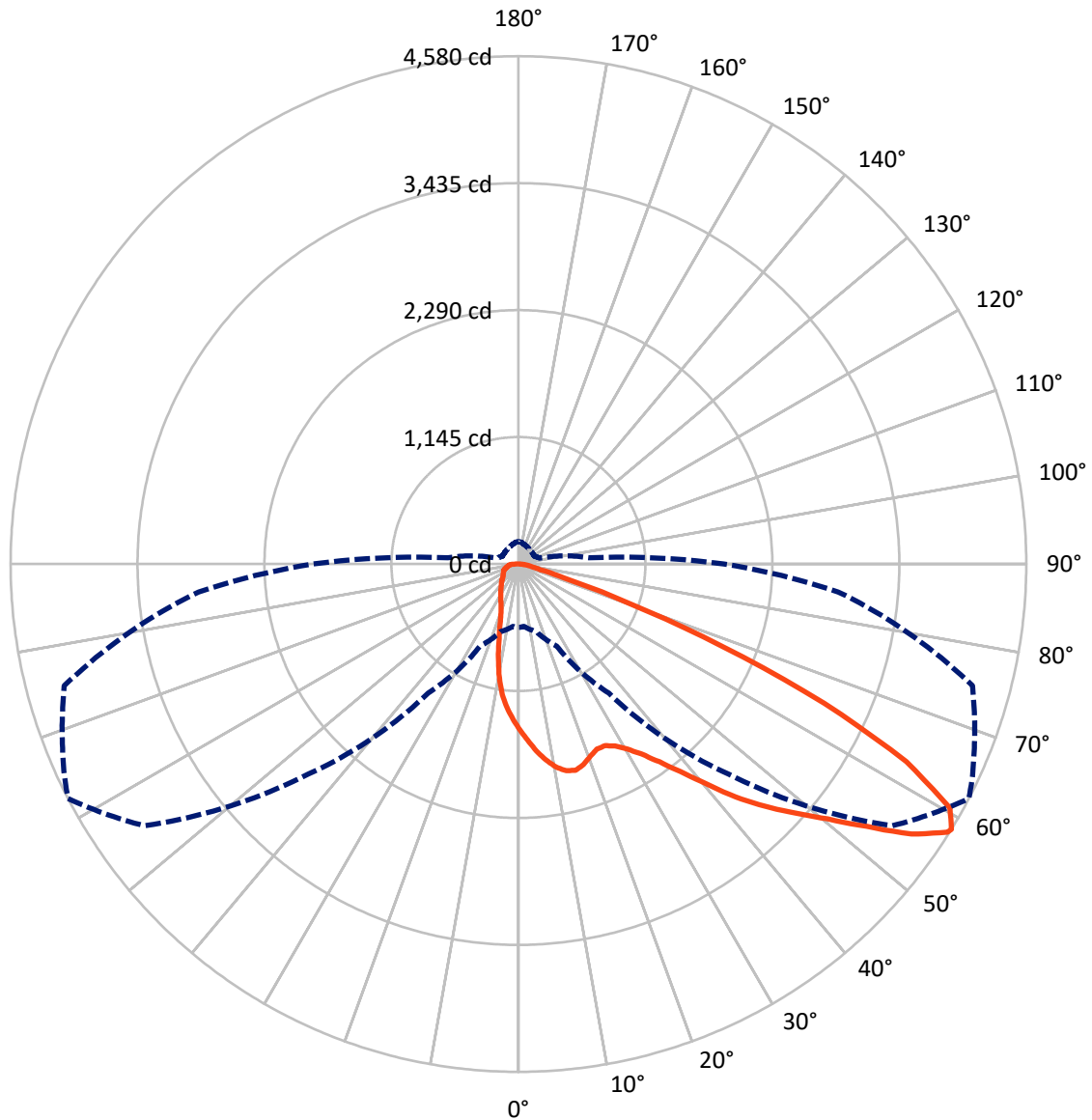
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.5 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	860.3	0.0	860.3
	% Fixture	15.4	0.0	15.4
Street Side	Lumens	4742.7	0.0	4742.7
	% Fixture	84.6	0.0	84.6
Total	Lumens	5603.0	0.0	5603.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.7	2.4
10°-20°	337.5	6.0
20°-30°	546.9	9.8
30°-40°	873.2	15.6
40°-50°	1270.1	22.7
50°-60°	1329.0	23.7
60°-70°	810.2	14.5
70°-80°	226.6	4.0
80°-90°	75.9	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°	5603.0	100.0
0°-180°	5603.0	100.0

Coefficient of Utilization



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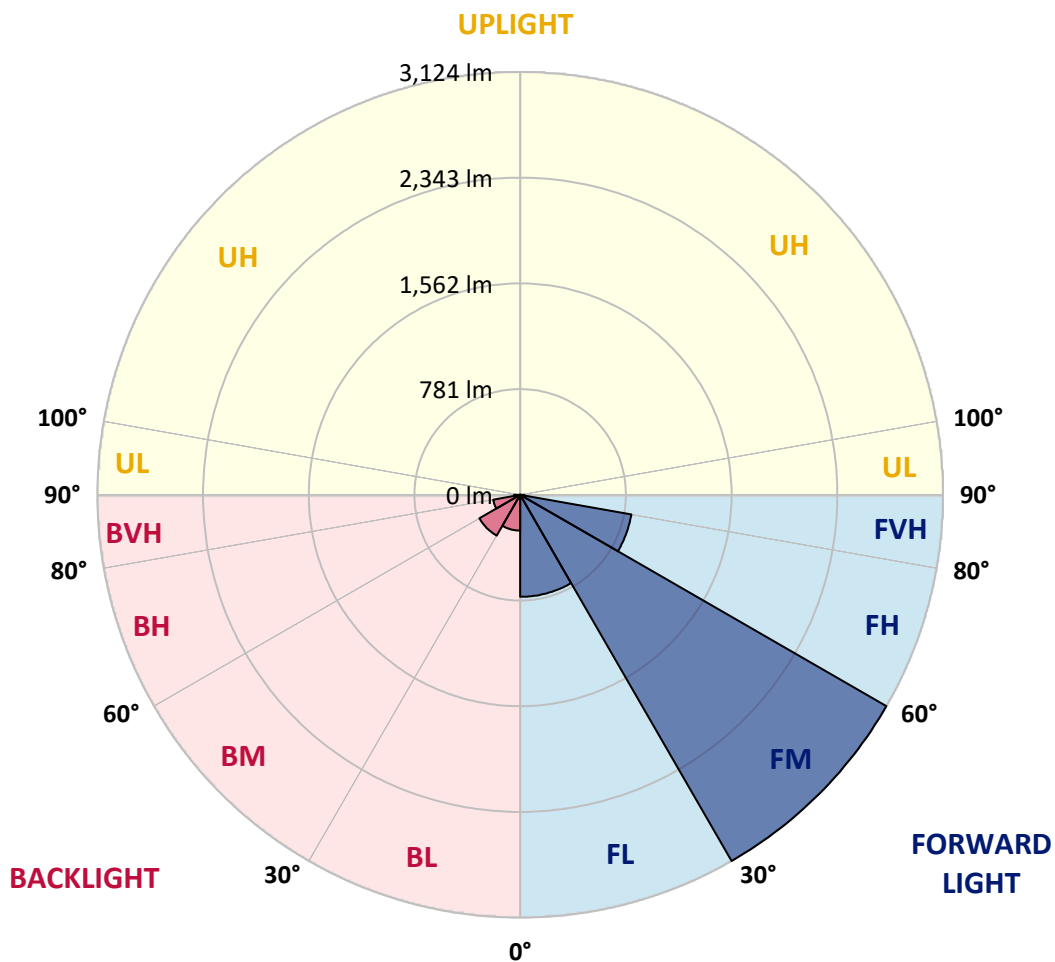
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	753.6	13.5			
FM	(30°-60°)	3124.3	55.8			
FH	(60°-80°)	834.3	14.9			G1/1800
FVH	(80°-90°)	30.6	0.5			G1/100
BL	(0°-30°)	264.4	4.7	B1/500		
BM	(30°-60°)	347.9	6.2	B1/1000		
BH	(60°-80°)	202.5	3.6	B1/500		G1/500
BVH	(80°-90°)	45.4	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°	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0
2.5°	1698.0	1697.0	1682.6	1673.2	1661.9	1636.0	1610.1	1590.9	1581.1	1543.6	1507.2
5°	1838.4	1834.2	1826.2	1816.0	1801.3	1768.8	1727.8	1692.4	1678.4	1611.9	1545.0
7.5°	1764.2	1770.9	1795.7	1823.7	1853.1	1855.2	1826.2	1784.2	1768.8	1679.8	1581.8
10°	1558.6	1555.8	1587.0	1641.6	1738.6	1834.6	1882.6	1861.9	1845.8	1744.2	1618.5
12.5°	1496.3	1495.6	1500.9	1514.9	1575.8	1707.5	1868.2	1913.0	1907.4	1812.5	1657.7
15°	1515.2	1515.9	1515.6	1517.3	1534.1	1596.8	1788.0	1930.2	1947.7	1880.1	1697.7
17.5°	1575.8	1573.4	1565.6	1557.2	1559.7	1582.1	1701.5	1900.8	1953.3	1940.3	1731.3
20°	1669.3	1669.3	1648.6	1625.2	1609.8	1614.7	1665.5	1850.3	1927.4	1991.5	1756.5
22.5°	1786.6	1788.4	1757.9	1715.2	1680.2	1666.9	1686.1	1812.9	1895.9	2038.7	1778.9
25°	1932.3	1931.9	1887.5	1826.2	1770.9	1739.0	1738.6	1814.6	1886.1	2094.1	1802.4
27.5°	2112.6	2096.2	2044.3	1957.1	1879.1	1830.4	1808.3	1858.7	1906.7	2162.0	1833.9
30°	2316.1	2299.3	2231.3	2119.3	2013.5	1942.4	1906.0	1935.1	1969.8	2248.5	1881.5
32.5°	2517.4	2521.3	2441.4	2315.0	2179.2	2079.0	2025.1	2042.9	2067.1	2354.3	1945.9
35°	2812.3	2811.9	2707.6	2549.7	2388.2	2249.5	2181.3	2190.7	2212.8	2503.4	2036.3
37.5°	3032.2	3028.7	2961.5	2821.7	2640.0	2473.7	2374.9	2376.3	2395.2	2690.8	2155.4
40°	3054.6	3053.9	3053.6	3033.6	2909.3	2752.4	2628.8	2603.2	2610.9	2889.7	2281.8
42.5°	2883.4	2908.9	2982.5	3095.2	3129.9	3047.6	2930.6	2873.6	2856.8	3118.0	2415.5
45°	2639.3	2652.3	2781.1	3034.7	3240.9	3324.9	3237.1	3116.6	3087.9	3340.0	2524.4
47.5°	2525.8	2520.2	2594.8	2871.1	3230.1	3545.6	3551.9	3354.4	3305.7	3531.6	2617.2
50°	2282.5	2275.1	2369.3	2630.5	3111.7	3655.2	3875.1	3613.5	3523.5	3713.6	2701.3
52.5°	1797.5	1790.5	1916.9	2253.4	2847.0	3614.2	4147.5	3931.5	3778.1	3889.1	2779.7
55°	1169.6	1170.3	1290.8	1637.8	2303.8	3375.4	4275.3	4298.8	4126.9	4064.5	2843.1
57.5°	644.0	638.0	723.8	937.1	1584.9	2832.9	4168.9	4563.5	4473.9	4215.1	2889.0
58°	572.5	565.5	631.7	815.6	1421.0	2679.9	4115.3	4580.3	4518.4	4240.0	2895.6
60°	408.0	396.1	385.9	459.8	818.7	1932.3	3758.1	4471.4	4531.3	4289.7	2889.3
62.5°	343.9	330.2	293.8	291.0	385.5	945.1	2972.0	3926.9	4094.6	4175.2	2787.8
65°	319.4	305.7	257.7	240.6	261.6	408.0	1837.7	3032.2	3256.3	3777.0	2532.1
67.5°	301.9	285.7	234.3	211.9	216.1	244.1	779.8	1983.1	2242.9	2945.4	2031.4
70°	286.1	268.2	215.7	189.8	186.3	185.6	304.7	1035.5	1285.9	1927.4	1360.8
72.5°	268.2	250.7	199.3	171.6	163.9	150.6	183.1	427.9	586.5	944.8	623.7
75°	242.3	228.0	181.0	156.5	143.2	122.2	135.2	205.2	252.8	361.7	289.6
77.5°	213.3	201.7	162.5	143.9	126.1	99.8	103.3	139.0	156.2	203.8	167.7
80°	150.9	155.1	141.8	126.8	111.0	80.5	79.5	101.9	112.1	136.9	112.8
82.5°	104.0	107.2	115.6	100.2	89.6	62.7	58.5	70.7	76.0	82.6	54.6
85°	74.2	72.1	80.2	71.8	65.8	39.9	37.5	44.8	48.0	50.4	26.3
87.5°	45.2	44.8	46.2	37.1	34.3	20.3	18.6	21.4	22.8	22.1	12.6
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°	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0	1496.0
2.5°	1493.5	1476.4	1438.9	1408.8	1376.2	1351.3	1326.5	1312.5	1297.1	1288.3	1287.3
5°	1510.0	1475.0	1395.1	1320.9	1244.5	1175.9	1108.7	1058.9	1018.3	995.2	993.8
7.5°	1528.2	1473.2	1349.9	1221.4	1085.6	950.4	831.0	746.6	692.3	667.1	665.3
10°	1542.2	1465.8	1295.0	1095.0	879.6	701.1	592.5	542.8	526.3	522.1	521.4
12.5°	1559.0	1460.6	1225.6	932.9	672.3	533.7	500.8	497.6	501.1	503.2	503.6
15°	1574.8	1450.4	1132.1	753.2	526.3	476.9	477.6	484.3	491.3	494.5	494.8
17.5°	1582.1	1425.6	1009.2	593.6	460.5	451.4	459.4	468.2	474.5	476.9	476.9
20°	1582.1	1385.7	866.7	480.8	426.2	427.9	437.7	444.4	445.8	443.7	442.6
22.5°	1575.5	1336.3	728.0	419.5	398.2	404.8	412.5	408.0	391.5	378.9	376.4
25°	1569.5	1277.8	594.6	382.0	373.6	382.4	379.2	348.1	322.9	309.9	307.8
27.5°	1559.7	1207.1	483.2	351.2	349.8	356.8	325.7	295.6	282.9	275.9	274.5
30°	1557.2	1130.4	404.5	323.9	326.4	316.6	280.8	271.0	268.2	264.4	262.6
32.5°	1565.3	1053.7	355.1	301.5	304.0	271.7	258.1	259.5	259.1	254.2	252.5
35°	1587.4	979.1	323.6	281.2	274.2	243.4	245.1	249.3	249.3	243.4	241.3
37.5°	1625.9	909.8	303.6	264.0	239.9	228.7	233.2	238.8	238.8	234.6	232.9
40°	1666.9	842.2	288.5	250.4	218.2	218.5	223.1	227.3	229.0	229.7	228.3
42.5°	1704.0	772.1	272.4	235.7	208.4	210.8	212.9	216.1	223.4	228.3	227.6
45°	1725.7	701.8	254.9	217.5	201.7	202.8	202.1	207.7	216.4	223.8	223.8
47.5°	1745.6	644.0	240.6	199.3	195.0	195.0	192.9	198.6	206.6	215.4	216.1
50°	1764.6	606.5	230.4	185.2	186.6	185.6	184.9	190.1	201.0	211.5	213.3
52.5°	1783.8	593.9	221.3	175.1	177.9	176.5	177.2	184.5	196.8	207.7	209.4
55°	1810.8	602.0	211.9	168.1	169.5	169.1	171.9	180.3	191.2	202.1	202.8
57.5°	1844.0	631.4	203.8	162.8	161.4	163.5	168.1	176.1	186.6	199.6	200.7
58°	1850.7	638.4	202.4	161.4	159.7	162.8	167.4	175.1	185.9	199.6	200.7
60°	1860.9	663.2	198.9	158.6	153.7	159.3	164.9	172.6	184.5	201.4	203.5
62.5°	1811.8	668.1	197.9	155.5	147.4	154.4	161.1	169.8	183.1	207.3	211.9
65°	1642.0	617.7	190.5	150.2	142.2	150.6	157.6	167.7	187.3	225.2	227.3
67.5°	1318.1	513.0	172.6	142.2	136.2	146.0	154.8	167.7	189.1	228.0	229.4
70°	906.3	385.5	150.2	133.4	129.2	140.4	153.7	171.6	183.1	215.7	211.5
72.5°	473.4	268.2	131.7	123.3	120.8	135.5	163.9	167.7	176.1	201.4	197.2
75°	238.5	182.4	115.9	111.7	111.4	133.8	183.5	161.4	168.8	189.4	198.6
77.5°	140.8	142.9	103.3	100.9	102.6	130.6	183.8	155.1	160.4	174.4	184.2
80°	96.3	118.0	93.5	92.8	94.2	120.1	169.5	147.4	150.6	164.9	175.4
82.5°	54.3	65.1	81.9	86.5	85.8	98.4	146.4	134.1	138.0	195.0	206.3
85°	26.3	39.2	68.6	80.9	73.2	65.5	119.1	119.1	120.1	139.7	141.5
87.5°	9.8	17.5	46.2	64.1	51.1	39.2	80.9	84.4	93.8	96.6	98.8
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)