

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: P196731

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196731  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-T2-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11298.5 lumens  
Efficiency: N/A  
Efficacy: 117.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Medium - Full Cutoff  
BUG Rating: B2 - U0 - G2

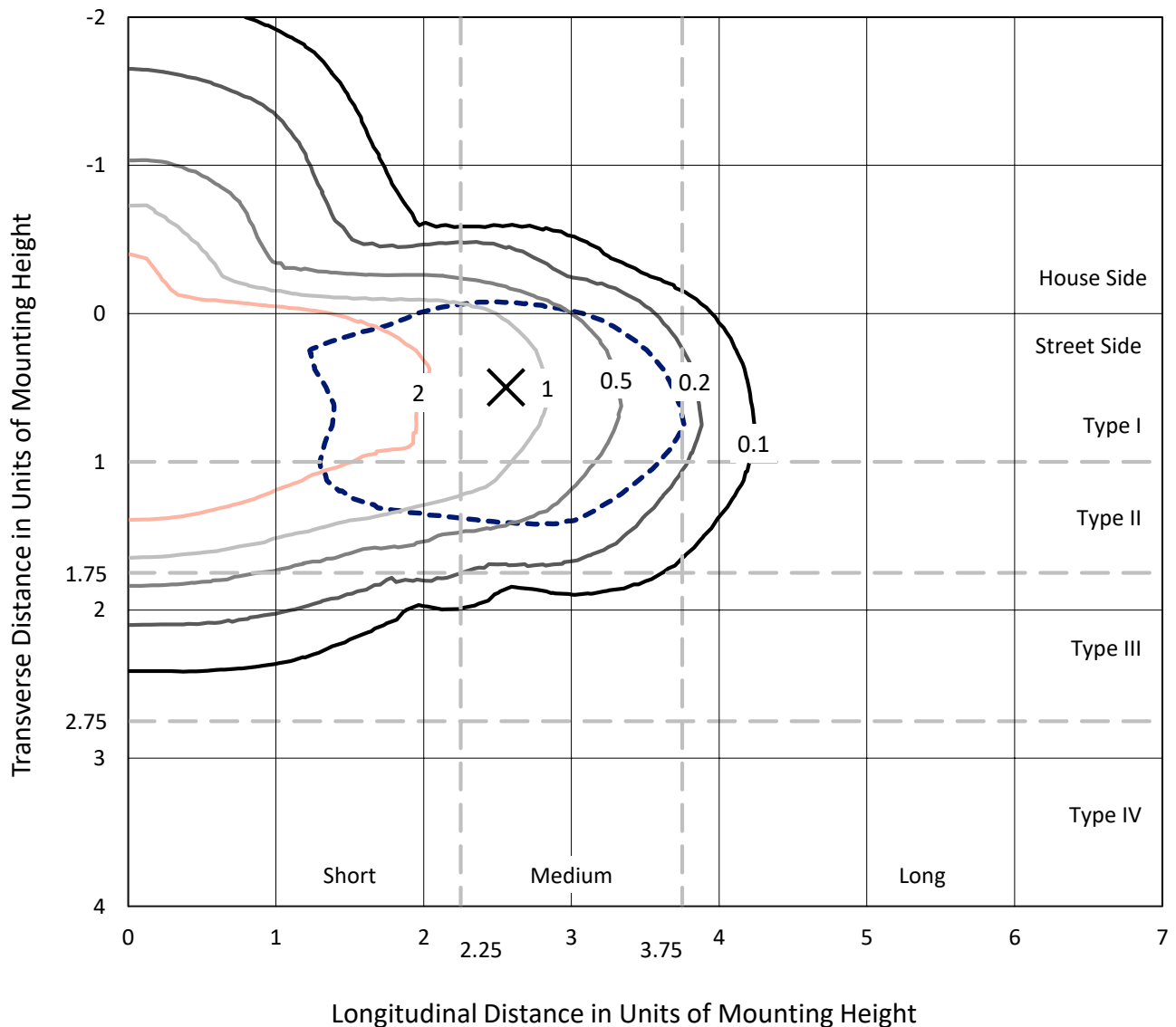
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

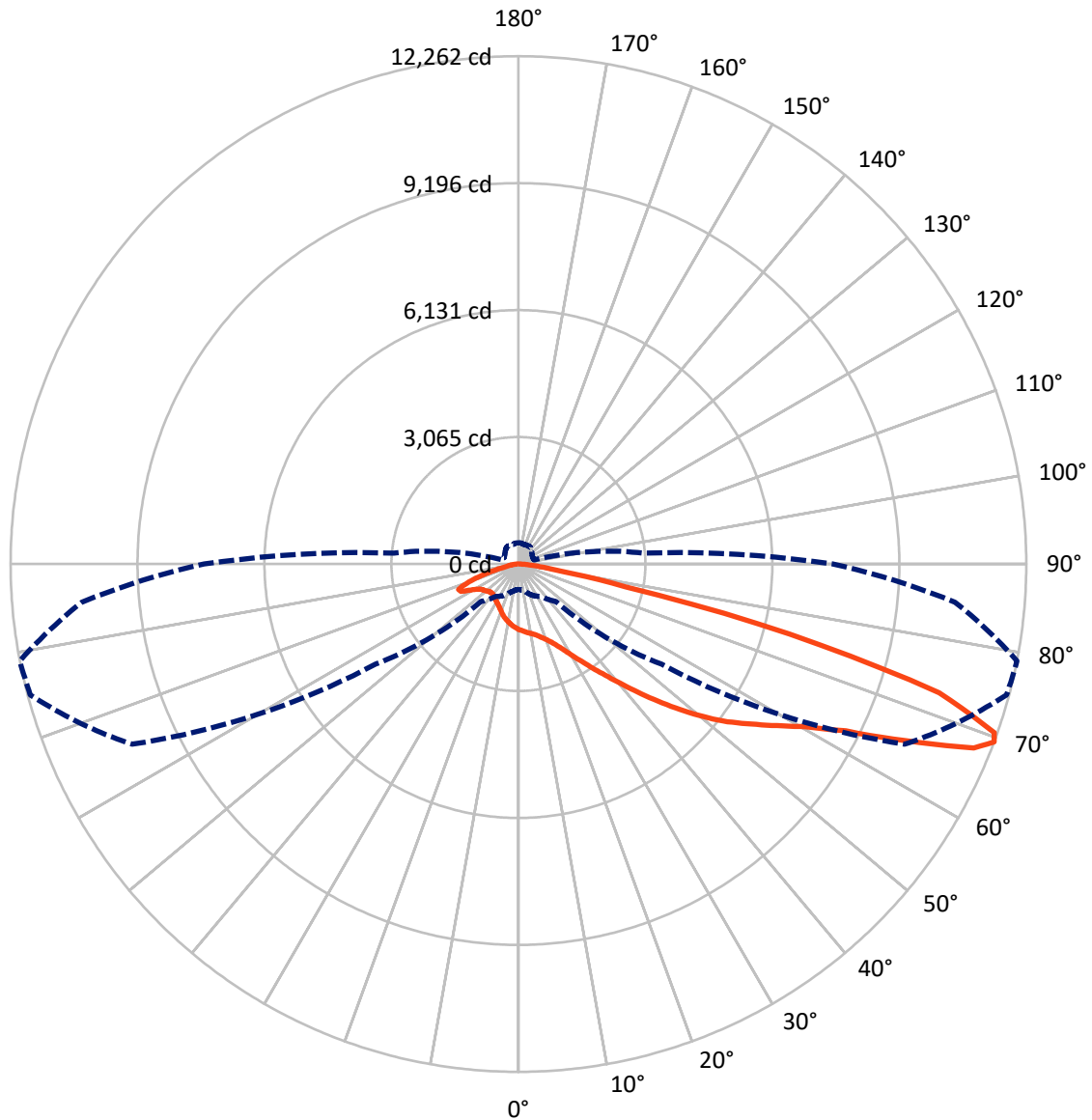
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.8 fc  
 Type II - Medium - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2125.4	0.0	2125.4
	% Fixture	18.8	0.0	18.8
<b>Street Side</b>	Lumens	9173.1	0.0	9173.1
	% Fixture	81.2	0.0	81.2
<b>Total</b>	Lumens	11298.5	0.0	11298.5
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.0	1.3
10°-20°	421.4	3.7
20°-30°	696.3	6.2
30°-40°	1127.6	10.0
40°-50°	1801.3	15.9
50°-60°	2579.6	22.8
60°-70°	2874.1	25.4
70°-80°	1437.9	12.7
80°-90°	213.4	1.9
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°	11298.5	100.0
0°-180°	11298.5	100.0

**Coefficient of Utilization**



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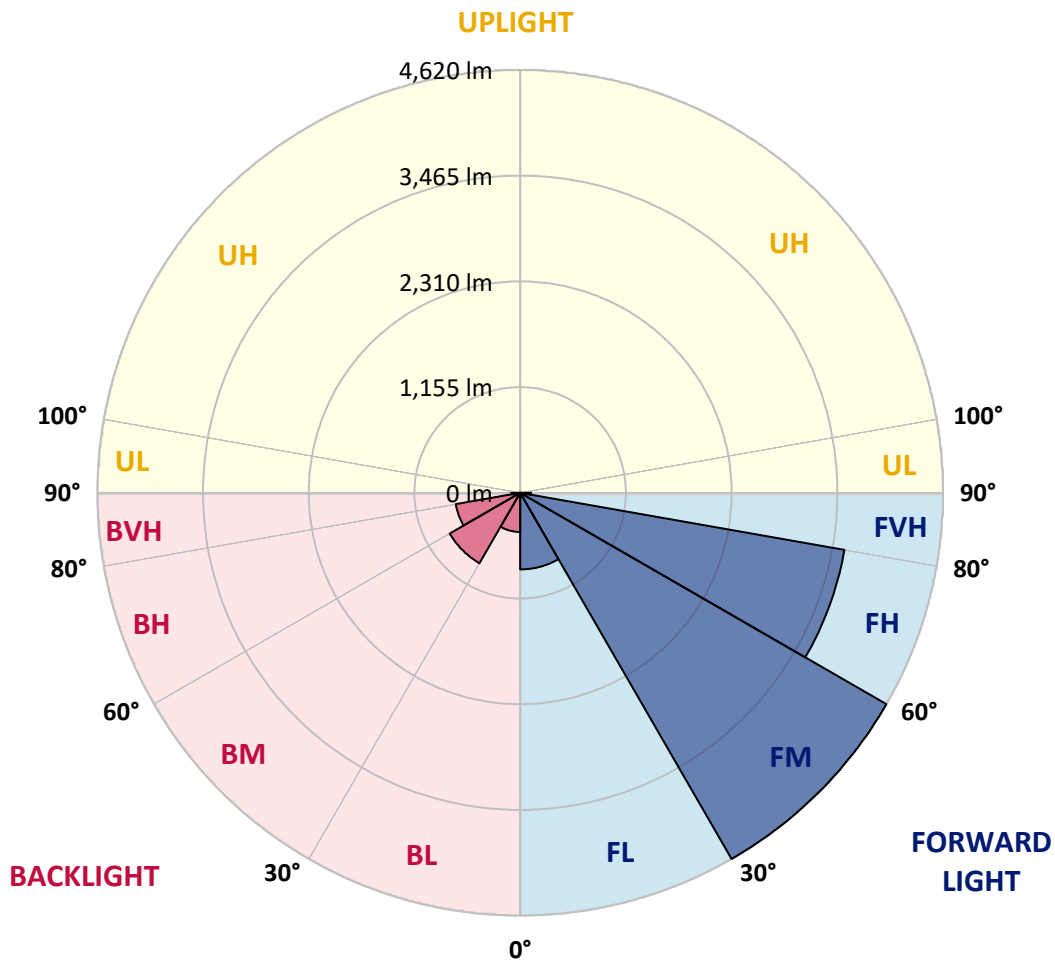
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	836.6	7.4			
FM (30°-60°)	4620.0	40.9			
FH (60°-80°)	3597.3	31.8			G2/5000
FVH (80°-90°)	119.2	1.1			G2/225
BL (0°-30°)	428.2	3.8	B1/500		
BM (30°-60°)	888.5	7.9	B1/1000		
BH (60°-80°)	714.7	6.3	B2/1000		G2/1000
BVH (80°-90°)	94.1	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6
2.5°	1740.7	1737.1	1736.3	1725.2	1719.3	1706.7	1677.2	1646.9	1618.7	1604.0	1588.5
5°	1886.4	1879.0	1875.3	1856.9	1840.6	1812.5	1765.8	1717.9	1667.7	1641.7	1610.7
7.5°	1974.4	1975.1	1975.1	1960.3	1944.0	1910.1	1850.9	1785.1	1710.5	1676.5	1627.6
10°	1981.8	1982.5	1993.6	1997.3	2001.0	1983.2	1928.5	1845.7	1749.7	1705.3	1641.7
12.5°	1908.5	1913.7	1932.2	1958.8	1996.5	2015.8	1992.2	1910.7	1799.9	1746.0	1668.3
15°	1810.2	1815.5	1839.1	1879.7	1940.3	2004.7	2037.9	1985.5	1865.7	1802.1	1707.5
17.5°	1762.3	1768.2	1784.4	1816.9	1876.0	1962.6	2062.3	2065.2	1943.2	1870.1	1754.0
20°	1739.3	1743.7	1764.4	1791.0	1836.1	1918.9	2064.6	2149.5	2035.7	1950.8	1811.0
22.5°	1791.8	1793.3	1803.6	1818.4	1848.6	1912.2	2063.1	2236.7	2151.0	2052.0	1884.1
25°	1945.5	1935.8	1928.5	1910.1	1917.4	1962.6	2086.8	2329.9	2298.9	2184.9	1981.8
27.5°	2127.4	2125.8	2106.6	2063.8	2036.5	2065.2	2153.9	2434.1	2479.9	2354.3	2109.6
30°	2329.9	2330.6	2310.8	2258.2	2202.7	2205.7	2261.1	2554.6	2696.5	2558.3	2267.0
32.5°	2542.0	2555.3	2518.4	2465.9	2398.7	2377.2	2414.8	2700.3	2947.0	2799.2	2449.6
35°	2795.6	2797.8	2757.1	2680.2	2613.1	2578.9	2613.7	2882.0	3236.2	3082.4	2672.2
37.5°	3058.7	3060.3	3018.1	2919.7	2834.7	2812.6	2851.0	3103.1	3542.1	3404.6	2933.8
40°	3273.9	3289.4	3256.0	3163.7	3078.0	3064.6	3120.1	3367.7	3933.2	3786.1	3245.0
42.5°	3517.7	3535.5	3495.5	3399.5	3331.5	3327.1	3413.5	3669.3	4322.0	4227.3	3597.6
45°	3792.7	3817.8	3762.5	3654.5	3596.9	3694.4	3699.6	4003.4	4769.9	4721.1	3994.5
47.5°	4092.9	4113.5	4068.5	3952.4	3889.5	4030.7	3979.8	4364.8	5254.1	5250.4	4424.0
50°	4324.2	4347.1	4351.6	4300.6	4234.8	4252.5	4287.3	4744.8	5736.7	5794.4	4868.3
52.5°	4282.1	4304.3	4404.0	4537.9	4643.5	4597.7	4639.8	5148.4	6203.2	6325.1	5290.4
55°	3942.1	3953.9	4140.9	4458.8	4908.9	5127.6	5130.6	5587.4	6646.7	6817.4	5690.9
57.5°	3329.2	3330.8	3574.0	4042.6	4754.4	5471.3	5905.3	6138.8	7109.4	7361.5	6187.7
60°	2355.7	2361.6	2644.7	3257.6	4200.8	5429.9	6738.3	7125.7	7645.3	7972.7	6827.8
62.5°	1398.5	1411.8	1625.4	2117.0	3120.1	4897.8	7230.7	8881.2	8434.7	8869.4	7852.3
65°	909.9	921.0	1048.9	1295.9	1843.5	3563.6	7068.7	10581.3	9928.6	10279.7	9324.7
67.5°	700.8	709.6	810.1	959.4	1131.0	1926.4	5651.8	10937.6	11747.0	11856.4	10567.3
69°	615.7	623.1	697.1	840.4	952.0	1275.0	4211.8	10290.8	12201.6	12261.5	10582.9
70°	570.7	576.6	646.0	770.3	874.4	1017.9	3223.5	9539.9	12035.4	12188.3	10277.6
72.5°	470.2	475.3	524.8	620.1	714.8	725.2	1428.1	6966.1	10134.2	10623.5	8697.1
75°	392.5	395.4	428.0	497.4	578.7	577.3	729.6	3945.7	6184.0	6767.2	5370.1
77.5°	327.4	329.6	351.2	394.0	456.8	454.6	513.7	1703.1	2730.5	2634.5	1848.6
80°	289.0	290.5	301.5	312.7	352.6	350.4	380.7	782.1	1110.9	1026.7	699.3
82.5°	219.5	222.5	278.7	283.8	273.4	263.9	265.4	455.3	569.1	518.2	375.6
85°	124.2	124.9	178.8	209.2	237.9	178.8	172.2	235.0	280.9	246.2	164.1
87.5°	55.4	57.7	85.8	99.1	128.6	105.0	98.4	99.8	121.3	100.5	65.0
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6	1585.6
2.5°	1573.7	1561.1	1531.6	1501.2	1470.9	1451.7	1431.8	1413.3	1405.9	1405.2	1391.1
5°	1580.3	1550.8	1483.5	1409.7	1339.4	1284.7	1238.9	1209.3	1180.4	1175.3	1162.7
7.5°	1582.6	1534.5	1425.2	1306.8	1199.6	1124.3	1078.5	1058.5	1044.4	1040.8	1036.4
10°	1581.8	1513.8	1360.1	1198.2	1076.2	1019.3	1002.4	1006.8	1012.8	1015.7	1015.7
12.5°	1593.6	1504.3	1295.0	1096.2	996.5	969.0	982.4	1005.3	1023.0	1030.5	1031.9
15°	1615.1	1498.3	1223.3	1007.5	940.2	946.8	979.4	1012.8	1037.9	1048.9	1051.8
17.5°	1641.7	1490.2	1140.5	934.2	907.7	930.7	972.7	1014.9	1045.2	1059.3	1061.5
20°	1671.2	1478.4	1054.8	879.6	878.9	907.7	949.8	997.1	1029.7	1045.2	1044.4
22.5°	1711.2	1467.3	975.0	839.6	847.1	873.7	908.5	951.3	981.5	995.7	992.7
25°	1764.4	1457.0	903.2	804.2	810.9	828.6	853.0	885.5	907.0	914.4	909.1
27.5°	1836.1	1448.8	847.1	771.7	771.0	779.1	793.9	811.6	821.9	819.8	811.6
30°	1924.0	1440.7	805.7	742.9	732.5	731.8	738.5	748.8	755.4	742.1	735.6
32.5°	2022.4	1426.6	768.7	717.8	699.3	692.6	695.6	709.6	737.0	723.7	718.5
35°	2138.4	1410.3	731.8	690.4	676.4	663.8	666.1	696.3	779.1	769.5	764.3
37.5°	2278.2	1395.6	697.7	660.8	660.0	644.5	643.1	679.3	790.2	769.5	765.1
40°	2446.0	1392.6	667.5	628.4	640.1	634.2	629.0	651.1	728.9	686.7	678.6
42.5°	2648.5	1405.9	645.2	597.2	617.2	631.3	621.6	626.8	658.7	620.9	614.2
45°	2885.0	1442.1	629.0	569.9	592.8	629.0	618.0	613.5	618.7	597.9	593.6
47.5°	3160.8	1506.4	618.0	547.0	569.9	623.1	616.4	607.6	605.4	593.6	590.6
50°	3455.7	1592.9	610.5	526.3	549.2	612.7	615.7	603.2	599.5	594.3	592.8
52.5°	3748.3	1686.9	601.7	508.6	532.2	600.2	616.4	598.7	593.6	590.6	589.1
55°	4039.7	1784.4	585.4	493.0	519.6	585.4	615.7	592.8	586.9	586.9	586.9
57.5°	4417.4	1932.9	564.0	480.4	503.3	566.2	606.2	586.1	578.1	578.7	579.5
60°	4962.9	2182.0	540.3	466.4	482.0	544.0	591.3	574.3	564.8	567.7	568.4
62.5°	5874.3	2617.5	507.8	446.5	459.8	520.4	572.1	558.1	549.2	554.4	555.1
65°	7089.5	3144.5	464.9	421.3	436.8	493.8	547.7	538.8	529.3	541.8	541.1
67.5°	7830.8	3299.0	419.9	394.8	414.6	465.7	517.5	513.7	507.1	529.3	527.7
69°	7587.6	3019.5	394.0	377.7	399.2	446.5	498.2	496.7	491.5	513.0	511.6
70°	7209.9	2758.6	377.7	366.7	391.0	434.7	485.6	485.6	480.4	499.0	495.3
72.5°	5791.5	2046.1	340.1	338.6	363.0	402.1	451.7	455.3	452.4	459.0	455.3
75°	3400.2	1233.0	303.0	307.4	329.0	367.3	414.0	417.0	414.0	413.2	414.0
77.5°	1179.0	552.9	267.5	274.2	292.7	331.9	372.6	378.5	374.0	368.9	370.3
80°	461.3	321.6	229.1	238.7	254.2	291.9	331.2	334.9	328.3	327.4	321.6
82.5°	277.2	195.9	178.1	193.7	212.8	253.6	286.0	284.6	279.3	309.8	271.3
85°	120.5	108.7	130.1	145.7	155.2	190.0	241.7	235.0	222.5	195.9	191.4
87.5°	48.8	56.2	71.7	86.6	93.1	122.7	165.5	159.6	161.9	133.1	132.3
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)