

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: P195656

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7050-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195656  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-02-D-UNV-SL3-7050-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(2) 70 CRI, 5000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9829 lumens  
Efficiency: N/A  
Efficacy: 115.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

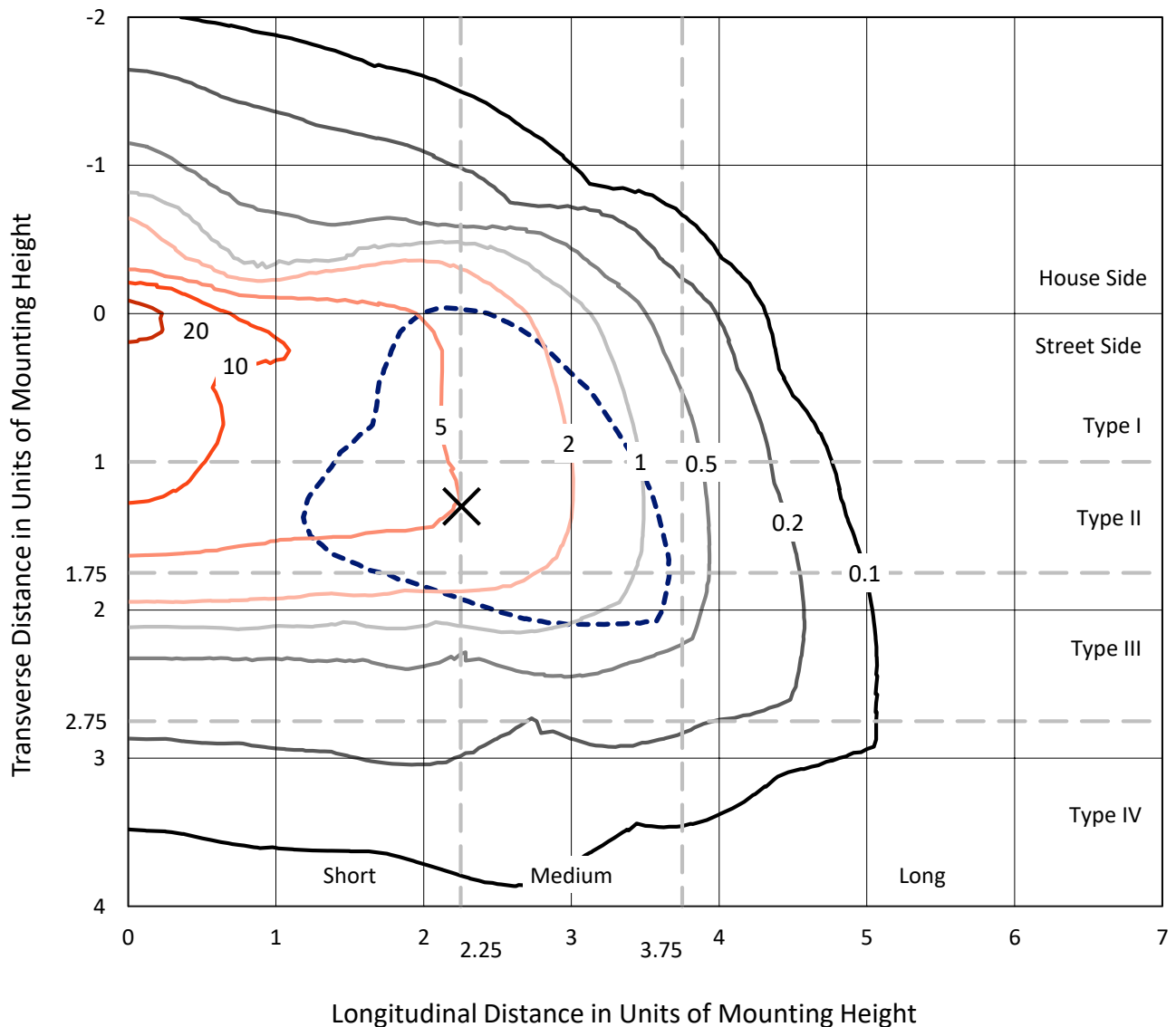
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

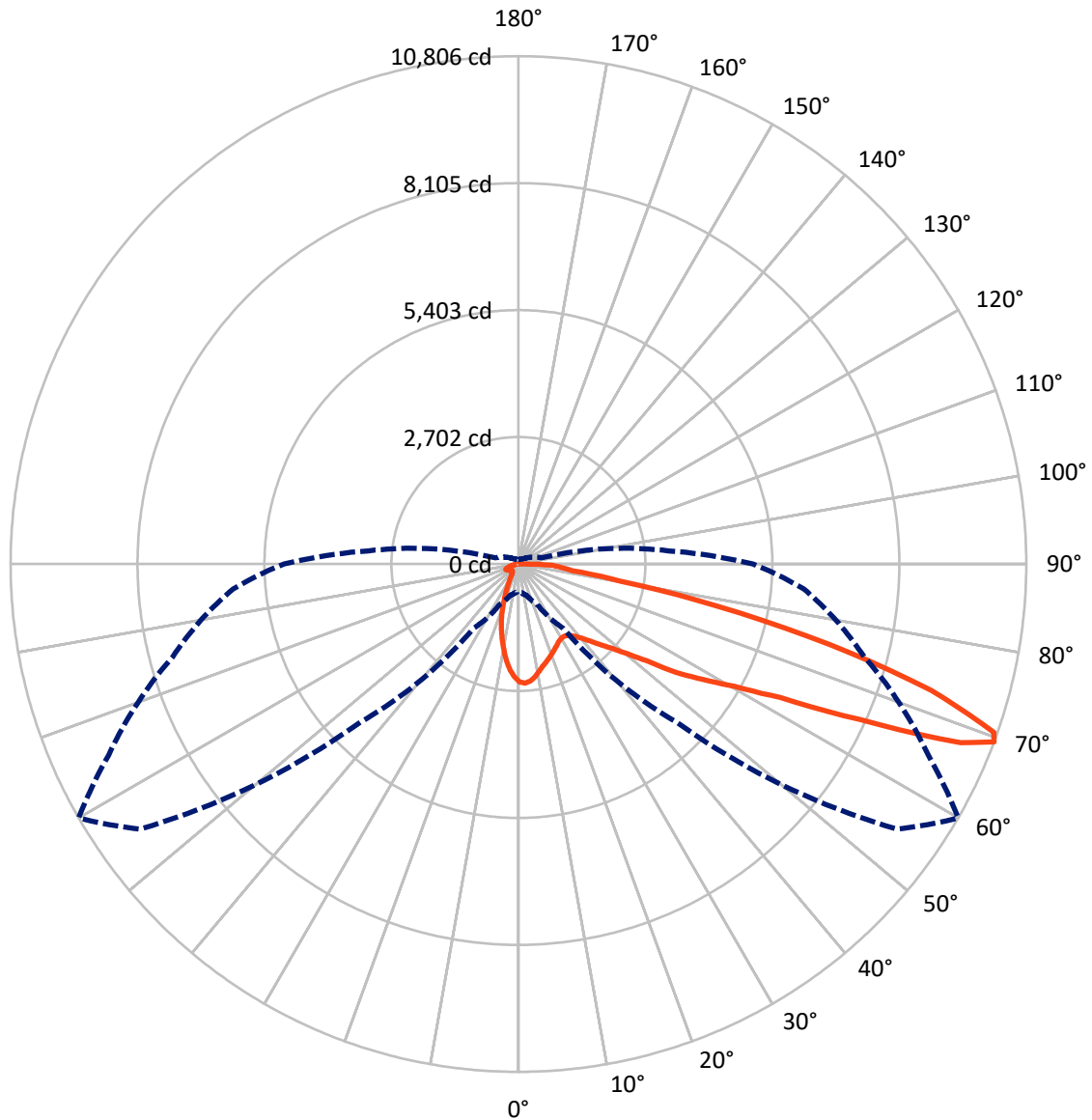
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 25.1 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1401.9	0.0	1401.9
	% Fixture	14.3	0.0	14.3
<b>Street Side</b>	Lumens	8427.1	0.0	8427.1
	% Fixture	85.7	0.0	85.7
<b>Total</b>	Lumens	9829.0	0.0	9829.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.8	2.2
10°-20°	455.5	4.6
20°-30°	581.1	5.9
30°-40°	799.7	8.1
40°-50°	1295.3	13.2
50°-60°	2032.9	20.7
60°-70°	2710.3	27.6
70°-80°	1507.5	15.3
80°-90°	233.8	2.4
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°	9829.0	100.0
0°-180°	9829.0	100.0



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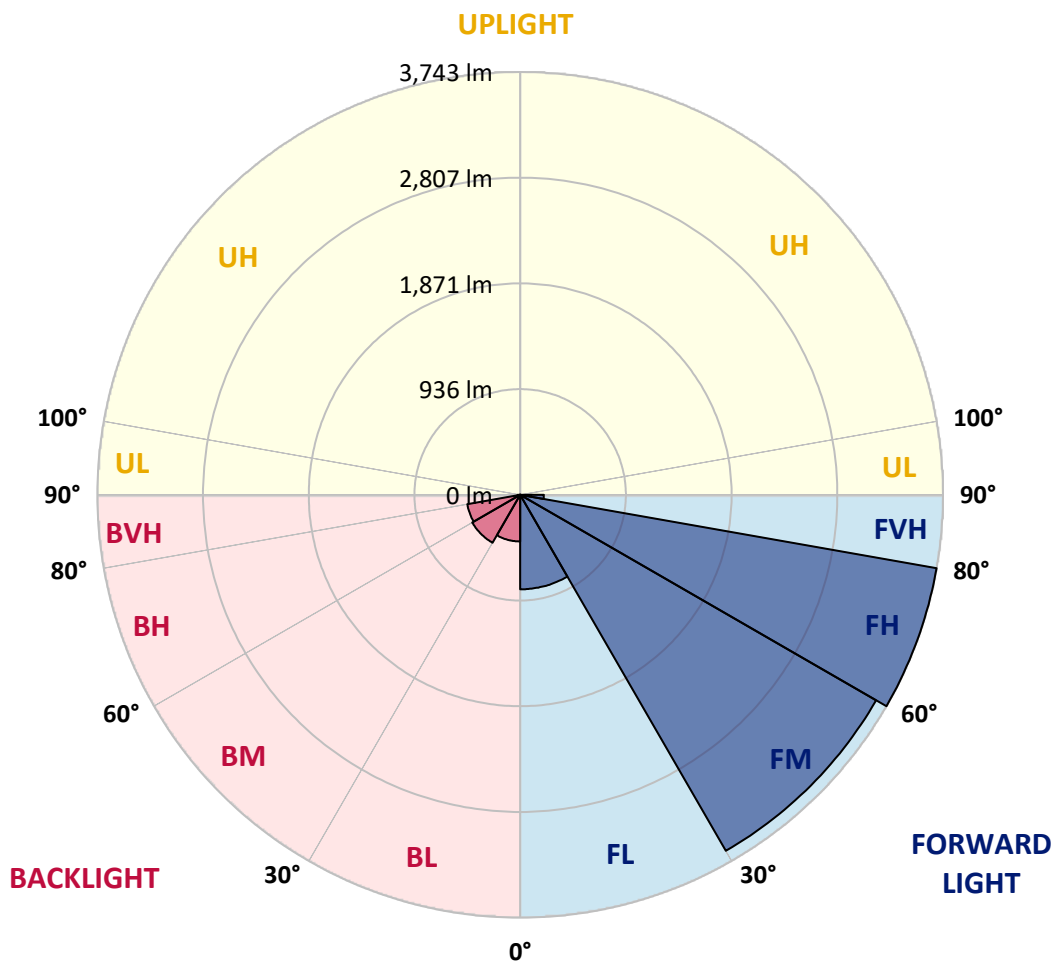
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	836.3	8.5			
FM	(30°-60°)	3638.2	37.0			
FH	(60°-80°)	3742.5	38.1			G2/5000
FVH	(80°-90°)	210.1	2.1			G2/225
BL	(0°-30°)	413.2	4.2	B1/500		
BM	(30°-60°)	489.8	5.0	B1/1000		
BH	(60°-80°)	475.3	4.8	B1/500		G1/500
BVH	(80°-90°)	23.7	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9
2.5°	2574.7	2581.6	2581.6	2576.0	2572.8	2554.5	2543.8	2536.3	2523.0	2498.4	2476.4
5°	2482.7	2495.9	2501.6	2504.1	2520.5	2514.8	2515.5	2510.4	2499.1	2472.6	2436.7
7.5°	2313.8	2316.3	2326.4	2343.4	2383.1	2410.8	2433.5	2437.9	2435.4	2415.9	2365.5
10°	2147.4	2151.8	2163.8	2192.8	2230.6	2270.3	2319.4	2339.6	2354.7	2348.4	2284.8
12.5°	2009.3	2010.0	2023.2	2056.6	2098.8	2148.6	2215.4	2247.0	2282.9	2297.4	2226.2
15°	1876.4	1885.2	1897.8	1938.1	1990.4	2053.5	2130.4	2173.8	2221.1	2262.7	2180.8
17.5°	1775.5	1782.4	1790.0	1823.4	1883.9	1962.7	2057.9	2104.5	2166.9	2230.6	2134.1
20°	1720.0	1722.6	1716.9	1733.3	1784.3	1869.4	1979.7	2035.8	2110.2	2199.7	2086.2
22.5°	1708.7	1708.7	1687.9	1684.7	1707.4	1779.3	1899.0	1967.7	2058.5	2178.3	2043.4
25°	1761.6	1757.9	1718.8	1682.9	1674.7	1711.2	1822.2	1906.6	2014.4	2177.6	2011.2
27.5°	1861.9	1856.8	1808.3	1747.8	1695.5	1679.7	1762.9	1849.3	1979.7	2199.1	1994.8
30°	1986.7	1984.8	1935.6	1860.0	1773.6	1692.3	1739.6	1819.6	1956.4	2238.8	1994.2
32.5°	2123.4	2114.6	2084.3	2008.7	1896.5	1762.3	1753.5	1820.9	1950.1	2296.8	2008.7
35°	2269.0	2262.7	2255.2	2178.9	2052.8	1885.8	1814.6	1864.4	1981.0	2377.4	2049.7
37.5°	2454.3	2447.4	2460.0	2376.8	2238.8	2047.8	1918.0	1951.4	2044.0	2494.7	2125.9
40°	2784.0	2763.8	2728.5	2600.6	2455.6	2246.3	2067.3	2072.4	2151.8	2651.6	2248.2
42.5°	3325.4	3260.5	3085.9	2850.8	2684.4	2477.0	2262.1	2238.1	2300.5	2859.0	2426.0
45°	3868.1	3794.9	3500.0	3123.7	2921.4	2724.7	2502.9	2445.5	2485.8	3100.4	2654.8
47.5°	4218.5	4182.6	3849.8	3396.6	3169.7	2994.5	2778.3	2683.7	2712.7	3373.9	2937.1
50°	4321.2	4290.3	4028.8	3610.3	3404.2	3320.3	3119.3	2993.8	2998.9	3693.5	3275.6
52.5°	4244.3	4231.7	4058.4	3742.6	3619.7	3663.8	3591.4	3416.8	3375.2	4043.9	3642.4
55°	4141.6	4146.0	4079.2	3875.6	3839.1	3984.0	4209.0	4068.5	3892.0	4408.8	4024.4
57.5°	3818.3	3821.4	3996.6	4129.0	4257.6	4432.8	4689.9	4630.7	4425.2	4802.8	4452.3
60°	3074.5	3099.1	3489.3	4076.7	4736.0	5317.1	5380.1	5278.0	4992.5	5256.6	5008.9
62.5°	2196.5	2218.6	2670.5	3539.0	4679.9	6318.0	6654.5	6248.6	5762.1	5935.4	5791.7
65°	1154.1	1150.3	1500.1	2445.5	3941.8	6549.9	8662.6	7971.8	7058.6	6868.8	6548.0
67.5°	644.8	665.6	801.1	1233.5	2569.0	5764.6	9945.3	10148.8	8861.2	7609.4	6515.2
69°	596.2	603.2	693.9	953.6	1674.7	4756.1	9835.0	10806.2	9621.3	7612.6	6095.5
70°	579.2	586.8	669.4	878.6	1406.8	3897.0	9433.5	10729.3	9806.0	7443.7	5713.5
72.5°	519.4	529.4	609.5	789.7	1185.6	2008.7	7598.7	9183.2	8882.6	6505.8	4430.3
75°	443.1	460.1	581.1	784.1	1123.2	1277.0	5067.5	6841.7	6611.1	4652.8	2513.6
77.5°	183.4	185.3	254.0	574.2	1178.6	1222.1	2723.5	4333.8	3836.5	2040.2	757.0
80°	127.9	125.4	126.7	167.7	951.1	1230.3	1397.3	2204.1	1713.1	538.3	354.2
82.5°	107.8	106.5	111.6	105.3	322.1	1396.1	1168.5	1149.0	806.8	289.9	168.9
85°	71.2	69.3	91.4	95.8	153.2	1108.7	1256.8	903.2	601.3	155.0	71.9
87.5°	34.7	35.3	52.3	64.9	81.3	351.1	1203.8	714.1	464.5	67.4	29.0
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°	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9	2507.9
2.5°	2467.6	2448.7	2431.6	2410.2	2393.8	2380.0	2361.0	2360.4	2357.3	2361.7	2362.9
5°	2412.7	2381.2	2333.3	2279.7	2241.9	2192.1	2143.6	2127.2	2108.9	2107.0	2112.7
7.5°	2330.2	2281.0	2199.1	2117.1	2035.2	1951.4	1871.9	1831.6	1792.5	1780.6	1786.2
10°	2238.1	2175.7	2050.3	1916.7	1801.4	1676.6	1555.5	1477.4	1406.2	1375.9	1383.5
12.5°	2166.3	2086.9	1910.4	1737.1	1564.4	1385.4	1225.9	1071.5	954.9	902.6	905.7
15°	2104.5	2003.0	1779.3	1548.6	1332.4	1087.2	866.0	687.0	584.9	547.1	545.8
17.5°	2037.7	1914.8	1642.5	1373.4	1092.9	789.7	579.9	474.0	433.6	421.0	421.0
20°	1966.5	1824.0	1499.4	1182.4	840.8	551.5	436.2	395.2	380.1	376.3	375.6
22.5°	1900.3	1735.2	1355.7	978.8	608.2	418.5	371.2	355.5	353.0	356.1	356.1
25°	1848.0	1657.0	1210.1	764.5	442.5	350.4	330.3	328.4	337.8	349.2	351.1
27.5°	1808.9	1587.1	1066.4	558.4	347.9	305.1	298.1	306.3	328.4	351.1	355.5
30°	1781.8	1527.2	894.4	401.5	289.9	267.2	270.4	284.9	318.3	353.0	362.4
32.5°	1769.8	1478.6	721.0	308.2	247.7	235.1	243.3	262.2	296.9	331.5	342.9
35°	1781.2	1443.4	561.0	255.9	216.8	207.4	216.8	236.4	259.0	276.1	283.0
37.5°	1822.2	1430.7	422.3	226.9	196.6	187.2	194.8	208.0	218.1	224.4	227.5
40°	1908.5	1444.0	330.9	211.8	185.3	174.6	176.5	182.8	189.7	194.8	195.4
42.5°	2045.9	1487.5	294.3	206.1	178.4	164.5	161.4	165.8	173.3	180.3	181.5
45°	2228.7	1560.0	290.6	208.0	175.2	156.3	150.0	154.4	164.5	175.8	177.7
47.5°	2465.0	1674.7	308.2	218.1	177.1	151.9	142.4	146.9	160.1	175.2	177.7
50°	2744.9	1833.5	341.0	233.2	185.9	151.9	139.3	143.1	156.9	174.0	176.5
52.5°	3074.5	2054.7	375.0	248.3	198.5	157.6	140.6	139.9	152.5	168.3	171.4
55°	3438.2	2329.5	407.8	261.6	205.5	165.1	143.7	136.1	146.2	158.8	161.4
57.5°	3866.2	2705.8	465.1	274.2	209.3	170.8	147.5	132.4	138.0	146.9	148.7
60°	4446.7	3258.6	576.7	295.6	216.2	173.3	148.1	128.6	127.9	134.3	134.9
62.5°	5203.6	3905.9	683.2	320.8	230.1	174.0	145.6	126.1	119.8	121.6	121.6
65°	5741.9	4144.1	652.3	342.2	242.7	173.3	143.1	124.2	113.5	110.3	110.3
67.5°	5435.6	3660.7	554.0	347.9	243.9	166.4	137.4	119.8	107.8	100.2	100.2
69°	4985.5	3208.8	508.6	337.8	233.8	158.2	131.1	115.3	104.0	95.2	95.2
70°	4618.7	2866.5	480.9	325.9	221.9	151.3	125.4	110.9	100.2	92.7	92.0
72.5°	3448.3	1912.9	410.9	281.1	182.2	127.9	109.7	99.0	90.1	85.1	85.1
75°	1819.6	958.7	336.6	229.4	140.6	102.1	90.1	83.2	78.2	77.5	76.9
77.5°	596.2	433.6	242.0	172.7	103.4	79.4	71.9	67.4	66.8	69.3	69.3
80°	322.1	259.0	155.7	116.6	71.9	59.2	55.5	54.8	56.7	60.5	60.5
82.5°	156.3	127.9	92.7	71.9	49.2	43.5	43.5	44.1	46.6	51.1	51.1
85°	67.4	60.5	53.6	40.3	30.3	27.1	30.9	34.0	35.9	39.1	40.3
87.5°	32.1	28.4	24.6	15.8	13.2	13.9	16.4	20.2	24.0	26.5	27.1
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)