

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: P195225

Luminaire Tested: **NAV-AF-03-D-UNV-SL4-7060-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195225  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
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-SL4-7060-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13962 lumens  
Efficiency: N/A  
Efficacy: 112.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G3

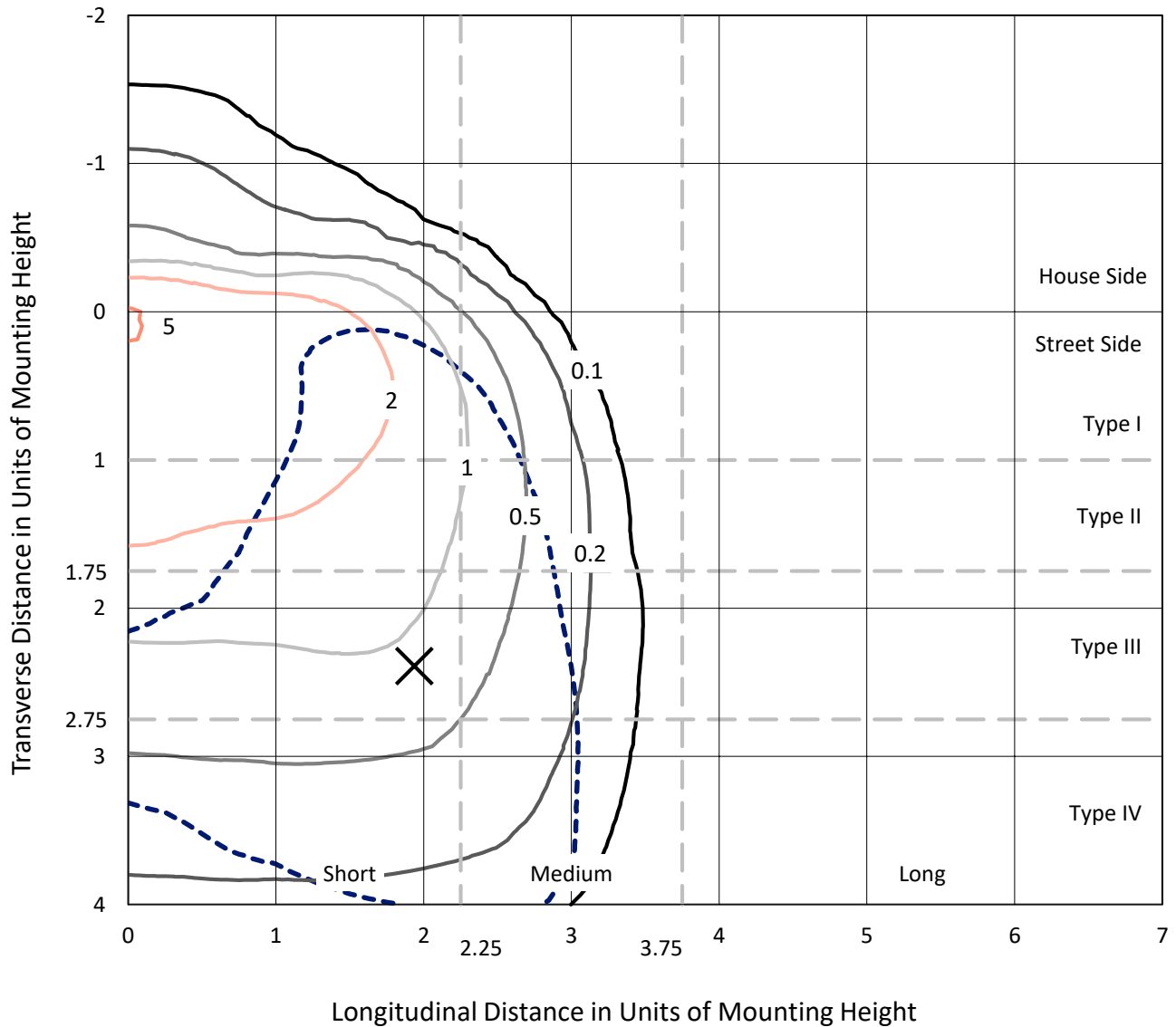
Input Watts (W): 124  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

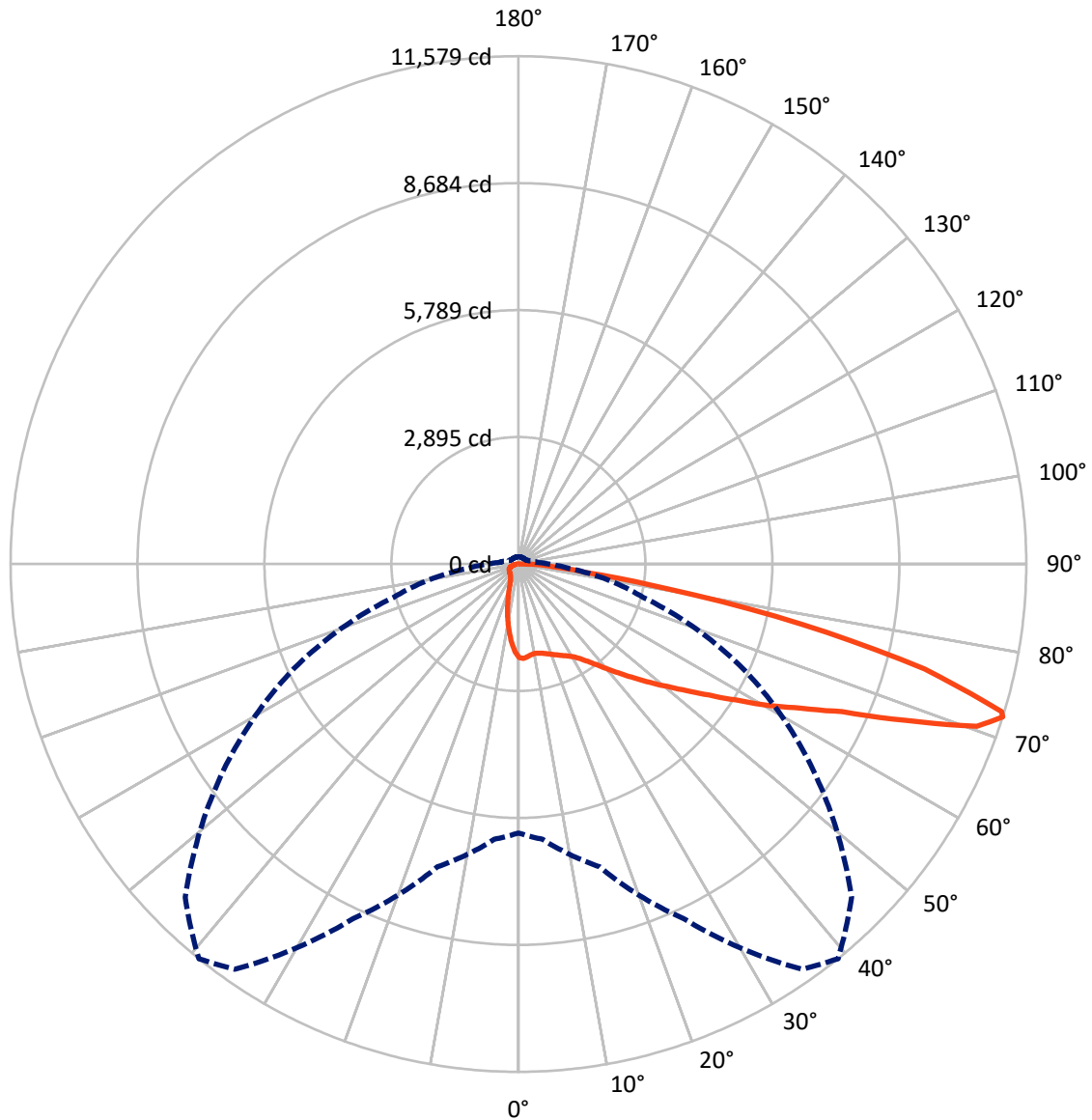
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.3 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 72-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1600.9	0.0	1600.9
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	12361.1	0.0	12361.1
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	13962.0	0.0	13962.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	183.2	1.3
10°-20°	460.4	3.3
20°-30°	717.5	5.1
30°-40°	1104.8	7.9
40°-50°	1801.0	12.9
50°-60°	2798.6	20.0
60°-70°	3745.9	26.8
70°-80°	2693.8	19.3
80°-90°	456.7	3.3
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°	13962.0	100.0
0°-180°	13962.0	100.0

**Coefficient of Utilization**



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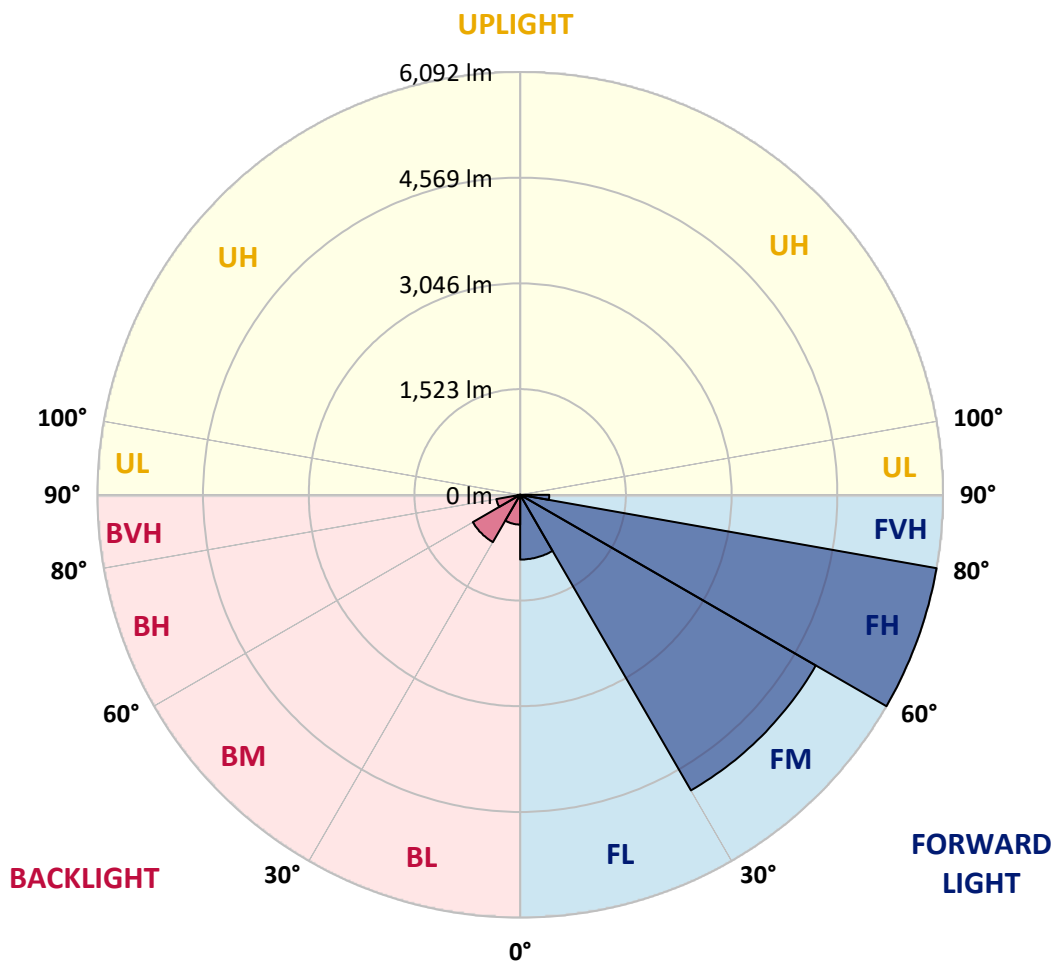
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	932.6	6.7			
FM	(30°-60°)	4917.7	35.2			
FH	(60°-80°)	6091.8	43.6			G3/7500
FVH	(80°-90°)	418.9	3.0			G3/500
BL	(0°-30°)	428.6	3.1	B1/500		
BM	(30°-60°)	786.8	5.6	B1/1000		
BH	(60°-80°)	347.8	2.5	B1/500		G1/500
BVH	(80°-90°)	37.8	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2
2.5°	2178.2	2179.1	2176.3	2167.9	2160.4	2156.6	2150.1	2138.8	2123.8	2113.5	2105.1
5°	2157.6	2160.4	2158.5	2144.4	2131.3	2123.8	2113.5	2097.6	2077.9	2069.5	2049.8
7.5°	2141.6	2143.5	2137.9	2121.9	2096.6	2087.3	2068.5	2047.9	2030.1	2017.9	1994.5
10°	2130.4	2132.2	2127.6	2111.6	2083.5	2072.3	2049.8	2027.3	2003.8	1988.8	1962.6
12.5°	2114.4	2118.2	2118.2	2110.7	2091.9	2084.4	2062.0	2037.6	2016.0	2000.1	1967.3
15°	2111.6	2116.3	2124.8	2123.8	2118.2	2112.6	2094.8	2070.4	2051.6	2032.9	1992.6
17.5°	2135.1	2145.4	2162.2	2167.9	2164.1	2151.9	2131.3	2108.8	2088.2	2070.4	2020.7
20°	2194.1	2199.7	2225.0	2236.3	2217.5	2199.7	2172.5	2143.5	2124.8	2110.7	2047.0
22.5°	2283.1	2290.6	2311.3	2312.2	2272.8	2251.3	2216.6	2181.0	2163.2	2157.6	2082.6
25°	2425.6	2423.7	2429.4	2405.9	2334.7	2309.4	2267.2	2226.0	2213.8	2225.0	2135.1
27.5°	2596.2	2591.5	2573.7	2512.8	2405.0	2372.2	2321.6	2285.0	2285.0	2311.3	2206.3
30°	2793.0	2788.3	2730.2	2628.1	2488.4	2450.9	2397.5	2359.1	2378.7	2429.4	2302.8
32.5°	3001.1	2984.2	2902.7	2765.8	2607.4	2566.2	2514.6	2475.3	2512.8	2599.0	2441.5
35°	3197.0	3187.6	3087.3	2925.2	2761.1	2726.5	2690.9	2642.1	2702.1	2836.1	2637.4
37.5°	3399.4	3391.9	3269.1	3096.7	2948.6	2925.2	2895.2	2861.4	2958.0	3134.2	2902.7
40°	3625.3	3610.3	3455.6	3283.2	3167.0	3155.7	3139.8	3130.4	3286.0	3548.4	3238.2
42.5°	3881.2	3852.1	3652.5	3488.5	3405.0	3414.4	3406.0	3443.5	3681.5	4026.4	3637.5
45°	4173.6	4115.5	3848.4	3706.8	3668.4	3705.9	3723.7	3819.3	4149.2	4578.5	4083.6
47.5°	4447.3	4372.3	4063.0	3944.0	3965.5	4030.2	4080.8	4249.5	4661.9	5124.0	4539.1
50°	4699.4	4615.0	4292.6	4189.5	4294.5	4386.3	4491.3	4729.4	5207.4	5685.4	4957.1
52.5°	4885.9	4825.0	4522.2	4457.6	4672.2	4794.0	4961.8	5262.7	5758.5	6220.5	5330.2
55°	5030.2	4997.4	4746.2	4765.0	5099.6	5273.9	5477.3	5823.1	6341.4	6700.4	5630.1
57.5°	5197.1	5172.7	5002.1	5136.1	5630.1	5849.4	6089.3	6473.6	6896.3	7123.1	5865.3
60°	5373.3	5373.3	5287.0	5583.2	6293.6	6544.8	6783.8	7082.8	7449.3	7503.6	5960.9
62.5°	5506.4	5541.0	5572.0	6059.3	6923.5	7235.6	7498.0	7784.8	8021.9	7691.1	5736.0
65°	5699.4	5773.5	5947.8	6609.5	7703.3	8111.9	8466.2	8707.1	8485.9	7542.1	5002.1
67.5°	6031.2	6140.9	6512.0	7428.7	8897.3	9509.4	9853.3	9437.2	8395.0	6603.9	3831.5
70°	6330.2	6484.8	7119.4	8468.1	10449.4	11084.9	10926.5	9267.5	7311.5	4840.9	2357.2
72°	6131.5	6300.2	7147.5	8920.8	11278.9	11578.8	10743.7	8213.1	5649.8	2954.2	1162.2
72.5°	6001.2	6176.5	7056.6	8909.5	11301.4	11516.0	10489.7	7794.2	5128.6	2584.9	940.1
75°	5013.4	5163.3	6067.8	7896.3	9959.2	9565.6	8186.0	5044.3	2357.2	835.1	483.6
77.5°	3273.8	3388.2	4183.9	5470.7	6976.0	6597.3	4982.4	2361.9	883.8	507.1	363.7
80°	1644.9	1726.4	2239.1	2876.4	3764.9	3464.1	2300.0	1142.5	591.4	366.5	285.9
82.5°	1144.4	1219.4	1541.8	1468.7	1573.6	1523.0	1081.6	953.2	442.4	231.5	150.0
85°	959.7	1037.5	1275.6	1046.9	856.6	780.7	775.1	900.7	292.4	114.3	126.5
87.5°	837.0	955.1	1052.5	764.8	587.7	518.3	570.8	825.7	92.8	62.8	38.4
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°	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2	2132.2
2.5°	2091.0	2088.2	2074.1	2052.6	2036.6	2026.3	2006.7	2005.7	2007.6	1990.7	1997.3
5°	2032.0	2020.7	1984.2	1934.5	1894.2	1855.8	1813.6	1799.5	1787.3	1762.0	1764.8
7.5°	1970.1	1950.4	1886.7	1805.1	1727.4	1656.1	1585.8	1551.2	1524.9	1492.1	1492.1
10°	1933.6	1902.6	1805.1	1686.1	1562.4	1458.4	1353.4	1290.6	1244.7	1202.5	1199.7
12.5°	1931.7	1884.8	1748.9	1584.9	1415.3	1269.0	1125.6	1029.1	960.7	911.0	906.3
15°	1946.7	1881.1	1702.0	1490.2	1276.5	1086.3	909.1	786.4	699.2	643.9	638.3
17.5°	1959.8	1876.4	1651.4	1390.9	1141.6	910.1	713.2	585.8	503.3	458.3	453.6
20°	1972.0	1866.1	1586.8	1285.9	992.5	745.1	557.7	454.6	400.2	374.9	372.1
22.5°	1989.8	1856.7	1519.3	1167.8	846.3	606.4	460.2	386.1	357.1	344.9	343.0
25°	2018.8	1857.6	1453.7	1046.9	712.3	505.2	398.3	352.4	336.5	328.0	328.0
27.5°	2061.0	1868.9	1389.0	924.1	598.9	435.8	361.8	334.6	324.3	317.7	315.9
30°	2122.9	1889.5	1320.6	807.9	508.9	388.0	340.2	323.4	314.9	309.3	308.4
32.5°	2212.9	1926.1	1248.4	702.0	440.5	354.3	324.3	314.0	307.4	302.7	301.8
35°	2346.9	1990.7	1178.1	612.0	391.8	329.9	311.2	302.7	299.0	297.1	296.2
37.5°	2543.7	2094.8	1111.6	541.7	359.9	314.0	298.0	293.4	291.5	291.5	291.5
40°	2791.1	2231.6	1051.6	492.1	342.1	301.8	288.7	284.9	284.9	285.9	285.9
42.5°	3092.0	2403.1	1000.0	458.3	331.8	293.4	282.1	280.2	279.3	279.3	280.2
45°	3441.6	2605.6	968.2	432.1	324.3	288.7	277.4	276.5	272.7	270.9	270.9
47.5°	3793.1	2822.1	966.3	417.1	314.9	283.1	272.7	272.7	265.2	261.5	262.4
50°	4121.1	3016.1	986.9	413.3	309.3	274.6	268.1	269.0	258.7	254.0	253.1
52.5°	4385.4	3164.2	1012.2	418.0	309.3	267.1	259.6	264.3	253.1	247.4	246.5
55°	4589.7	3267.3	1021.6	428.3	313.0	260.6	252.1	259.6	251.2	243.7	243.7
57.5°	4735.9	3300.1	981.3	433.0	318.7	259.6	244.6	258.7	254.0	244.6	244.6
60°	4682.5	3109.8	831.3	415.2	317.7	257.7	239.0	260.6	263.4	253.1	253.1
62.5°	4265.4	2601.8	667.3	374.9	301.8	251.2	232.4	258.7	269.9	266.2	264.3
65°	3472.5	1908.2	517.4	327.1	274.6	237.1	218.4	241.8	254.9	258.7	259.6
67.5°	2447.2	1208.1	402.1	278.4	240.9	216.5	202.4	213.7	218.4	220.3	224.0
70°	1338.4	654.2	319.6	234.3	206.2	195.9	185.6	186.5	184.6	182.8	184.6
72°	672.0	427.4	269.9	203.4	182.8	176.2	171.5	168.7	168.7	165.9	166.8
72.5°	578.3	397.4	260.6	195.9	177.1	171.5	167.8	165.0	164.0	162.1	163.1
75°	385.2	314.9	217.4	164.0	150.9	147.1	149.0	146.2	147.1	145.3	146.2
77.5°	311.2	270.9	184.6	138.7	129.3	123.7	127.5	128.4	130.3	128.4	127.5
80°	260.6	230.6	154.6	114.3	107.8	103.1	105.0	111.5	112.5	106.8	105.9
82.5°	168.7	185.6	121.8	89.0	82.5	80.6	85.3	91.9	93.7	86.2	84.4
85°	141.5	149.0	88.1	60.9	54.4	52.5	61.9	68.4	73.1	65.6	63.7
87.5°	39.4	73.1	43.1	29.1	24.4	24.4	30.0	35.6	42.2	43.1	43.1
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)