

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: P197091

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197091
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-03-D-UNV-SL3-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 615mA 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: 9726 lumens
Efficiency: N/A
Efficacy: 101.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

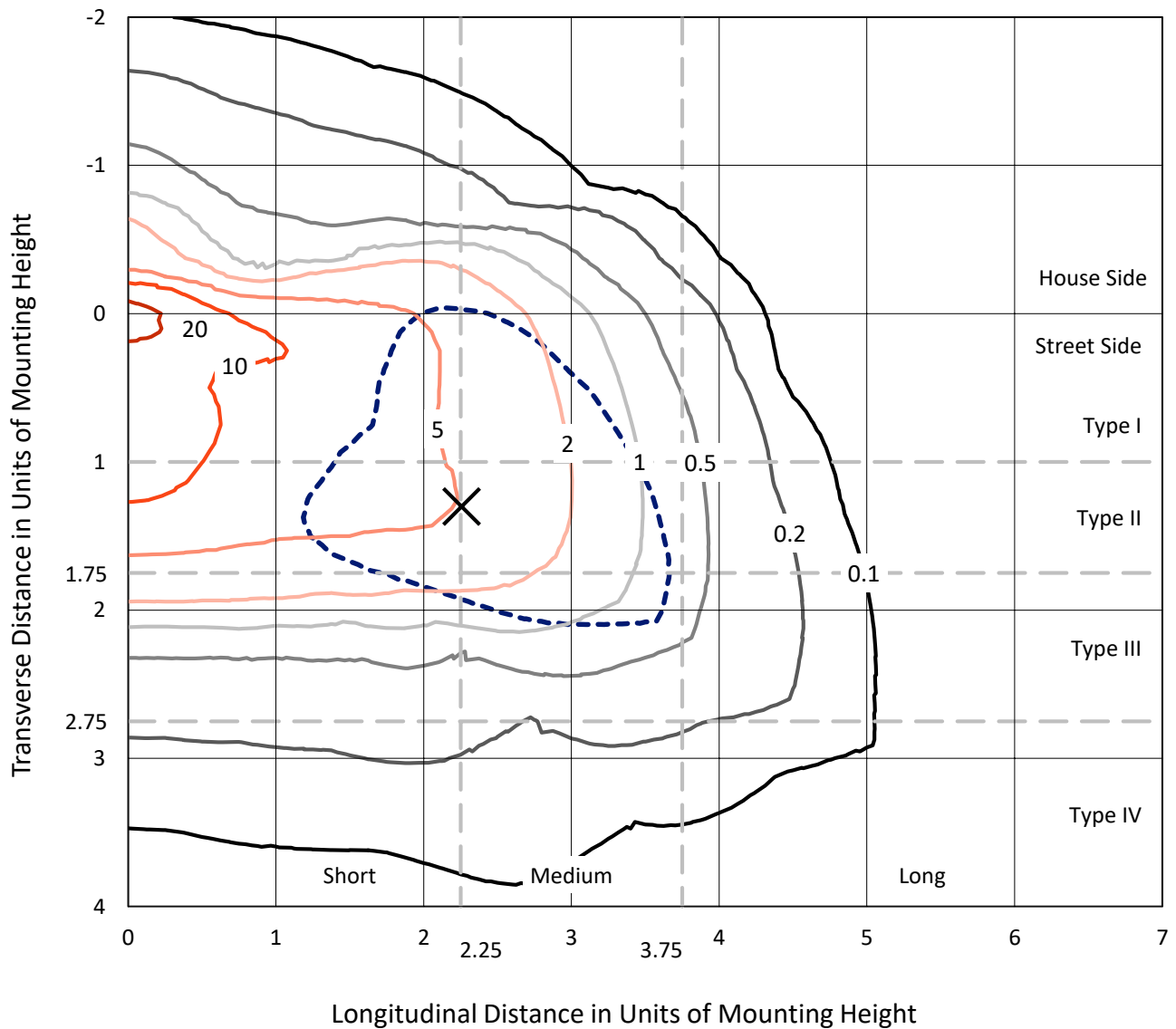
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

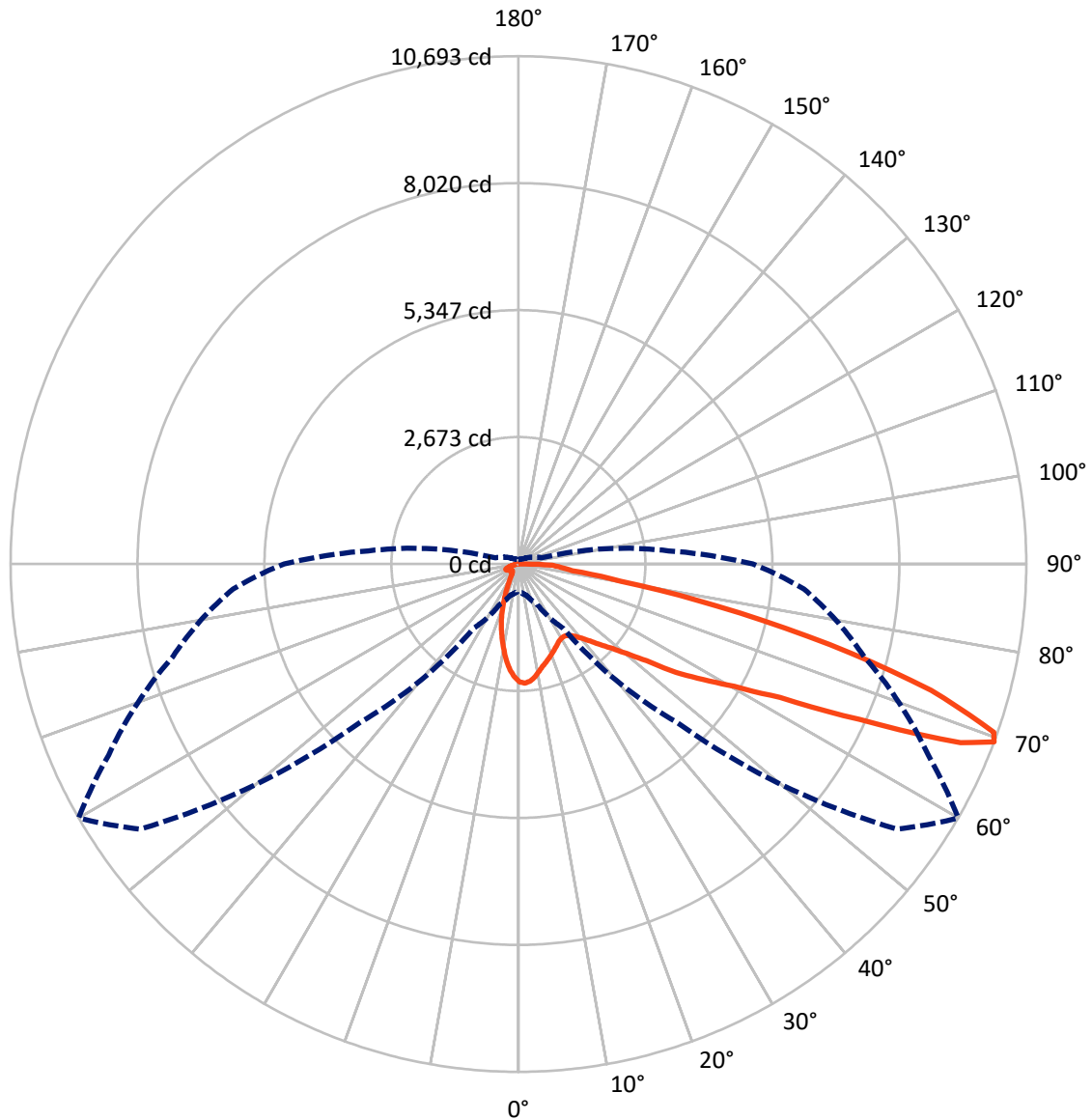
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 24.8 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
House Side	Lumens	1387.2	0.0	1387.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	8338.8	0.0	8338.8
	% Fixture	85.7	0.0	85.7
Total	Lumens	9726.0	0.0	9726.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.5	2.2
10°-20°	450.8	4.6
20°-30°	575.0	5.9
30°-40°	791.3	8.1
40°-50°	1281.7	13.2
50°-60°	2011.6	20.7
60°-70°	2681.9	27.6
70°-80°	1491.7	15.3
80°-90°	231.4	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°	9726.0	100.0
0°-180°	9726.0	100.0



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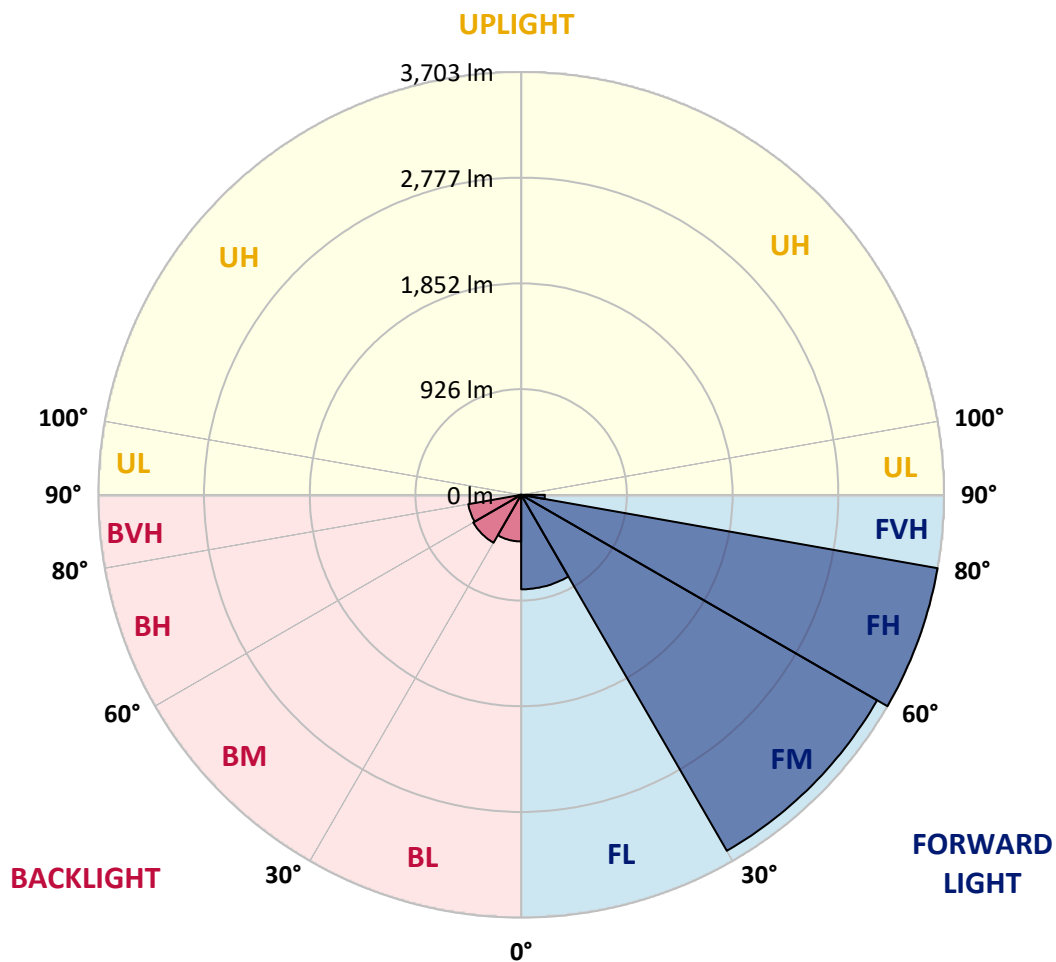
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	827.5	8.5			
FM	(30°-60°)	3600.1	37.0			
FH	(60°-80°)	3703.3	38.1			G2/5000
FVH	(80°-90°)	207.9	2.1			G2/225
BL	(0°-30°)	408.8	4.2	B1/500		
BM	(30°-60°)	484.6	5.0	B1/1000		
BH	(60°-80°)	470.3	4.8	B1/500		G1/500
BVH	(80°-90°)	23.4	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°	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6
2.5°	2547.7	2554.6	2554.6	2549.0	2545.9	2527.8	2517.2	2509.7	2496.6	2472.3	2450.4
5°	2456.7	2469.8	2475.4	2477.9	2494.1	2488.5	2489.1	2484.1	2472.9	2446.7	2411.1
7.5°	2289.5	2292.0	2302.0	2318.8	2358.1	2385.6	2408.0	2412.4	2409.9	2390.6	2340.7
10°	2124.9	2129.2	2141.1	2169.8	2207.2	2246.5	2295.1	2315.1	2330.1	2323.8	2260.8
12.5°	1988.3	1988.9	2002.0	2035.1	2076.9	2126.1	2192.2	2223.4	2259.0	2273.3	2202.8
15°	1856.7	1865.4	1877.9	1917.8	1969.6	2031.9	2108.0	2151.1	2197.8	2239.0	2157.9
17.5°	1756.9	1763.8	1771.2	1804.3	1864.2	1942.1	2036.3	2082.5	2144.2	2207.2	2111.8
20°	1702.0	1704.5	1698.9	1715.1	1765.6	1849.8	1959.0	2014.5	2088.1	2176.6	2064.4
22.5°	1690.8	1690.8	1670.2	1667.1	1689.5	1760.6	1879.1	1947.1	2036.9	2155.4	2022.0
25°	1743.2	1739.4	1700.8	1665.2	1657.1	1693.3	1803.1	1886.6	1993.3	2154.8	1990.2
27.5°	1842.3	1837.4	1789.3	1729.5	1677.7	1662.1	1744.4	1829.9	1959.0	2176.0	1973.9
30°	1965.8	1964.0	1915.3	1840.5	1755.0	1674.6	1721.4	1800.6	1935.9	2215.3	1973.3
32.5°	2101.2	2092.4	2062.5	1987.7	1876.7	1743.8	1735.1	1801.8	1929.7	2272.7	1987.7
35°	2245.2	2239.0	2231.5	2156.1	2031.3	1866.0	1795.6	1844.8	1960.2	2352.5	2028.2
37.5°	2428.6	2421.7	2434.2	2351.9	2215.3	2026.3	1897.9	1930.9	2022.6	2468.5	2103.7
40°	2754.8	2734.8	2699.9	2573.3	2429.9	2222.8	2045.7	2050.7	2129.2	2623.8	2224.7
42.5°	3290.5	3226.3	3053.5	2820.9	2656.2	2451.1	2238.4	2214.7	2276.4	2829.0	2400.5
45°	3827.5	3755.2	3463.3	3091.0	2890.8	2696.2	2476.6	2419.9	2459.8	3067.9	2626.9
47.5°	4174.3	4138.7	3809.4	3361.0	3136.5	2963.1	2749.2	2655.6	2684.3	3338.6	2906.3
50°	4275.9	4245.4	3986.6	3572.4	3368.5	3285.5	3086.6	2962.5	2967.5	3654.8	3241.3
52.5°	4199.9	4187.4	4015.9	3703.4	3581.8	3625.4	3553.7	3381.0	3339.8	4001.5	3604.2
55°	4098.2	4102.6	4036.5	3835.0	3798.8	3942.3	4164.9	4025.8	3851.2	4362.6	3982.2
57.5°	3778.2	3781.4	3954.8	4085.7	4213.0	4386.3	4640.8	4582.2	4378.9	4752.4	4405.7
60°	3042.3	3066.6	3452.7	4034.0	4686.3	5261.4	5323.7	5222.7	4940.2	5201.5	4956.4
62.5°	2173.5	2195.4	2642.5	3502.0	4630.8	6251.8	6584.8	6183.2	5701.7	5873.2	5731.0
65°	1142.0	1138.2	1484.4	2419.9	3900.5	6481.3	8571.8	7888.3	6984.6	6796.9	6479.4
67.5°	638.0	658.6	792.7	1220.5	2542.1	5704.2	9841.0	10042.5	8768.3	7529.7	6447.0
69°	590.0	596.9	686.7	943.6	1657.1	4706.3	9731.9	10693.0	9520.5	7532.8	6031.6
70°	573.2	580.6	662.3	869.4	1392.1	3856.2	9334.6	10616.9	9703.2	7365.7	5653.7
72.5°	513.9	523.9	603.1	781.5	1173.1	1987.7	7519.1	9087.0	8789.5	6437.6	4383.8
75°	438.4	455.3	575.0	775.9	1111.4	1263.6	5014.4	6770.0	6541.8	4604.0	2487.2
77.5°	181.5	183.4	251.3	568.2	1166.3	1209.3	2694.9	4288.4	3796.3	2018.8	749.0
80°	126.6	124.1	125.4	165.9	941.1	1217.4	1382.7	2181.0	1695.2	532.6	350.5
82.5°	106.6	105.4	110.4	104.2	318.7	1381.4	1156.3	1137.0	798.3	286.9	167.1
85°	70.5	68.6	90.4	94.8	151.6	1097.1	1243.6	893.7	595.0	153.4	71.1
87.5°	34.3	34.9	51.8	64.2	80.5	347.4	1191.2	706.6	459.7	66.7	28.7
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°	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6	2481.6
2.5°	2441.7	2423.0	2406.2	2384.9	2368.7	2355.0	2336.3	2335.7	2332.6	2336.9	2338.2
5°	2387.4	2356.3	2308.9	2255.8	2218.4	2169.2	2121.1	2104.9	2086.8	2085.0	2090.6
7.5°	2305.7	2257.1	2176.0	2094.9	2013.9	1930.9	1852.3	1812.4	1773.7	1761.9	1767.5
10°	2214.7	2152.9	2028.8	1896.6	1782.5	1659.0	1539.2	1461.9	1391.4	1361.5	1369.0
12.5°	2143.6	2065.0	1890.4	1718.9	1548.0	1370.8	1213.1	1060.3	944.9	893.1	896.2
15°	2082.5	1982.1	1760.6	1532.4	1318.5	1075.8	856.9	679.8	578.8	541.4	540.1
17.5°	2016.4	1894.7	1625.3	1359.0	1081.5	781.5	573.8	469.0	429.1	416.6	416.6
20°	1945.9	1804.9	1483.7	1170.0	832.0	545.7	431.6	391.0	376.1	372.3	371.7
22.5°	1880.4	1717.0	1341.5	968.6	601.9	414.1	367.3	351.8	349.3	352.4	352.4
25°	1828.6	1639.7	1197.5	756.5	437.8	346.8	326.8	324.9	334.3	345.5	347.4
27.5°	1790.0	1570.4	1055.3	552.6	344.3	301.9	295.0	303.1	324.9	347.4	351.8
30°	1763.1	1511.2	885.0	397.3	286.9	264.4	267.6	281.9	315.0	349.3	358.6
32.5°	1751.3	1463.2	713.5	305.0	245.1	232.6	240.7	259.5	293.8	328.1	339.3
35°	1762.5	1428.2	555.1	253.2	214.5	205.2	214.5	233.9	256.3	273.2	280.0
37.5°	1803.1	1415.8	417.9	224.5	194.6	185.2	192.7	205.8	215.8	222.0	225.1
40°	1888.5	1428.8	327.4	209.6	183.4	172.8	174.6	180.9	187.7	192.7	193.3
42.5°	2024.5	1471.9	291.3	203.9	176.5	162.8	159.7	164.0	171.5	178.4	179.6
45°	2205.3	1543.6	287.5	205.8	173.4	154.7	148.4	152.8	162.8	174.0	175.9
47.5°	2439.2	1657.1	305.0	215.8	175.3	150.3	141.0	145.3	158.4	173.4	175.9
50°	2716.1	1814.3	337.4	230.8	184.0	150.3	137.8	141.6	155.3	172.1	174.6
52.5°	3042.3	2033.2	371.1	245.7	196.5	155.9	139.1	138.5	150.9	166.5	169.6
55°	3402.2	2305.1	403.5	258.8	203.3	163.4	142.2	134.7	144.7	157.2	159.7
57.5°	3825.6	2677.5	460.3	271.3	207.1	169.0	145.9	131.0	136.6	145.3	147.2
60°	4400.1	3224.4	570.7	292.5	213.9	171.5	146.6	127.2	126.6	132.8	133.5
62.5°	5149.1	3864.9	676.1	317.5	227.6	172.1	144.1	124.7	118.5	120.4	120.4
65°	5681.7	4100.7	645.5	338.7	240.1	171.5	141.6	122.9	112.3	109.1	109.1
67.5°	5378.6	3622.3	548.2	344.3	241.4	164.7	136.0	118.5	106.6	99.2	99.2
69°	4933.3	3175.2	503.3	334.3	231.4	156.5	129.7	114.1	102.9	94.2	94.2
70°	4570.3	2836.5	475.9	322.4	219.5	149.7	124.1	109.8	99.2	91.7	91.1
72.5°	3412.1	1892.9	406.6	278.2	180.2	126.6	108.5	97.9	89.2	84.2	84.2
75°	1800.6	948.6	333.0	227.0	139.1	101.0	89.2	82.3	77.3	76.7	76.1
77.5°	590.0	429.1	239.5	170.9	102.3	78.6	71.1	66.7	66.1	68.6	68.6
80°	318.7	256.3	154.0	115.4	71.1	58.6	54.9	54.3	56.1	59.9	59.9
82.5°	154.7	126.6	91.7	71.1	48.6	43.0	43.0	43.7	46.2	50.5	50.5
85°	66.7	59.9	53.0	39.9	29.9	26.8	30.6	33.7	35.5	38.7	39.9
87.5°	31.8	28.1	24.3	15.6	13.1	13.7	16.2	20.0	23.7	26.2	26.8
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)