

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: P882760

Luminaire Tested: **NAV-SB2D-740-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882760
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-740-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 4000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16930 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

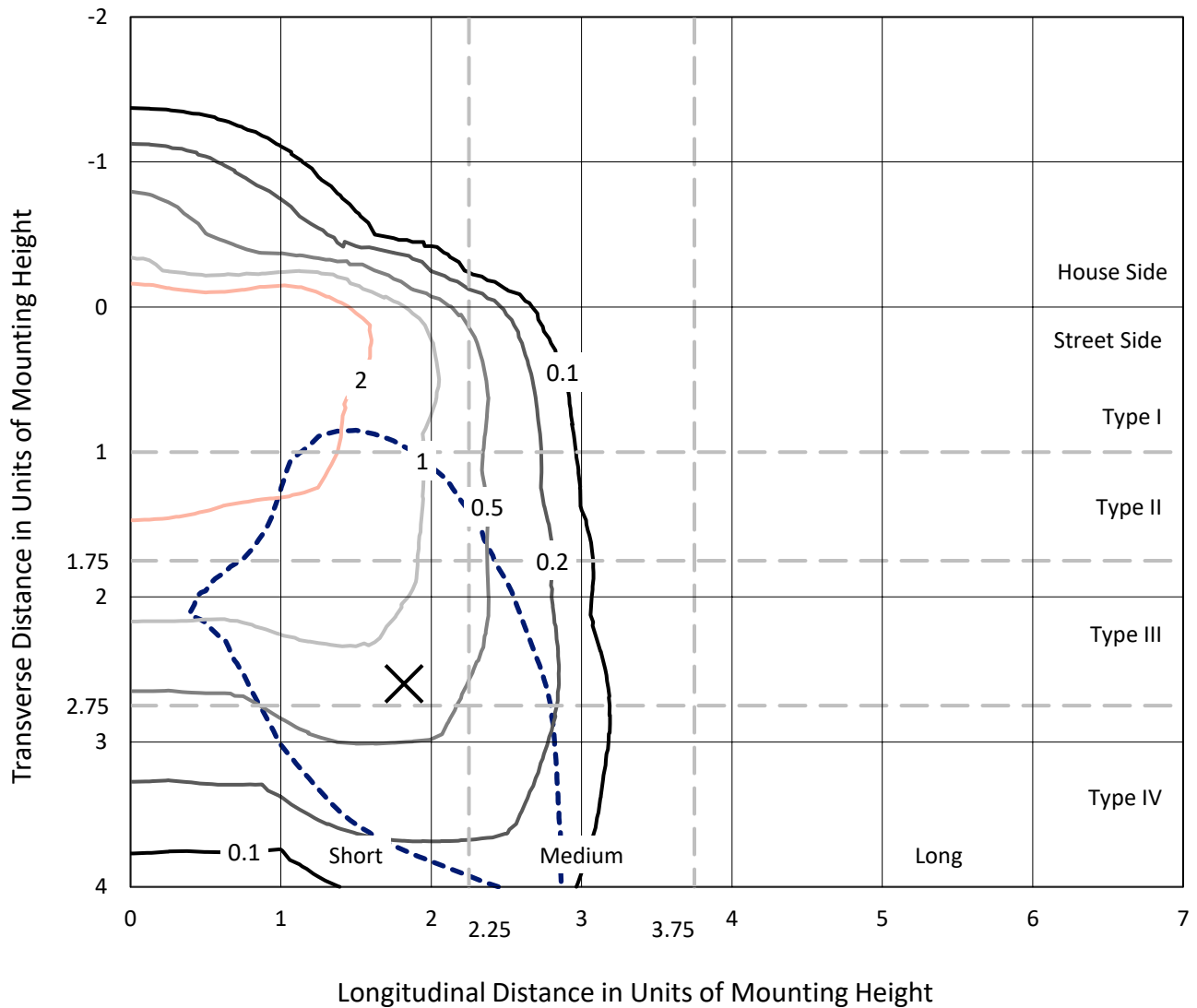
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

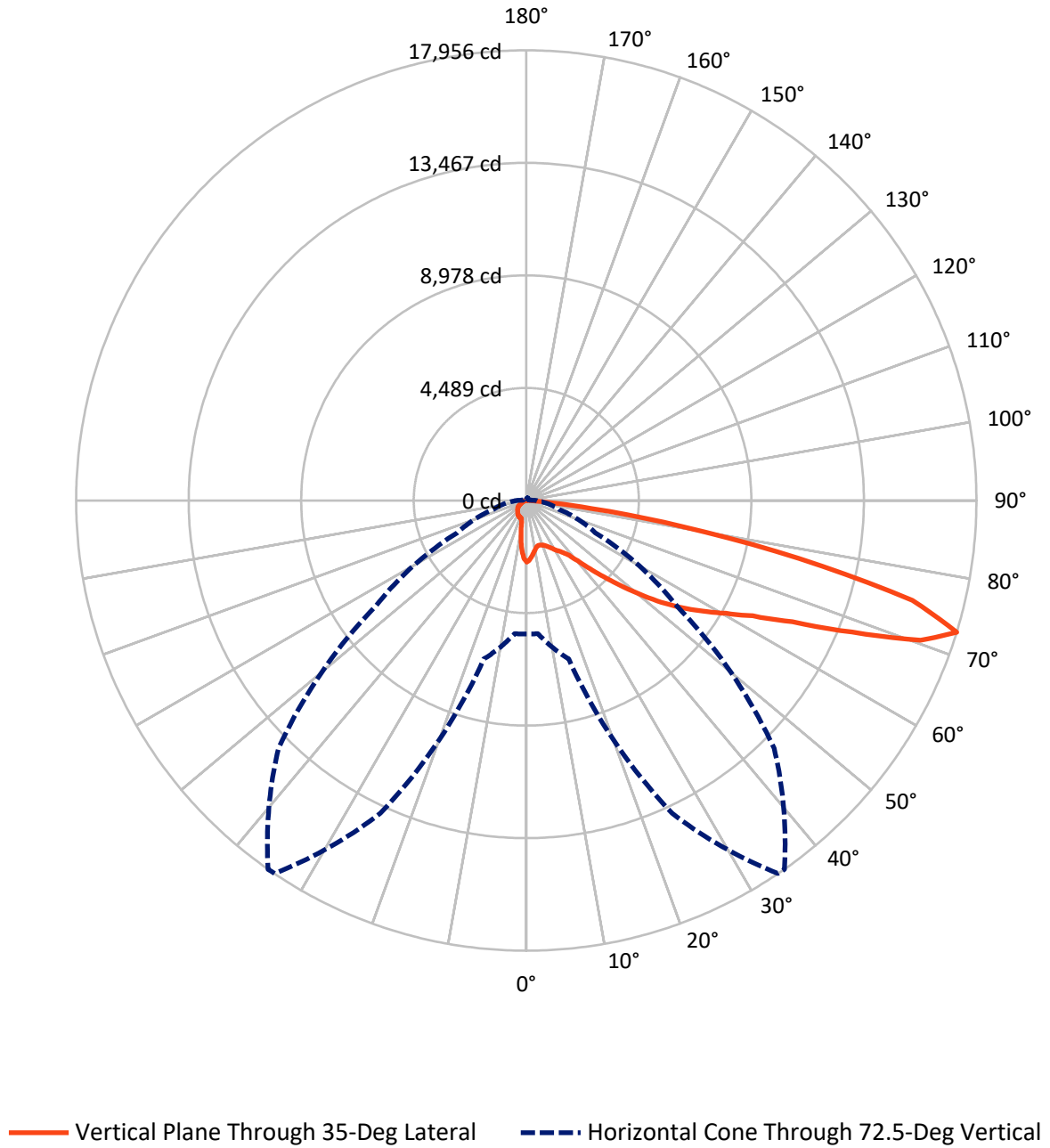
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1905.4	0.0	1905.4
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	15024.6	0.0	15024.6
	% Fixture	88.7	0.0	88.7
Total	Lumens	16930.0	0.0	16930.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.6	1.2
10°-20°	471.7	2.8
20°-30°	766.3	4.5
30°-40°	1278.5	7.6
40°-50°	2418.9	14.3
50°-60°	3843.6	22.7
60°-70°	4754.9	28.1
70°-80°	2955.7	17.5
80°-90°	238.9	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°	16930.0	100.0
0°-180°	16930.0	100.0

Coefficient of Utilization



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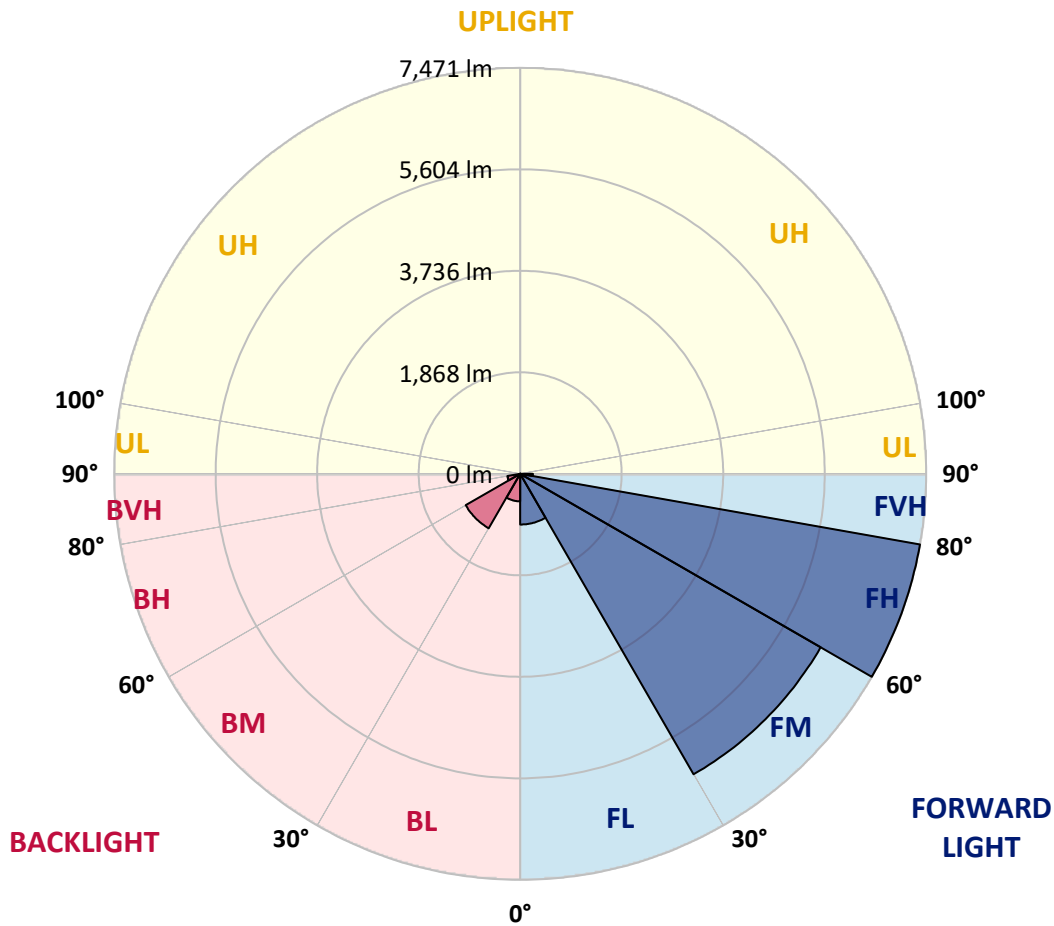
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	933.3	5.5			
FM (30°-60°)	6384.3	37.7			
FH (60°-80°)	7471.4	44.1			G3/7500
FVH (80°-90°)	235.6	1.4			G3/500
BL (0°-30°)	506.3	3.0	B2/1000		
BM (30°-60°)	1156.7	6.8	B2/2500		
BH (60°-80°)	239.1	1.4	B1/500		G1/500
BVH (80°-90°)	3.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7
2.5°	2344.6	2364.4	2368.1	2374.3	2374.3	2381.8	2394.2	2411.5	2440.1	2455.0	2464.9
5°	2161.0	2175.9	2194.5	2209.3	2237.9	2241.6	2290.0	2337.1	2402.9	2452.5	2487.2
7.5°	1976.1	1993.5	2018.3	2054.3	2091.5	2102.7	2175.9	2255.2	2359.4	2452.5	2510.8
10°	1845.9	1847.1	1869.4	1905.4	1965.0	1978.6	2067.9	2180.8	2311.1	2437.6	2533.1
12.5°	1772.7	1781.4	1791.3	1818.6	1875.6	1884.3	1979.9	2112.6	2262.7	2428.9	2559.2
15°	1772.7	1778.9	1785.1	1798.7	1844.6	1852.1	1936.4	2069.2	2237.9	2432.6	2601.3
17.5°	1791.3	1801.2	1796.3	1812.4	1860.8	1865.7	1940.2	2056.8	2236.6	2456.2	2665.9
20°	1836.0	1843.4	1833.5	1843.4	1891.8	1901.7	1978.6	2080.3	2257.7	2497.1	2746.5
22.5°	1906.7	1910.4	1886.8	1894.3	1943.9	1956.3	2045.6	2147.3	2308.6	2562.9	2854.4
25°	1996.0	2003.4	1967.4	1976.1	2023.3	2038.2	2141.1	2247.8	2389.2	2653.4	2992.1
27.5°	2098.9	2102.7	2071.6	2070.4	2131.2	2152.3	2256.5	2371.9	2497.1	2767.6	3165.8
30°	2216.8	2228.0	2198.2	2193.2	2270.1	2287.5	2390.5	2524.4	2655.9	2938.8	3412.6
32.5°	2309.8	2318.5	2301.1	2313.5	2391.7	2405.3	2553.0	2740.3	2905.3	3181.9	3748.8
35°	2443.8	2448.8	2409.1	2431.4	2520.7	2555.4	2775.0	3043.0	3219.1	3487.1	4188.0
37.5°	2928.8	2928.8	2760.1	2649.7	2735.3	2766.3	3078.9	3423.8	3606.2	3896.4	4741.2
40°	3600.0	3588.8	3341.9	3116.2	3105.0	3165.8	3511.9	3903.9	4106.1	4387.7	5364.0
42.5°	4315.7	4298.4	3962.2	3738.9	3701.7	3722.8	4011.8	4495.6	4701.5	4986.8	6033.8
45°	4950.9	4945.9	4638.3	4338.1	4271.1	4338.1	4635.8	5187.8	5335.4	5635.6	6702.5
47.5°	5483.0	5483.0	5258.5	5062.5	5027.8	5067.5	5480.6	5955.7	5942.0	6326.6	7353.7
50°	6095.9	6090.9	5877.5	5793.2	5829.1	5885.0	6453.1	6764.5	6569.7	7005.1	7935.5
52.5°	6525.1	6554.8	6481.7	6468.0	6651.6	6748.4	7440.6	7555.9	7131.7	7649.0	8370.9
55°	6865.0	6899.7	6984.1	7079.6	7433.1	7559.7	8397.0	8306.4	7601.8	8207.2	8621.5
57.5°	7346.3	7296.7	7426.9	7615.5	8187.4	8339.9	9323.7	9014.8	7980.2	8660.0	8648.8
60°	7930.6	7938.0	7960.3	8198.5	8940.3	9136.3	10236.7	9684.6	8223.3	8937.9	8346.1
62.5°	8632.7	8643.9	8689.8	9055.7	9951.4	10136.2	11209.2	10232.9	8335.0	8859.7	7564.6
65°	8584.3	8631.5	9143.8	10395.5	11488.3	11670.7	12344.3	10617.5	8166.3	8145.2	6159.1
67.5°	7820.2	7897.1	8754.3	11995.7	13805.6	14009.1	13716.3	10693.2	7438.1	6334.0	4018.0
70°	6817.8	6845.1	7876.0	13434.7	16488.8	16694.8	14944.4	9860.8	5644.3	3533.0	1800.0
72.5°	5324.3	5330.5	6540.0	13768.4	17945.2	17956.4	13980.5	7320.2	3035.5	1357.1	625.2
75°	3803.4	3766.2	4380.2	11165.8	15787.9	15914.5	10481.1	3433.7	1159.9	641.3	311.4
77.5°	2039.4	2080.3	2478.5	6621.8	10906.5	11122.4	5718.7	989.9	590.5	436.7	205.9
80°	630.2	664.9	1016.0	3031.8	6177.7	6308.0	2120.0	440.4	411.8	311.4	135.2
82.5°	198.5	205.9	473.9	1274.0	2564.1	2623.7	614.1	249.3	281.6	205.9	79.4
85°	57.1	58.3	210.9	475.1	633.9	646.3	172.4	96.8	161.3	127.8	40.9
87.5°	6.2	19.8	79.4	79.4	55.8	54.6	18.6	21.1	45.9	16.1	7.4
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°	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7	2453.7
2.5°	2458.7	2459.9	2443.8	2416.5	2386.7	2361.9	2330.9	2306.1	2288.7	2283.8	2292.5
5°	2476.1	2467.4	2421.5	2338.4	2239.1	2153.5	2058.0	1982.3	1932.7	1911.6	1919.1
7.5°	2502.1	2477.3	2376.8	2213.1	2023.3	1854.6	1683.4	1550.6	1466.3	1424.1	1430.3
10°	2524.4	2474.8	2302.4	2032.0	1741.7	1486.1	1255.4	1095.4	1006.1	963.9	965.1
12.5°	2545.5	2473.6	2205.6	1817.3	1424.1	1111.5	896.9	817.5	792.7	784.0	781.5
15°	2585.2	2477.3	2084.1	1571.7	1107.8	839.8	761.7	760.4	765.4	762.9	761.7
17.5°	2639.8	2481.0	1946.4	1311.2	854.7	740.6	736.9	748.0	755.5	751.7	750.5
20°	2710.5	2495.9	1800.0	1053.2	734.4	715.8	724.5	734.4	740.6	734.4	733.1
22.5°	2809.8	2522.0	1640.0	846.0	695.9	700.9	708.3	719.5	725.7	717.0	715.8
25°	2931.3	2562.9	1482.4	735.6	677.3	683.5	694.7	707.1	714.5	705.8	704.6
27.5°	3088.9	2628.6	1337.3	710.8	658.7	662.4	678.6	697.2	707.1	695.9	695.9
30°	3317.1	2736.6	1212.0	722.0	647.5	638.9	661.2	687.2	698.4	688.5	687.2
32.5°	3619.8	2889.1	1135.1	739.3	642.6	611.6	632.7	666.2	684.8	678.6	678.6
35°	4016.8	3121.1	1105.3	759.2	638.9	583.0	597.9	633.9	666.2	672.4	672.4
37.5°	4498.1	3443.6	1114.0	767.9	627.7	559.5	566.9	597.9	640.1	660.0	664.9
40°	5045.1	3819.5	1163.6	759.2	615.3	539.6	540.9	564.4	601.6	631.4	641.3
42.5°	5609.6	4258.7	1255.4	726.9	604.1	522.3	518.5	534.7	559.5	580.6	589.2
45°	6146.7	4710.2	1346.0	682.3	590.5	504.9	496.2	502.4	507.4	516.1	521.0
47.5°	6615.6	5027.8	1319.9	641.3	571.9	485.0	470.2	467.7	452.8	451.5	450.3
50°	6939.4	5097.2	1172.3	600.4	544.6	462.7	439.1	424.3	398.2	385.8	387.0
52.5°	7042.4	4823.1	957.7	559.5	499.9	432.9	399.4	375.9	343.6	332.5	331.2
55°	6905.9	4286.0	765.4	509.8	437.9	393.2	356.0	325.0	299.0	285.3	285.3
57.5°	6572.2	3602.4	605.4	451.5	372.2	348.6	311.4	280.4	258.0	244.4	241.9
60°	6018.9	2860.6	478.8	382.1	317.6	300.2	261.7	241.9	222.1	205.9	202.2
62.5°	5179.1	2041.9	375.9	302.7	265.5	245.6	223.3	208.4	184.8	162.5	158.8
65°	4041.6	1249.2	290.3	222.1	213.4	203.4	189.8	176.2	147.6	125.3	121.6
67.5°	2549.2	591.7	207.2	167.5	168.7	163.7	157.5	146.4	125.3	105.4	103.0
70°	1122.7	286.6	136.5	127.8	125.3	125.3	130.3	126.5	106.7	88.1	84.4
72.5°	382.1	153.8	101.7	96.8	90.6	89.3	109.2	105.4	85.6	68.2	64.5
75°	199.7	103.0	74.4	69.5	54.6	65.7	86.8	81.9	60.8	44.7	40.9
77.5°	130.3	73.2	50.9	44.7	31.0	43.4	64.5	57.1	36.0	22.3	19.8
80°	81.9	48.4	29.8	21.1	14.9	23.6	34.7	24.8	13.6	5.0	3.7
82.5°	43.4	24.8	11.2	7.4	6.2	7.4	8.7	6.2	2.5	0.0	0.0
85°	17.4	8.7	3.7	2.5	1.2	0.0	2.5	1.2	0.0	0.0	0.0
87.5°	6.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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)