

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: STREETWORKS

Report Number: P197344

Luminaire Tested: **NVN-AF-04-LED-U-T4W-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197344
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: NVN-AF-04-LED-U-T4W-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19673 lumens
Efficiency: N/A
Efficacy: 87.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G4

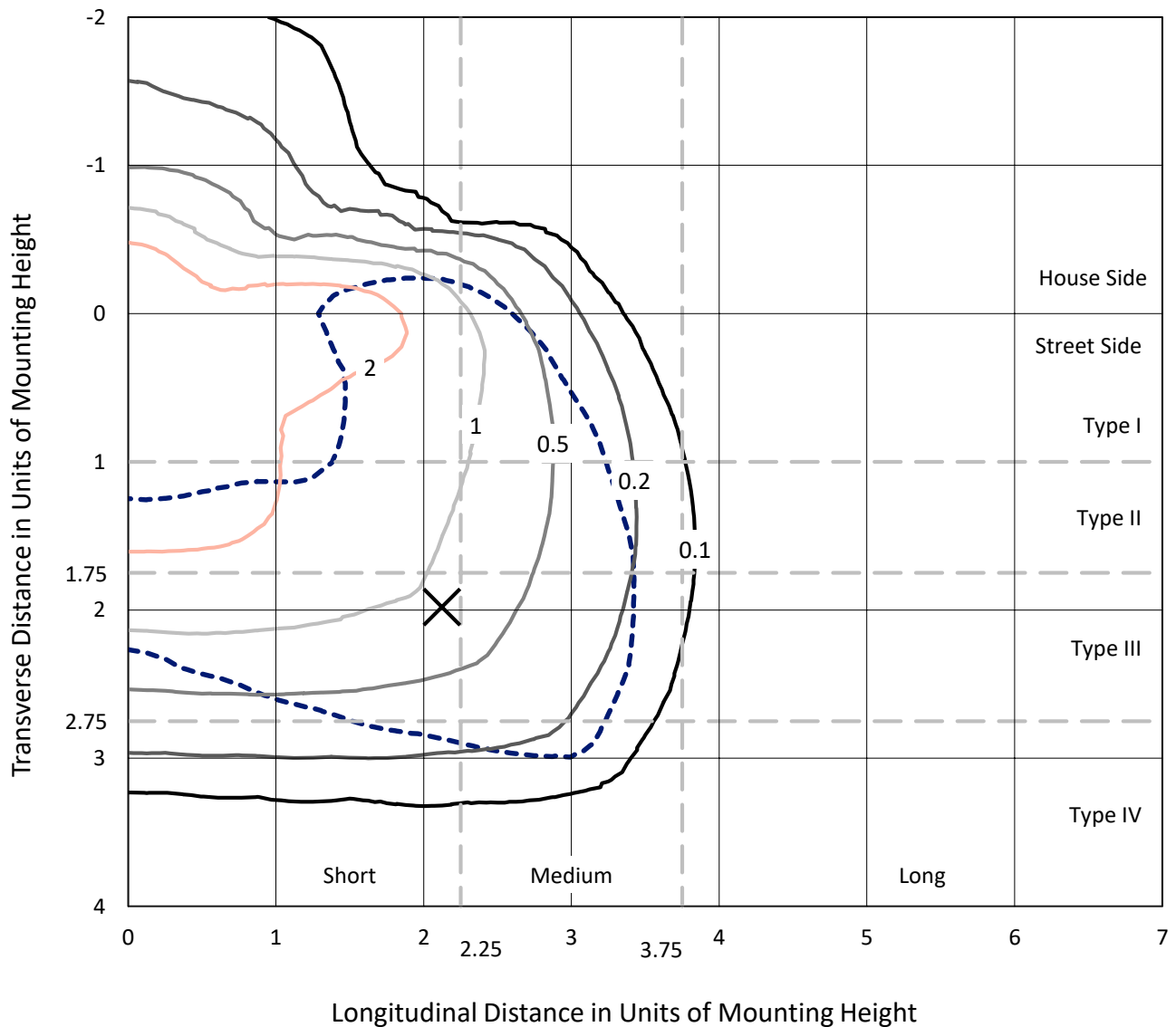
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

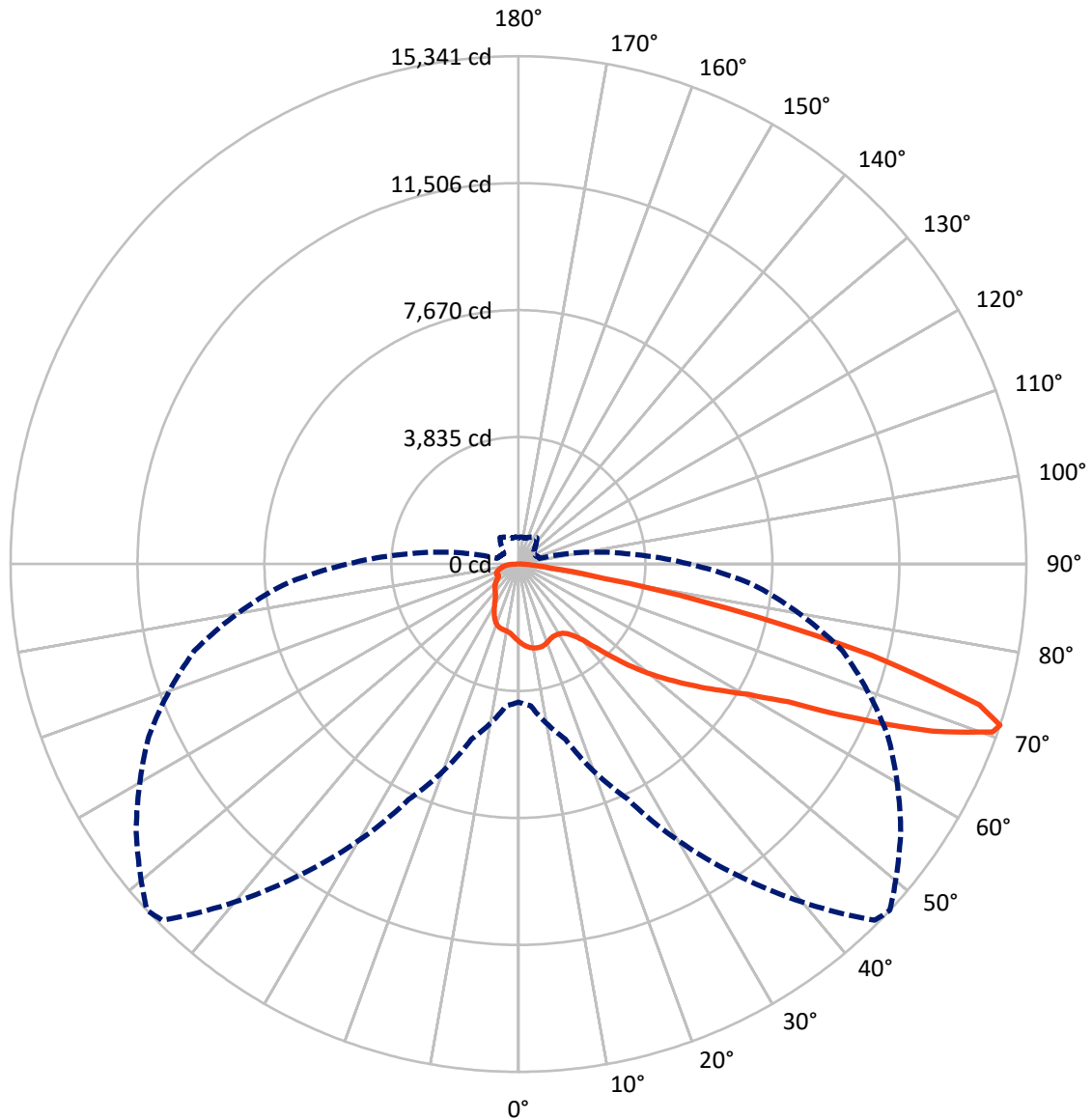
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4216.2	0.0	4216.2
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	15456.8	0.0	15456.8
	% Fixture	78.6	0.0	78.6
Total	Lumens	19673.0	0.0	19673.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.4	1.1
10°-20°	653.5	3.3
20°-30°	971.0	4.9
30°-40°	1394.3	7.1
40°-50°	2472.1	12.6
50°-60°	4230.1	21.5
60°-70°	6005.3	30.5
70°-80°	3289.1	16.7
80°-90°	434.2	2.2
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°	19673.0	100.0
0°-180°	19673.0	100.0



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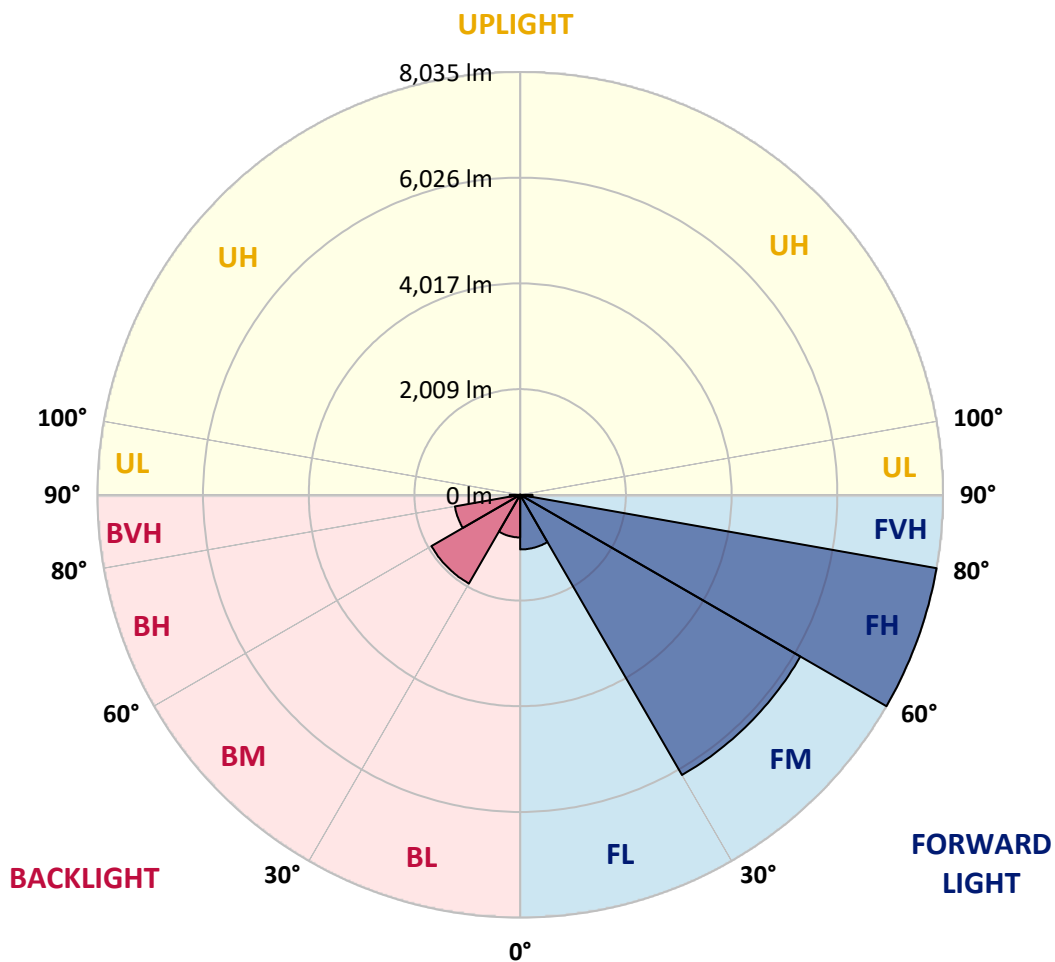
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1038.3	5.3			
FM	(30°-60°)	6148.4	31.3			
FH	(60°-80°)	8034.6	40.8			G4/12000
FVH	(80°-90°)	235.5	1.2			G3/500
BL	(0°-30°)	809.7	4.1	B2/1000		
BM	(30°-60°)	1948.1	9.9	B2/2500		
BH	(60°-80°)	1259.7	6.4	B3/2500		G3/2500
BVH	(80°-90°)	198.7	1.0			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4
2.5°	2482.2	2477.1	2479.7	2470.8	2449.1	2426.1	2426.1	2401.9	2376.4	2350.9	2322.9
5°	2636.5	2628.9	2622.5	2594.4	2552.4	2505.2	2497.5	2449.1	2396.8	2344.5	2293.6
7.5°	2765.3	2757.6	2738.5	2687.5	2626.3	2556.2	2547.3	2483.5	2414.7	2342.0	2270.6
10°	2857.1	2852.0	2815.0	2750.0	2678.6	2595.7	2580.4	2515.4	2433.8	2343.3	2252.8
12.5°	2908.1	2900.4	2855.8	2779.3	2695.1	2611.0	2595.7	2533.2	2440.2	2340.7	2234.9
15°	2887.7	2883.8	2841.8	2764.0	2679.8	2607.2	2594.4	2530.7	2436.3	2331.8	2218.3
17.5°	2801.0	2809.9	2776.7	2700.2	2631.4	2580.4	2566.4	2506.5	2417.2	2310.1	2192.8
20°	2681.1	2691.3	2674.7	2597.0	2557.5	2524.3	2516.7	2468.2	2385.3	2278.3	2162.2
22.5°	2553.6	2562.6	2563.8	2491.2	2478.4	2465.7	2459.3	2424.9	2357.3	2259.1	2141.8
25°	2465.7	2475.9	2478.4	2414.7	2422.3	2426.1	2424.9	2400.6	2352.2	2259.1	2144.4
27.5°	2442.7	2447.8	2445.3	2386.6	2400.6	2422.3	2423.6	2418.5	2372.6	2284.6	2180.1
30°	2521.8	2524.3	2492.4	2404.5	2418.5	2446.5	2447.8	2445.3	2415.9	2350.9	2260.4
32.5°	2863.4	2860.9	2751.2	2524.3	2475.9	2486.1	2489.9	2512.8	2515.4	2460.6	2376.4
35°	3383.6	3382.3	3254.8	2867.3	2639.1	2585.5	2590.6	2626.3	2658.2	2621.2	2572.8
37.5°	3956.0	3959.9	3882.1	3356.8	2990.9	2767.8	2762.7	2789.5	2846.9	2859.6	2866.0
40°	4590.9	4610.1	4606.2	3919.1	3484.3	3078.9	3027.9	2997.3	3108.2	3178.3	3268.9
42.5°	5316.4	5311.3	5313.8	4536.1	4047.8	3568.5	3474.1	3331.3	3460.1	3581.2	3780.1
45°	5939.8	5960.2	5975.5	5192.7	4678.9	4128.1	4032.5	3772.4	3888.5	4069.5	4372.9
47.5°	6567.0	6531.3	6559.4	5923.2	5381.4	4766.9	4643.2	4292.6	4401.0	4656.0	5117.5
50°	7297.6	7281.0	7153.5	6876.8	6230.5	5414.5	5252.6	4835.7	4993.8	5334.2	6036.7
52.5°	7952.9	7863.6	7764.2	7626.5	7065.5	6069.8	5864.6	5400.5	5691.2	6113.2	7177.7
55°	8192.5	8132.6	8252.5	8430.9	7949.0	6737.9	6508.4	6059.6	6477.8	7004.3	8520.2
57.5°	8447.5	8467.9	8738.2	9099.0	8785.4	7450.5	7201.9	6839.9	7340.9	8001.3	10020.7
60°	8575.0	8656.6	9195.9	9872.9	9580.9	8232.1	7993.6	7736.1	8298.4	9102.8	11517.5
62.5°	8596.7	8706.3	9470.0	10144.4	10676.0	9429.2	9153.8	8874.6	9494.2	10320.3	12601.2
65°	8198.9	8367.2	9445.8	10478.4	11674.3	11429.5	11254.9	10767.8	11095.5	11392.5	12786.0
67.5°	7029.8	7213.4	8511.3	10340.7	12474.9	13505.1	13471.9	12752.9	12332.1	11806.9	11415.5
70°	5159.5	5307.4	6554.3	8840.2	12125.6	15134.4	15193.0	14039.2	12677.6	10927.2	8488.3
71°	4172.8	4300.3	5475.7	7848.3	11444.8	15218.5	15340.9	14096.6	12318.1	10132.9	7106.3
72.5°	2597.0	2668.4	3636.0	5923.2	9855.0	14351.6	14558.1	13362.3	11186.0	8564.8	5023.1
75°	980.4	1008.4	1348.8	2612.3	5882.4	10781.9	11031.7	10098.5	7858.5	4889.3	2102.3
77.5°	526.5	540.6	669.3	1086.2	2357.3	6180.7	6502.0	5760.0	3769.9	1710.9	859.3
80°	353.1	362.1	462.8	643.8	1083.7	2353.5	2621.2	2312.7	1411.3	976.6	612.0
82.5°	228.2	233.3	314.9	423.3	699.9	827.4	944.7	986.8	881.0	699.9	369.7
85°	150.4	154.3	207.8	270.3	433.5	408.0	418.2	546.9	600.5	461.5	188.7
87.5°	86.7	89.2	124.9	139.0	195.1	153.0	165.7	260.1	357.0	300.9	108.4
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°	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4	2339.4
2.5°	2310.1	2299.9	2277.0	2263.0	2256.6	2254.0	2251.5	2256.6	2256.6	2254.0	2248.9
5°	2268.1	2248.9	2210.7	2183.9	2169.9	2166.1	2171.2	2177.5	2181.4	2181.4	2177.5
7.5°	2237.5	2209.4	2158.4	2121.4	2099.8	2093.4	2107.4	2130.4	2145.7	2153.3	2154.6
10°	2212.0	2173.7	2117.6	2079.4	2061.5	2059.0	2076.8	2106.1	2138.0	2152.0	2154.6
12.5°	2189.0	2145.7	2084.5	2048.8	2036.0	2042.4	2066.6	2093.4	2130.4	2150.8	2152.0
15°	2167.3	2122.7	2057.7	2020.7	2018.2	2028.4	2051.3	2073.0	2101.0	2126.5	2126.5
17.5°	2141.8	2093.4	2025.8	1991.4	1991.4	2000.3	2015.6	2027.1	2044.9	2069.2	2067.9
20°	2111.2	2061.5	1992.7	1957.0	1949.3	1944.2	1944.2	1946.8	1962.1	1983.8	1987.6
22.5°	2088.3	2037.3	1964.6	1921.3	1886.9	1853.7	1839.7	1834.6	1848.6	1869.0	1874.1
25°	2088.3	2037.3	1955.7	1883.0	1798.9	1735.1	1708.4	1700.7	1714.7	1733.9	1741.5
27.5°	2122.7	2071.7	1976.1	1848.6	1694.3	1592.4	1560.5	1554.1	1566.9	1582.2	1589.8
30°	2203.0	2153.3	2034.7	1809.1	1578.3	1444.5	1408.8	1402.4	1408.8	1415.1	1424.1
32.5°	2336.9	2294.8	2130.4	1773.4	1461.0	1310.6	1267.3	1257.1	1259.6	1260.9	1268.5
35°	2554.9	2535.8	2257.9	1731.3	1350.1	1201.0	1156.3	1135.9	1134.7	1141.0	1150.0
37.5°	2888.9	2900.4	2422.3	1670.1	1258.3	1123.2	1078.6	1058.2	1048.0	1060.7	1070.9
40°	3360.6	3387.4	2612.3	1587.3	1183.1	1077.3	1030.1	1011.0	997.0	993.2	998.2
42.5°	3973.9	3966.2	2806.1	1481.4	1101.5	1046.7	997.0	976.6	953.6	924.3	917.9
45°	4700.6	4590.9	2968.0	1351.4	1008.4	1017.4	966.4	938.3	902.6	859.3	854.2
47.5°	5558.6	5256.4	3067.4	1212.4	921.8	979.1	932.0	888.6	836.3	808.3	804.5
50°	6592.5	6035.4	3137.5	1070.9	844.0	930.7	883.5	826.1	775.1	767.5	766.2
52.5°	7816.4	6954.6	3224.2	943.4	782.8	868.2	835.1	776.4	735.6	739.4	739.4
55°	9118.1	7905.7	3226.8	842.7	729.2	795.5	799.4	752.2	720.3	733.1	736.9
57.5°	10305.1	8736.9	2973.1	771.3	678.2	738.2	787.9	761.1	736.9	781.5	785.3
60°	11340.3	9376.9	2427.4	712.7	636.2	716.5	813.4	815.9	810.8	932.0	940.9
62.5°	11718.9	9383.3	1723.7	663.0	613.2	729.2	866.9	870.8	870.8	983.0	999.5
65°	11188.6	8601.8	1147.4	633.6	597.9	757.3	910.3	893.7	854.2	932.0	914.1
67.5°	9319.5	6695.8	838.9	614.5	576.3	758.6	948.5	906.5	838.9	905.2	874.6
70°	6405.1	4260.7	702.5	596.7	550.8	725.4	968.9	902.6	815.9	844.0	803.2
71°	5155.7	3400.2	666.8	590.3	540.6	706.3	971.5	897.5	804.5	822.3	785.3
72.5°	3396.3	2094.7	623.4	576.3	525.3	673.1	965.1	886.1	789.2	790.4	766.2
75°	1339.9	868.2	561.0	544.4	481.9	619.6	937.1	861.8	759.8	734.3	724.1
77.5°	677.0	567.3	493.4	499.8	430.9	564.8	897.5	822.3	719.0	684.6	677.0
80°	494.7	430.9	422.0	433.5	373.5	511.2	847.8	768.8	666.8	702.5	687.2
82.5°	300.9	262.6	330.2	358.2	312.4	456.4	789.2	706.3	600.5	553.3	535.5
85°	142.8	154.3	238.4	263.9	230.8	364.6	721.6	637.5	524.0	452.6	460.2
87.5°	70.1	85.4	136.4	158.1	151.7	267.7	544.4	494.7	413.1	340.4	332.7
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)