

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: P962998

Luminaire Tested: **NAV-SB2D-735-U-T4W-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P962998
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-2)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-735-U-T4W-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV WIDE
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16067.9 lumens
Efficiency: N/A
Efficacy: 108.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G4

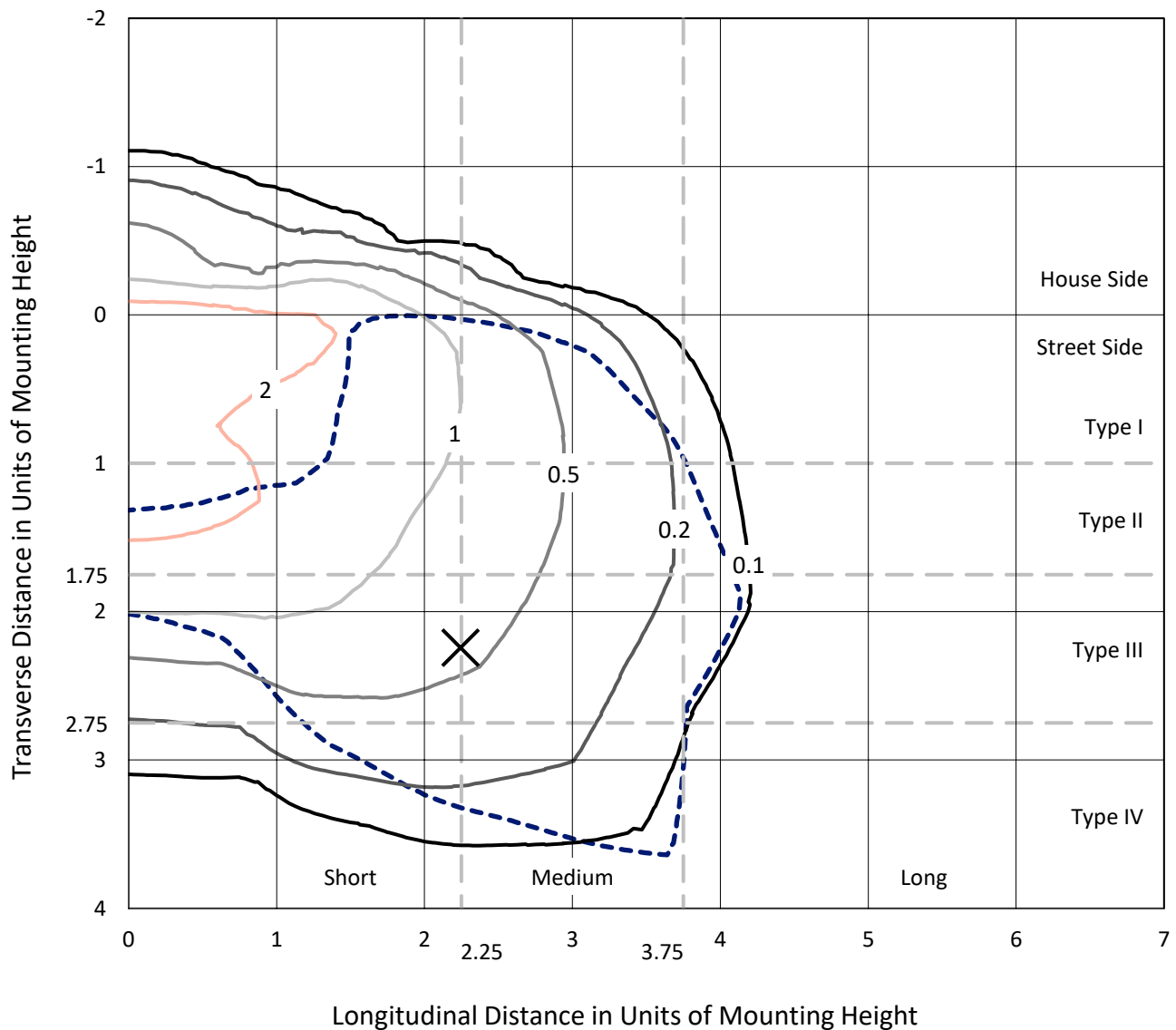
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P962998
CATALOG NUMBER: NAV-SB2D-735-U-T4W-HSS

Iso-Footcandle Lines of Horizontal Illumination

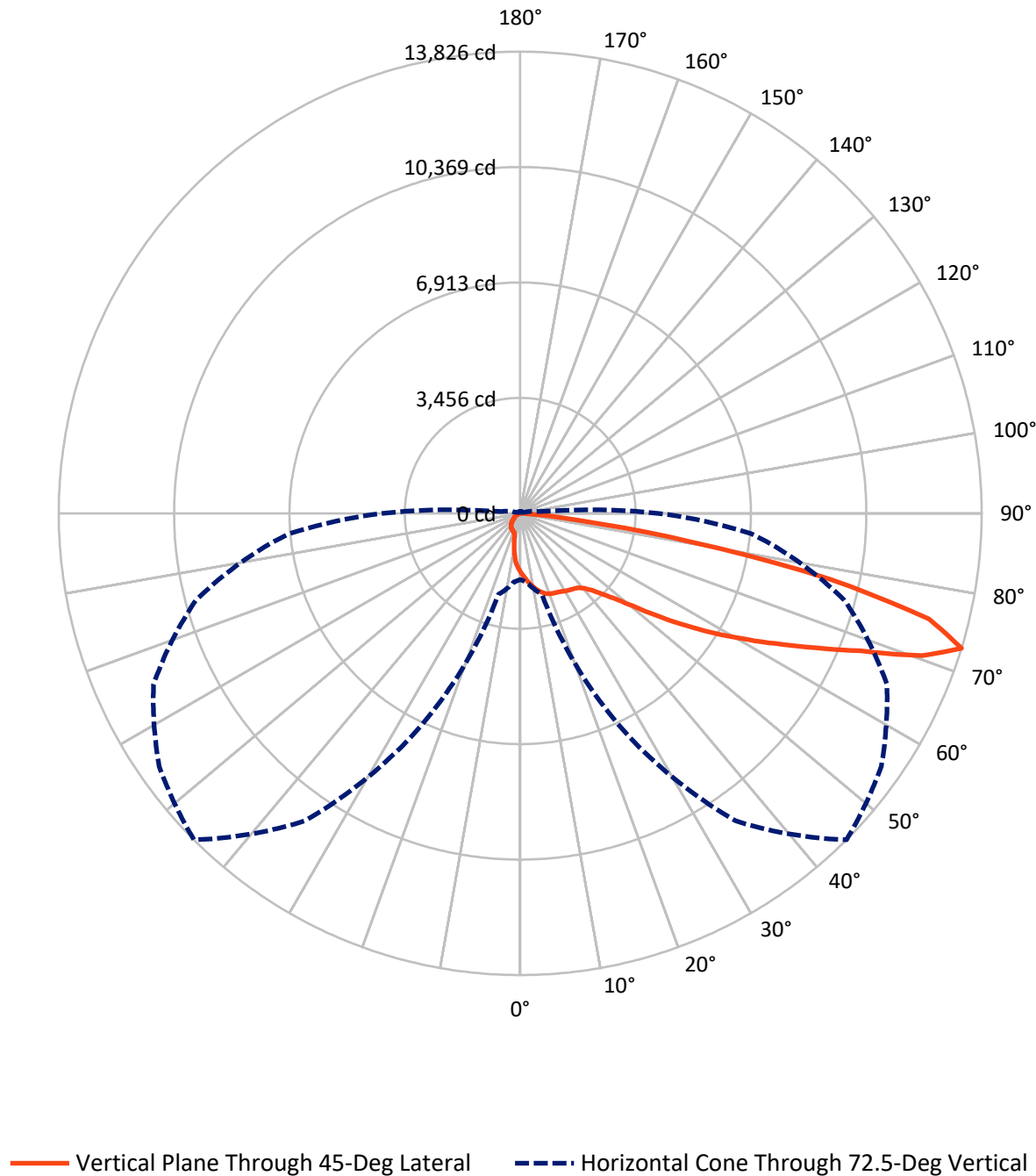
× Max cd
- - - 1/2 Max cd



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

REPORT NUMBER: P962998
CATALOG NUMBER: NAV-SB2D-735-U-T4W-HSS

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1688.3	0.0	1688.3
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	14379.6	0.0	14379.6
	% Fixture	89.5	0.0	89.5
Total	Lumens	16067.9	0.0	16067.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.9	1.0
10°-20°	484.7	3.0
20°-30°	796.0	5.0
30°-40°	1128.9	7.0
40°-50°	1865.9	11.6
50°-60°	3351.9	20.9
60°-70°	4654.4	29.0
70°-80°	3376.1	21.0
80°-90°	244.1	1.5
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°	16067.9	100.0
0°-180°	16067.9	100.0

Coefficient of Utilization



REPORT NUMBER: P962998

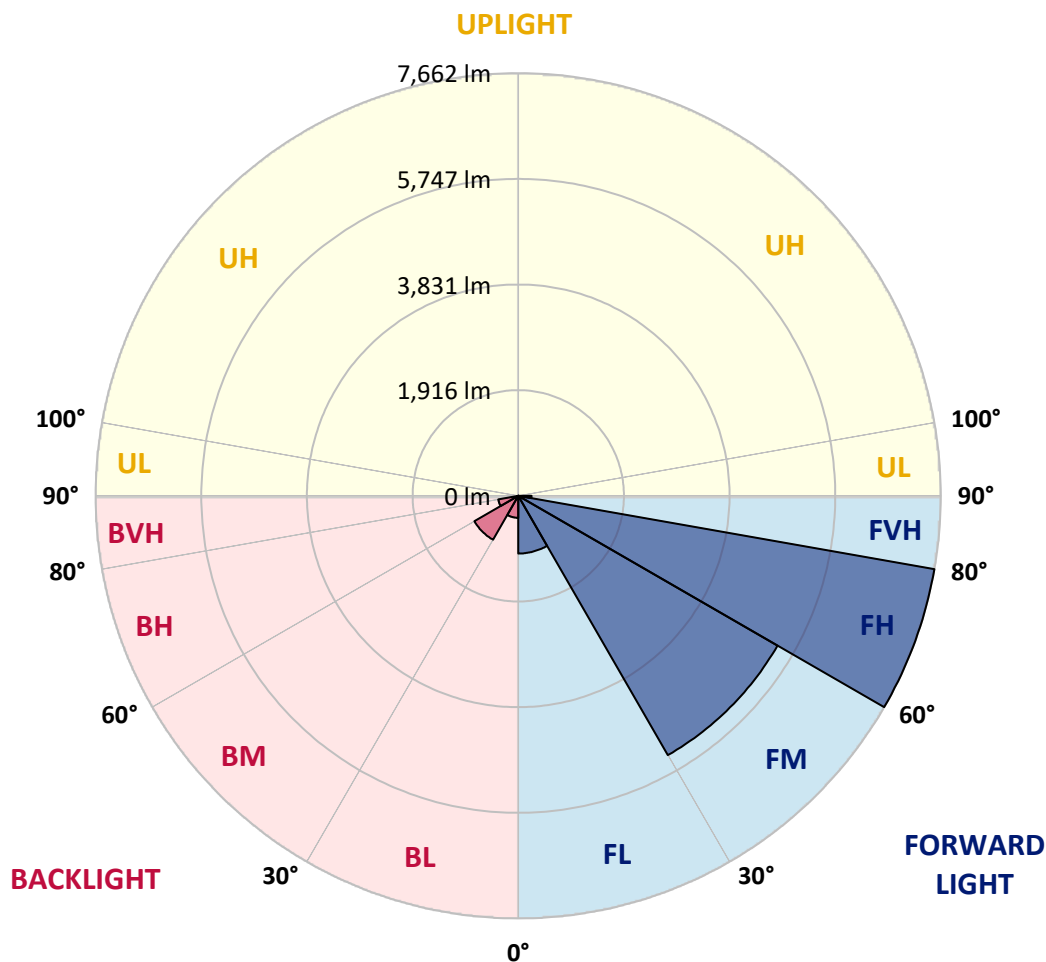
CATALOG NUMBER: NAV-SB2D-735-U-T4W-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1046.7	6.5			
FM	(30°-60°)	5428.6	33.8			
FH	(60°-80°)	7662.3	47.7			G4/12000
FVH	(80°-90°)	242.0	1.5			G3/500
BL	(0°-30°)	399.9	2.5	B1/500		
BM	(30°-60°)	918.2	5.7	B1/1000		
BH	(60°-80°)	368.2	2.3	B1/500		G1/500
BVH	(80°-90°)	2.1	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G4

Type IV Short



REPORT NUMBER: P962998

CATALOG NUMBER: NAV-SB2D-735-U-T4W-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1922.6	1925.9	1923.7	1910.5	1888.6	1876.6	1869.9	1848.0	1833.7	1808.5	1782.2
5°	2099.2	2112.3	2104.6	2078.3	2036.7	2007.1	1998.2	1953.3	1912.8	1865.6	1810.8
7.5°	2286.7	2293.3	2279.0	2245.1	2189.1	2138.7	2131.0	2068.4	2003.8	1931.4	1856.8
10°	2449.0	2456.7	2434.8	2385.4	2321.8	2259.3	2248.3	2179.3	2102.5	2013.6	1918.2
12.5°	2585.0	2592.7	2564.1	2505.0	2434.8	2370.1	2359.1	2286.7	2202.2	2103.5	1985.1
15°	2688.2	2702.4	2664.0	2600.4	2524.7	2460.0	2454.5	2383.2	2300.9	2191.2	2065.2
17.5°	2748.4	2762.7	2726.5	2649.7	2585.0	2530.2	2523.7	2464.4	2387.6	2282.4	2143.1
20°	2758.3	2771.5	2733.1	2666.2	2612.4	2568.5	2565.3	2522.5	2466.6	2365.7	2227.5
22.5°	2728.7	2745.2	2710.1	2656.3	2619.0	2596.0	2591.6	2567.5	2535.6	2450.2	2306.5
25°	2698.0	2711.1	2684.8	2637.6	2618.0	2615.7	2619.0	2614.7	2608.0	2535.6	2398.6
27.5°	2695.7	2710.1	2680.5	2635.5	2624.5	2647.6	2650.9	2671.7	2677.2	2613.5	2487.4
30°	2714.4	2724.3	2695.7	2648.6	2643.2	2695.7	2696.9	2734.2	2743.0	2679.4	2575.1
32.5°	2755.0	2766.0	2737.5	2668.4	2660.7	2734.2	2737.5	2786.9	2801.1	2749.6	2667.3
35°	2850.4	2863.6	2830.7	2723.2	2695.7	2770.4	2780.2	2838.3	2866.9	2824.1	2762.7
37.5°	3088.4	3050.1	3005.1	2834.0	2775.9	2827.4	2843.9	2911.8	2962.4	2912.9	2876.8
40°	3679.5	3558.9	3418.6	3022.6	2916.2	2949.1	2962.4	3030.3	3099.4	3051.1	3033.6
42.5°	4566.9	4424.3	4198.3	3456.9	3127.9	3144.4	3154.2	3213.5	3311.1	3272.7	3277.0
45°	5357.6	5306.0	5075.7	4198.3	3523.8	3442.7	3454.8	3485.4	3629.1	3614.9	3643.4
47.5°	5965.2	5935.6	5757.9	5049.4	4192.9	3807.9	3841.9	3856.2	4063.4	4113.8	4190.6
50°	6432.4	6421.4	6262.4	5806.1	5067.0	4346.4	4358.5	4327.8	4638.1	4763.2	4909.0
52.5°	6873.2	6910.6	6793.2	6509.2	6000.2	5051.6	5049.4	4904.6	5323.5	5512.2	5761.2
55°	7271.5	7284.6	7296.7	7226.5	6939.0	5854.4	5833.6	5596.7	6118.7	6314.0	6583.8
57.5°	7645.4	7650.9	7758.3	7902.0	7916.3	6716.4	6678.1	6394.1	6987.3	7126.6	7292.3
60°	7896.6	7921.8	8148.7	8548.0	8722.4	7605.9	7585.1	7295.5	7871.3	7936.1	7905.3
62.5°	7534.7	7688.2	8260.7	9052.5	9483.5	8591.9	8582.0	8310.0	8801.4	8748.7	8485.5
65°	6099.0	6358.9	7365.8	9393.6	10230.4	9693.0	9707.3	9417.7	9756.7	9585.5	8957.1
67.5°	4266.4	4540.5	5731.6	9421.0	11065.1	10986.1	11068.4	10614.3	10771.1	10387.2	9069.0
70°	2950.3	3091.7	3867.1	8831.0	11715.4	12767.2	12765.0	12083.9	11780.1	10752.5	8498.7
72.5°	1984.0	2057.5	2511.6	7006.0	11237.3	13825.5	13762.0	13207.0	12120.1	10056.1	6943.5
75°	836.8	890.5	1162.6	3937.3	8890.2	12648.7	12476.5	11671.6	10769.0	7918.5	4332.2
77.5°	265.4	288.4	458.5	1409.3	4896.9	9507.7	9325.7	7289.0	7217.6	3972.4	1583.7
80°	126.1	147.0	257.7	565.9	1927.0	5171.1	5145.9	3306.6	3104.9	1072.7	318.1
82.5°	54.8	64.7	142.6	302.7	862.0	1844.7	1882.0	1125.2	931.1	406.9	97.6
85°	17.5	23.1	65.8	139.3	364.1	458.5	452.9	267.6	375.0	221.5	34.0
87.5°	0.0	0.0	21.9	31.8	37.3	26.3	29.6	23.1	104.1	61.4	12.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P962998

CATALOG NUMBER: NAV-SB2D-735-U-T4W-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2	1760.2
2.5°	1769.0	1751.5	1720.8	1692.3	1667.1	1641.8	1626.5	1604.5	1602.4	1602.4	1607.8
5°	1781.1	1752.5	1697.7	1639.6	1572.8	1509.1	1445.6	1384.1	1364.4	1350.1	1356.7
7.5°	1816.2	1771.2	1684.6	1573.8	1446.6	1307.3	1209.7	1104.4	1063.8	1041.9	1045.2
10°	1866.6	1805.2	1673.6	1479.5	1273.4	1083.6	944.3	830.2	786.4	767.7	767.7
12.5°	1922.6	1846.9	1653.8	1362.1	1083.6	856.6	720.6	667.9	661.3	661.3	661.3
15°	1989.5	1897.4	1619.9	1224.0	885.1	677.8	629.6	631.7	638.3	642.7	642.7
17.5°	2058.6	1951.1	1566.2	1069.3	709.6	609.8	610.9	614.2	619.6	624.0	624.0
20°	2133.1	2004.8	1494.9	904.8	608.6	590.1	593.4	596.7	601.1	603.2	604.3
22.5°	2213.2	2055.3	1410.4	743.6	574.7	573.6	574.7	578.0	583.4	583.4	585.7
25°	2298.8	2111.2	1313.9	626.3	557.2	557.2	559.3	561.5	565.9	565.9	567.0
27.5°	2386.5	2162.8	1211.9	564.8	541.8	540.7	540.7	544.0	546.2	547.2	548.4
30°	2483.1	2223.1	1109.9	551.7	529.7	524.3	520.9	523.2	525.3	526.4	528.6
32.5°	2581.8	2281.2	1018.8	557.2	517.6	507.8	496.8	494.7	494.7	499.0	502.4
35°	2691.4	2344.8	948.6	575.7	511.1	483.7	466.1	456.2	457.4	463.9	467.2
37.5°	2823.1	2421.6	897.2	592.2	506.7	456.2	427.7	415.6	408.0	415.6	413.5
40°	2995.3	2534.6	859.9	605.4	501.2	424.5	386.0	366.3	352.1	356.4	354.2
42.5°	3248.5	2712.3	845.6	606.5	489.1	387.1	343.3	316.9	296.1	297.2	292.8
45°	3603.9	2993.0	919.1	592.2	462.8	346.6	298.3	263.2	250.1	246.7	242.4
47.5°	4090.9	3402.1	1089.1	562.6	424.5	307.1	254.4	224.8	214.9	209.5	206.2
50°	4743.4	3927.4	1277.7	529.7	386.0	269.8	218.2	199.6	193.0	187.6	186.4
52.5°	5500.2	4460.5	1432.3	496.8	347.7	236.9	195.3	184.3	178.8	174.4	173.3
55°	6194.4	4827.9	1423.6	461.8	310.4	210.5	178.8	172.2	165.6	161.2	159.0
57.5°	6626.5	4879.4	1173.5	423.3	267.6	189.7	163.4	159.0	151.4	145.9	144.7
60°	6825.1	4585.4	822.6	372.9	224.8	169.9	147.0	144.7	134.9	127.2	125.0
62.5°	6861.2	4039.3	548.4	310.4	187.6	151.4	130.5	127.2	114.1	100.9	94.3
65°	6714.3	3258.4	379.5	242.4	160.1	131.6	111.8	105.3	91.0	77.9	73.5
67.5°	6249.2	2287.8	264.3	174.4	136.0	104.1	88.9	86.6	75.6	64.7	61.4
70°	5397.0	1304.0	176.6	130.5	107.5	71.2	70.2	72.4	61.4	52.7	48.3
72.5°	4138.0	596.7	109.7	95.4	73.5	48.3	56.0	57.0	47.2	39.5	35.1
75°	2435.9	255.5	69.1	61.4	37.3	31.8	40.6	41.7	31.8	25.2	21.9
77.5°	829.1	96.6	43.9	36.2	18.7	17.5	26.3	26.3	17.5	9.8	7.7
80°	188.6	36.2	21.9	14.2	8.8	7.7	8.8	7.7	4.4	1.1	0.0
82.5°	53.7	14.2	8.8	5.4	3.3	3.3	1.1	0.0	0.0	0.0	0.0
85°	15.4	6.6	2.2	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	6.6	1.1	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)