

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: P963179

Luminaire Tested: **NAV-SB2D-835-U-T3R-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963179
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2411-289-6)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-835-U-T3R-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3500K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
ROADWAY OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16107.9 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

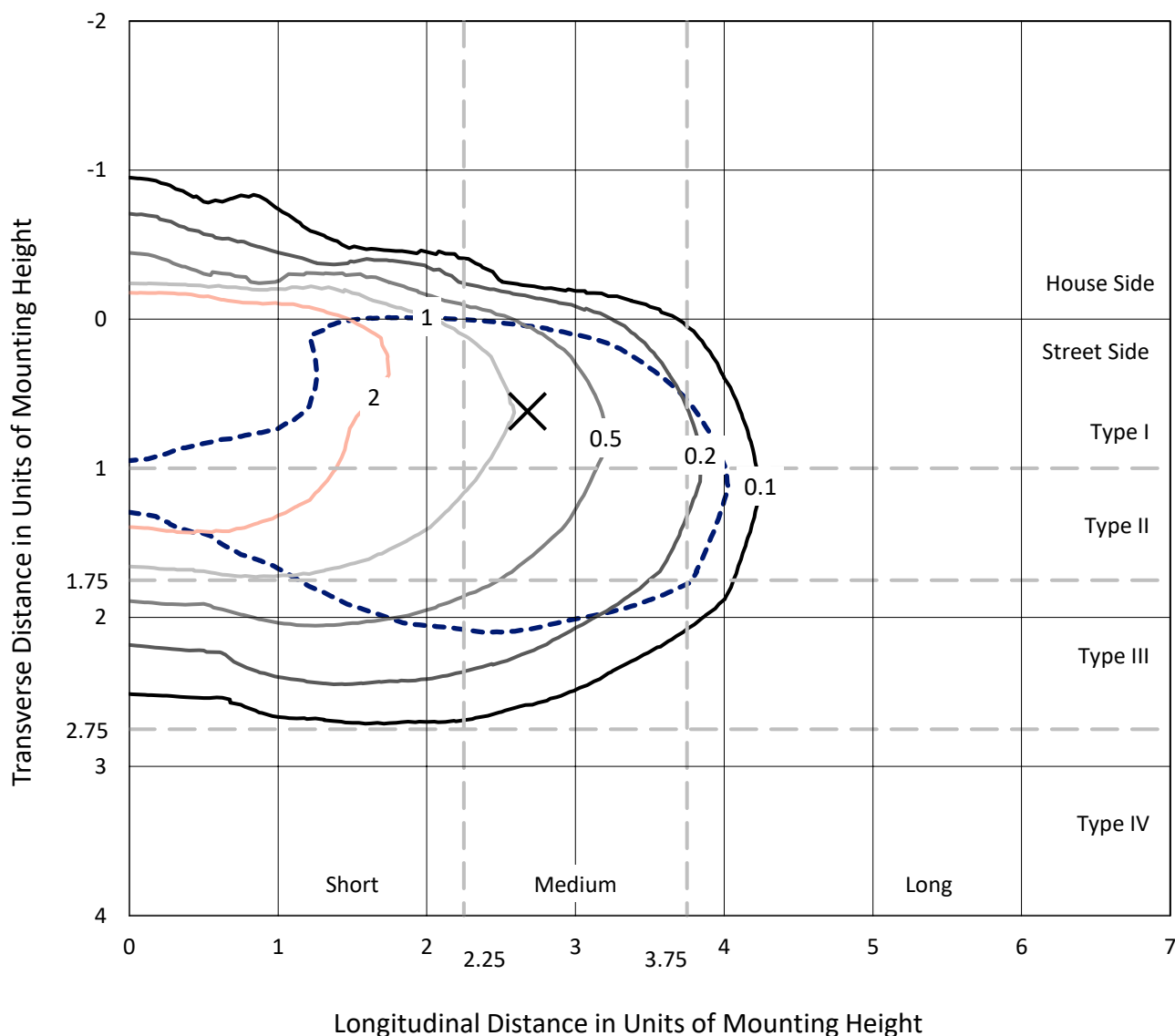
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

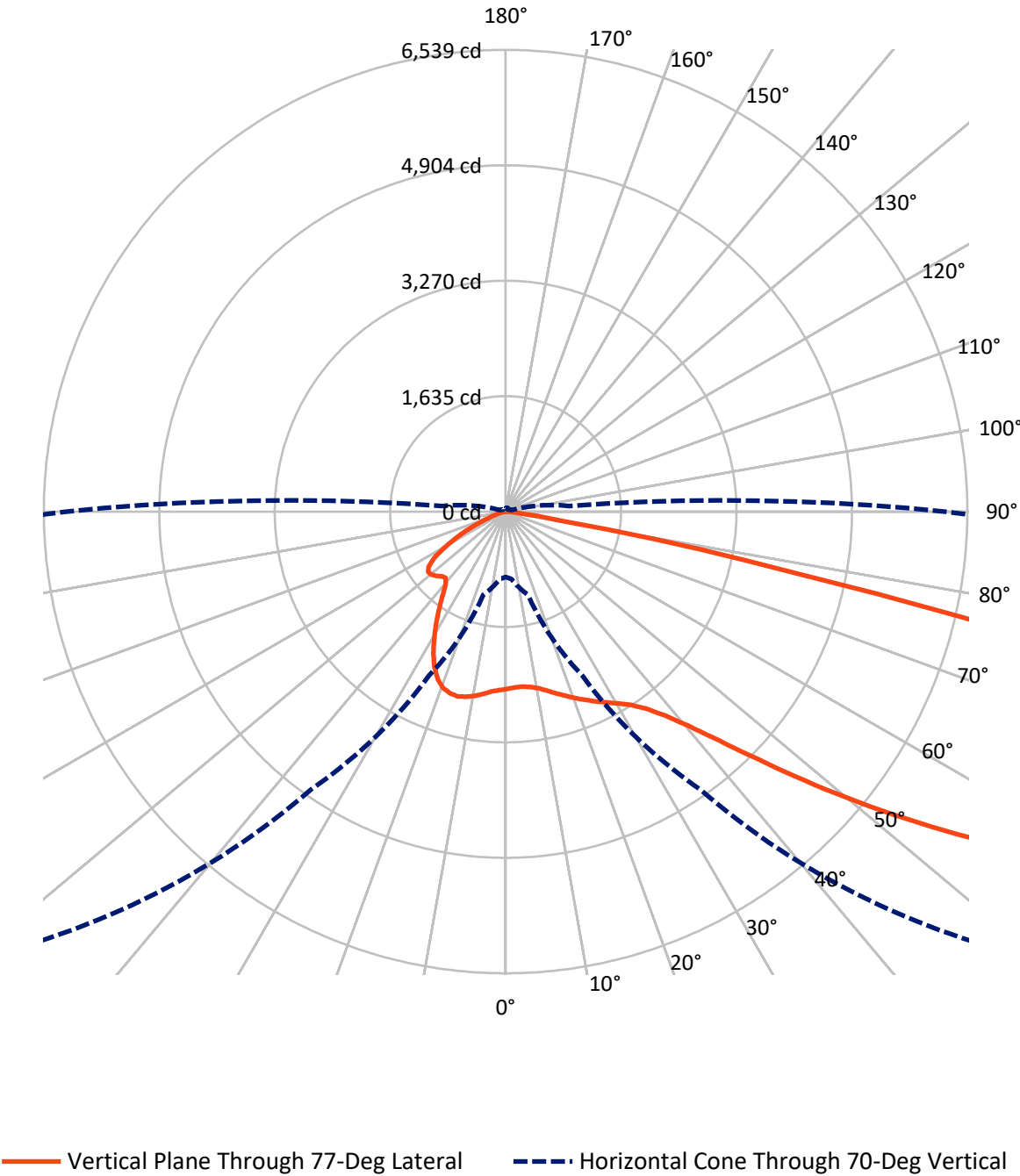
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1698.0	0.0	1698.0
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	14409.9	0.0	14409.9
	% Fixture	89.5	0.0	89.5
Total	Lumens	16107.9	0.0	16107.9
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.5	1.3
10°-20°	514.0	3.2
20°-30°	795.1	4.9
30°-40°	1442.7	9.0
40°-50°	2723.3	16.9
50°-60°	3934.9	24.4
60°-70°	4188.7	26.0
70°-80°	2219.7	13.8
80°-90°	72.9	0.5
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°	16107.9	100.0
0°-180°	16107.9	100.0

Coefficient of Utilization



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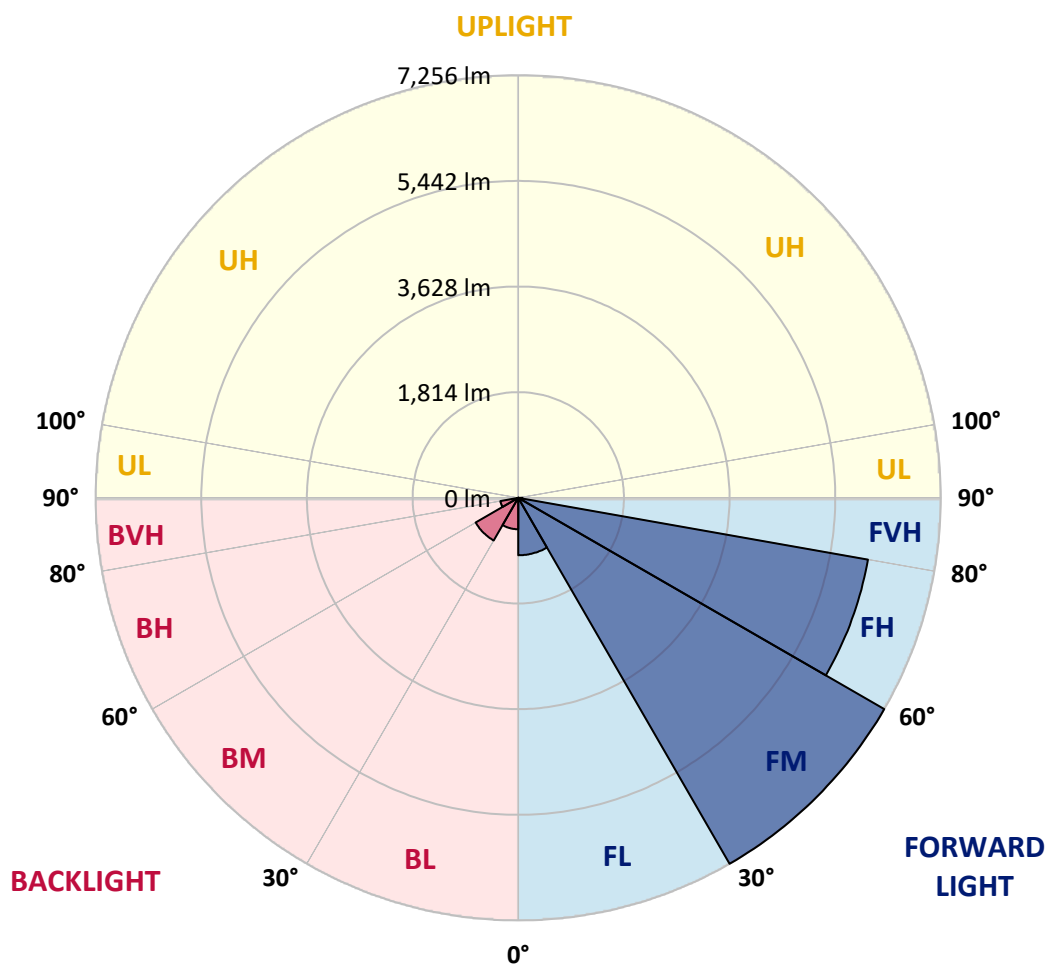
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	986.2	6.1			
FM	(30°-60°)	7255.7	45.0			
FH	(60°-80°)	6097.1	37.9			G3/7500
FVH	(80°-90°)	70.9	0.4			G1/100
BL	(0°-30°)	539.5	3.3	B2/1000		
BM	(30°-60°)	845.3	5.2	B1/1000		
BH	(60°-80°)	311.3	1.9	B1/500		G1/500
BVH	(80°-90°)	2.0	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 III Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77°	85°
0°	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6
2.5°	2358.9	2380.3	2377.3	2391.5	2396.6	2417.0	2437.2	2464.7	2495.3	2494.2	2514.5
5°	2225.7	2247.0	2252.1	2271.5	2295.9	2327.4	2369.1	2424.0	2481.0	2490.1	2530.8
7.5°	2068.0	2090.4	2103.6	2142.2	2187.0	2252.1	2320.3	2400.7	2495.3	2508.5	2586.8
10°	1910.3	1930.7	1948.0	2003.0	2074.1	2170.7	2281.6	2397.6	2524.8	2544.0	2655.0
12.5°	1812.7	1832.0	1851.4	1899.1	1987.7	2105.7	2256.2	2411.8	2573.6	2601.0	2747.5
15°	1778.1	1795.4	1810.7	1853.4	1935.8	2070.1	2251.1	2441.3	2635.6	2672.3	2859.4
17.5°	1783.2	1792.3	1802.6	1835.1	1915.4	2053.8	2260.2	2492.2	2708.9	2741.4	2971.3
20°	1812.7	1817.7	1818.8	1841.2	1912.3	2051.7	2278.6	2541.0	2778.1	2821.7	3082.2
22.5°	1850.3	1852.4	1850.3	1865.6	1931.7	2067.0	2303.0	2600.0	2855.3	2896.0	3194.1
25°	2026.3	1987.7	1938.8	1909.4	1964.2	2096.5	2339.6	2679.4	2939.8	2979.5	3303.0
27.5°	2572.5	2461.6	2286.7	2090.4	2031.3	2139.2	2390.5	2759.7	3025.2	3060.9	3419.9
30°	3459.6	3314.1	3017.1	2574.6	2247.0	2228.8	2456.6	2840.1	3115.8	3154.4	3545.1
32.5°	4348.7	4313.0	3970.2	3357.9	2732.2	2428.1	2566.5	2948.9	3235.8	3266.3	3713.9
35°	5247.9	5175.6	4894.9	4289.6	3479.9	2834.0	2749.6	3091.3	3393.5	3428.0	3960.1
37.5°	5936.5	5892.7	5718.8	5220.4	4366.9	3460.6	3062.9	3312.1	3622.4	3661.0	4275.4
40°	6544.8	6524.4	6465.5	6136.9	5358.7	4280.5	3550.1	3653.8	3939.7	3985.5	4661.9
42.5°	7022.9	7070.8	7104.3	7012.7	6381.0	5216.3	4205.2	4134.0	4382.2	4429.0	5154.2
45°	7512.2	7528.4	7663.7	7795.9	7396.2	6194.9	4943.7	4696.5	4932.5	4990.5	5744.2
47.5°	7826.5	7891.6	8129.7	8362.6	8249.7	7165.3	5737.1	5360.7	5570.3	5679.1	6405.4
50°	7849.9	7973.0	8300.6	8706.3	8871.2	8089.0	6599.8	6117.6	6340.3	6460.4	7111.3
52.5°	7460.3	7651.5	8159.1	8753.2	9206.9	8871.2	7491.8	6874.4	7160.2	7316.9	7843.8
55°	5719.8	5970.1	7627.1	8498.9	9220.1	9464.2	8360.5	7662.7	8073.7	8250.6	8635.2
57.5°	4983.3	5109.5	5996.6	8057.4	8974.9	9703.3	9145.9	8413.4	9067.6	9287.2	9382.8
60°	4146.2	4312.0	5029.2	7335.2	8642.3	9726.6	9839.6	9381.8	10144.7	10392.0	10068.5
62.5°	2817.7	2997.7	3710.8	6094.1	8187.6	9715.5	10408.3	10378.7	11342.0	11607.5	10649.3
65°	1745.6	1858.4	2328.4	4976.3	7551.9	9727.7	11003.3	11589.2	12605.4	12875.0	11098.9
67.5°	1379.3	1431.2	1676.4	3820.7	6456.3	9453.1	11597.4	12727.5	13794.6	14008.2	11236.3
70°	926.7	958.3	1219.6	2561.4	4803.4	8185.5	11586.2	13299.2	14406.9	14513.7	10735.7
72.5°	488.3	512.7	713.1	1186.1	2901.2	5818.5	9766.3	12615.6	13797.6	13636.9	9176.3
75°	244.2	284.8	480.1	602.2	1239.0	3244.9	6064.7	9946.4	10859.9	10237.3	5887.7
77.5°	185.1	223.8	396.7	396.7	431.3	1092.4	2568.4	5424.8	5003.7	4166.5	1728.3
80°	118.0	152.6	346.9	300.1	180.1	277.7	669.3	1519.8	1063.0	808.7	314.4
82.5°	69.2	99.7	288.8	198.3	100.7	102.7	189.2	323.5	275.6	214.6	96.7
85°	27.5	65.1	198.3	78.3	39.7	25.4	57.0	69.2	57.0	42.7	24.4
87.5°	0.0	15.3	34.5	0.0	3.1	2.0	4.1	5.1	5.1	4.1	8.1
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°	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6	2512.6
2.5°	2523.8	2525.8	2531.9	2532.9	2518.6	2500.3	2493.2	2490.1	2477.9	2476.9	2479.0
5°	2554.2	2563.4	2554.2	2527.8	2464.7	2376.3	2309.1	2254.2	2204.4	2189.1	2179.9
7.5°	2615.3	2624.4	2596.9	2493.2	2334.5	2158.5	1999.9	1887.9	1787.3	1749.6	1734.4
10°	2702.7	2714.9	2628.5	2419.0	2138.1	1855.5	1586.9	1397.7	1250.2	1190.1	1164.7
12.5°	2812.6	2817.7	2645.8	2306.0	1882.9	1479.1	1098.6	896.2	765.0	716.2	700.9
15°	2933.7	2926.6	2647.8	2152.4	1534.9	1045.7	717.2	589.0	536.1	519.8	519.8
17.5°	3060.9	3031.3	2607.2	1930.7	1153.5	715.1	532.0	501.5	492.3	488.3	487.3
20°	3185.9	3119.8	2532.9	1640.8	828.0	534.0	483.2	474.1	468.9	466.9	464.8
22.5°	3299.9	3186.9	2405.8	1304.1	601.2	472.0	456.7	448.6	439.4	435.4	434.4
25°	3410.8	3225.6	2226.7	989.7	481.1	441.5	429.3	414.0	401.8	396.7	394.7
27.5°	3518.6	3250.1	2003.0	732.4	429.3	413.0	390.6	369.2	360.1	358.0	356.0
30°	3633.5	3258.2	1748.6	546.2	397.7	377.4	344.8	320.4	315.3	316.3	316.3
32.5°	3773.8	3270.4	1492.3	447.6	371.3	334.7	296.0	270.6	266.5	270.6	269.6
35°	3941.7	3294.8	1245.1	411.9	347.9	290.9	249.2	227.9	223.8	226.8	225.8
37.5°	4169.6	3334.4	1014.1	404.9	328.5	254.3	209.5	192.3	192.3	193.3	192.3
40°	4472.7	3440.2	807.7	399.7	318.4	226.8	177.0	169.8	172.9	175.0	175.0
42.5°	4842.0	3665.1	668.3	393.7	307.2	214.6	160.7	157.6	162.8	164.8	164.8
45°	5256.0	3949.8	619.5	383.5	297.0	222.7	153.6	149.5	155.6	156.6	157.6
47.5°	5684.2	4228.6	613.4	372.3	286.9	234.9	151.6	142.4	149.5	150.6	151.6
50°	6117.6	4410.7	619.5	355.1	270.6	234.9	152.6	135.3	141.3	144.4	145.4
52.5°	6554.0	4494.1	615.4	317.3	242.1	220.8	152.6	129.1	135.3	137.4	137.4
55°	6977.1	4477.8	553.4	261.4	205.5	195.3	148.5	124.1	128.1	129.1	129.1
57.5°	7311.8	4251.0	438.4	203.5	166.9	162.8	135.3	118.0	121.1	120.0	120.0
60°	7486.7	3752.5	313.3	156.6	131.2	128.1	119.0	109.9	111.9	106.8	105.8
62.5°	7488.8	3093.3	209.5	124.1	104.8	101.7	101.7	98.7	96.7	86.5	83.4
65°	7329.1	2362.0	139.4	98.7	84.5	79.3	85.5	84.5	77.3	63.0	61.0
67.5°	6966.9	1548.3	105.8	77.3	65.1	62.0	68.2	71.2	66.1	52.9	51.9
70°	6222.4	901.3	87.4	60.1	48.8	45.8	54.9	61.0	54.9	42.7	40.7
72.5°	5168.5	486.3	71.2	44.8	33.5	30.5	43.8	49.8	43.8	31.6	30.5
75°	3353.8	260.5	54.9	29.5	17.3	19.4	32.6	36.6	30.5	20.3	18.3
77.5°	1126.1	114.9	34.5	14.2	8.1	8.1	19.4	22.3	14.2	7.1	6.1
80°	251.2	47.8	14.2	6.1	3.1	3.1	4.1	4.1	2.0	0.0	0.0
82.5°	82.4	19.4	6.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	31.6	7.1	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	12.2	1.0	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)