

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: P963122

Luminaire Tested: **NAV-SB2D-827-U-T4W-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963122
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-827-U-T4W-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 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: 13971.8 lumens
Efficiency: N/A
Efficacy: 94.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

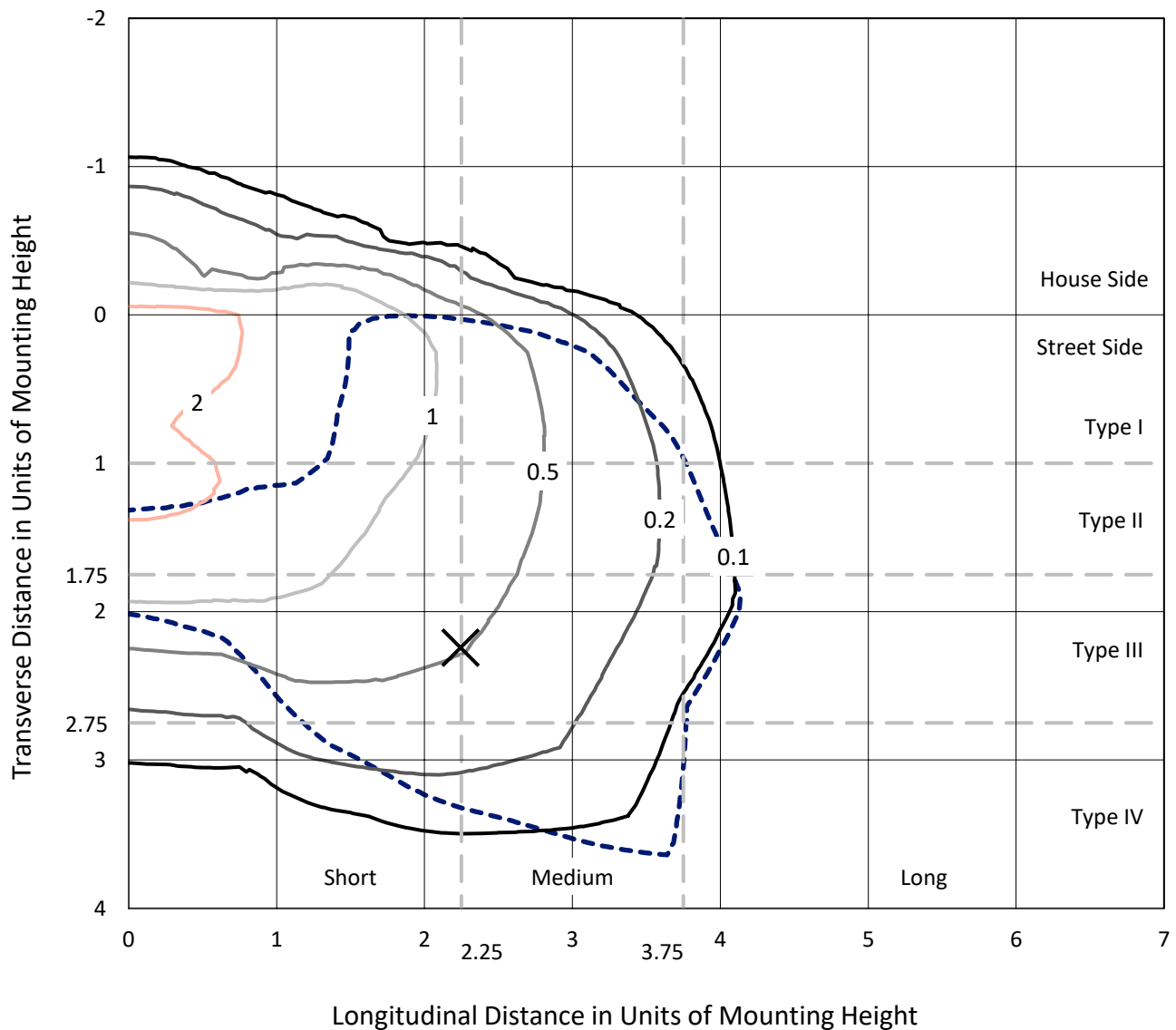
Input Watts (W): 147.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

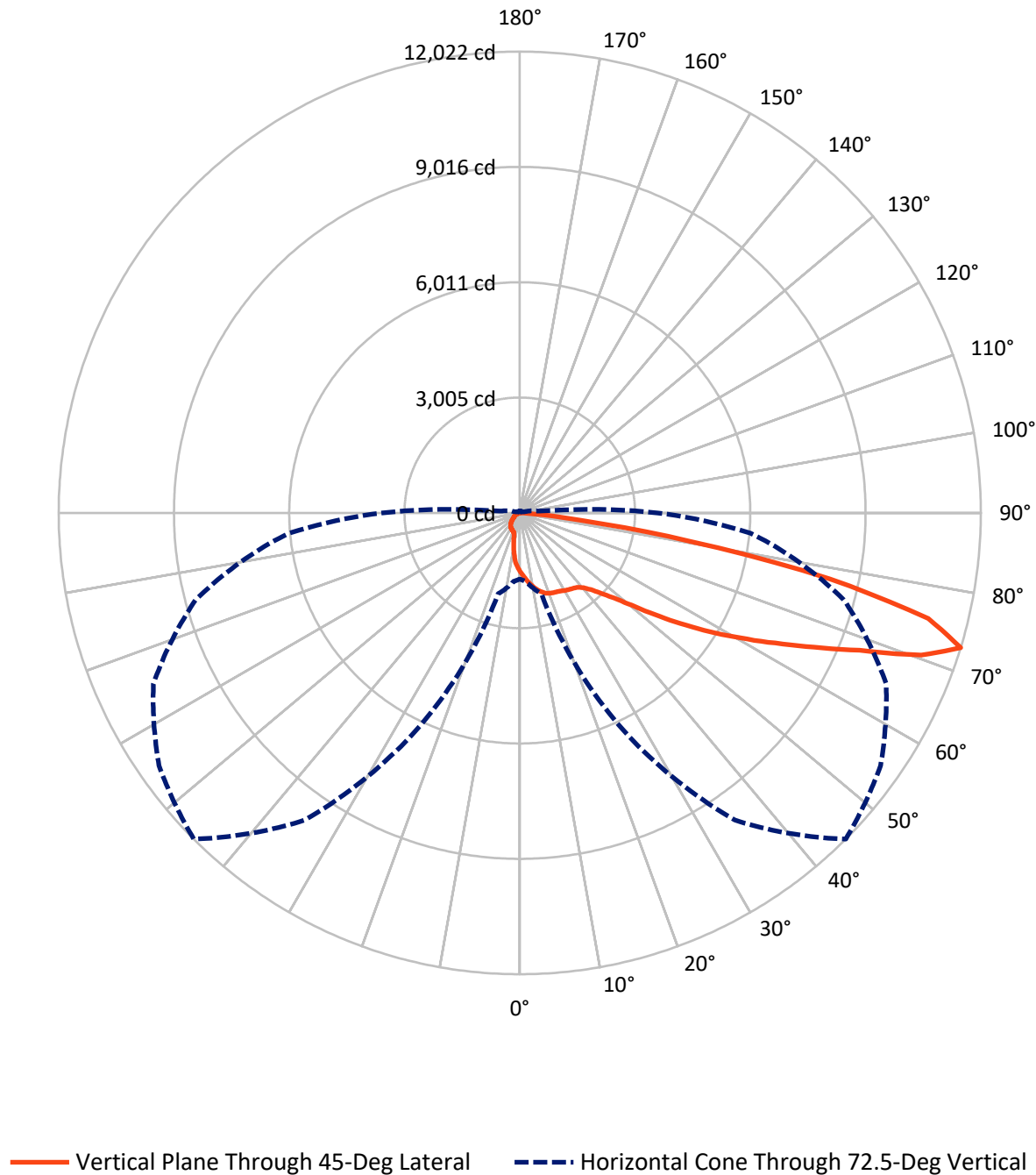
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 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	1468.0	0.0	1468.0
	% Fixture	10.5	0.0	10.5
Street Side	Lumens	12503.7	0.0	12503.7
	% Fixture	89.5	0.0	89.5
Total	Lumens	13971.8	0.0	13971.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.2	1.0
10°-20°	421.5	3.0
20°-30°	692.1	5.0
30°-40°	981.6	7.0
40°-50°	1622.5	11.6
50°-60°	2914.7	20.9
60°-70°	4047.2	29.0
70°-80°	2935.7	21.0
80°-90°	212.2	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°	13971.8	100.0
0°-180°	13971.8	100.0

Coefficient of Utilization



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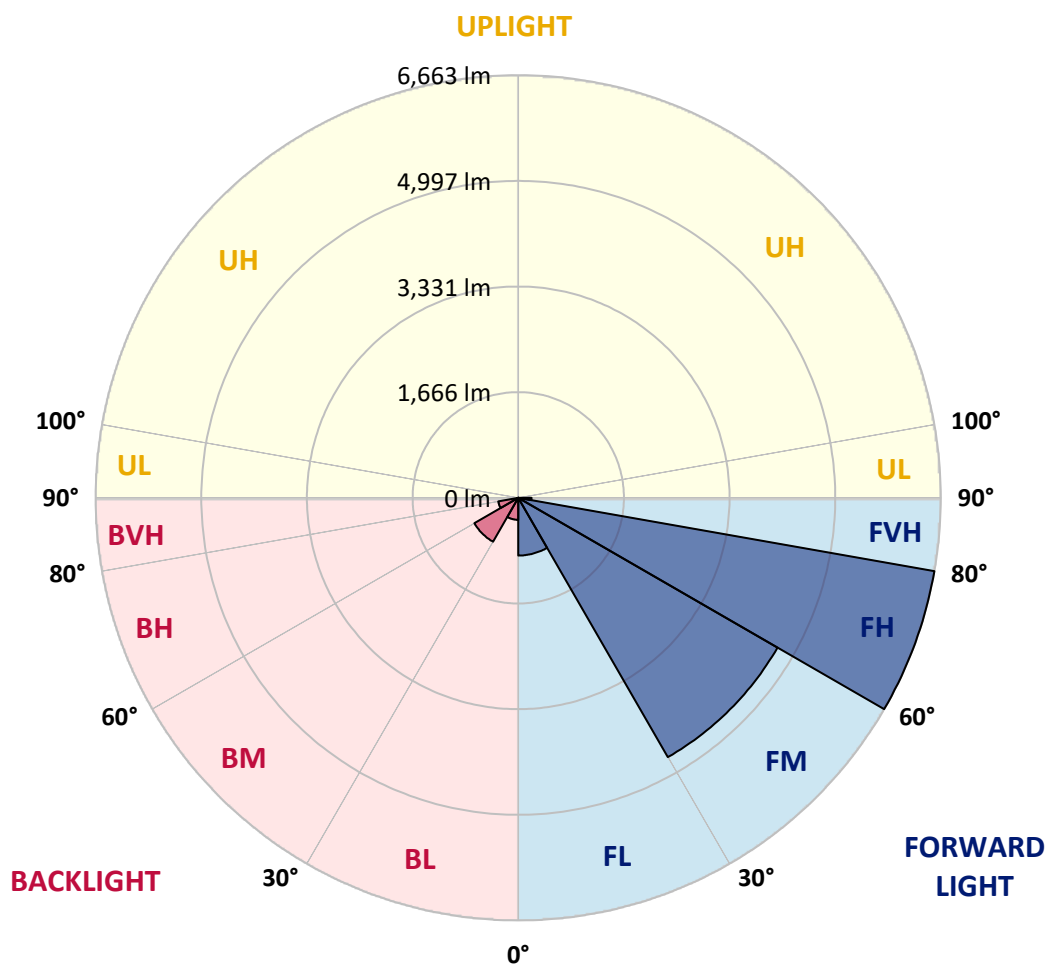
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	910.1	6.5			
FM	(30°-60°)	4720.4	33.8			
FH	(60°-80°)	6662.7	47.7			G3/7500
FVH	(80°-90°)	210.5	1.5			G2/225
BL	(0°-30°)	347.7	2.5	B1/500		
BM	(30°-60°)	798.4	5.7	B1/1000		
BH	(60°-80°)	320.1	2.3	B1/500		G1/500
BVH	(80°-90°)	1.8	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-G3

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6
2.5°	1671.8	1674.6	1672.7	1661.3	1642.3	1631.7	1626.0	1606.9	1594.5	1572.6	1549.7
5°	1825.3	1836.8	1830.1	1807.2	1771.0	1745.2	1737.6	1698.5	1663.2	1622.2	1574.5
7.5°	1988.4	1994.1	1981.7	1952.1	1903.5	1859.7	1853.0	1798.6	1742.4	1679.4	1614.6
10°	2129.5	2136.2	2117.1	2074.2	2018.9	1964.5	1955.0	1894.9	1828.2	1750.9	1668.0
12.5°	2247.8	2254.5	2229.7	2178.2	2117.1	2060.9	2051.3	1988.4	1915.0	1829.1	1726.1
15°	2337.4	2349.8	2316.5	2261.1	2195.3	2139.1	2134.4	2072.3	2000.8	1905.5	1795.8
17.5°	2389.9	2402.3	2370.8	2304.1	2247.8	2200.2	2194.4	2142.9	2076.1	1984.6	1863.4
20°	2398.5	2409.9	2376.6	2318.3	2271.6	2233.5	2230.6	2193.4	2144.8	2057.1	1936.9
22.5°	2372.8	2387.0	2356.5	2309.7	2277.3	2257.4	2253.6	2232.6	2204.9	2130.5	2005.5
25°	2346.0	2357.5	2334.5	2293.5	2276.4	2274.5	2277.3	2273.6	2267.8	2204.9	2085.7
27.5°	2344.1	2356.5	2330.7	2291.7	2282.2	2302.1	2305.0	2323.2	2327.9	2272.6	2163.0
30°	2360.4	2368.9	2344.1	2303.1	2298.4	2344.1	2345.1	2377.5	2385.2	2329.8	2239.2
32.5°	2395.6	2405.2	2380.4	2320.3	2313.6	2377.5	2380.4	2423.3	2435.7	2390.8	2319.4
35°	2478.6	2490.0	2461.4	2368.0	2344.1	2409.0	2417.6	2468.1	2492.9	2455.7	2402.3
37.5°	2685.5	2652.2	2613.0	2464.3	2413.8	2458.6	2472.8	2532.0	2575.8	2533.0	2501.5
40°	3199.5	3094.7	2972.6	2628.3	2535.8	2564.4	2575.8	2635.0	2695.0	2653.1	2637.8
42.5°	3971.1	3847.1	3650.6	3005.9	2719.8	2734.2	2742.8	2794.3	2879.1	2845.7	2849.6
45°	4658.6	4613.8	4413.5	3650.6	3064.1	2993.6	3004.1	3030.7	3155.7	3143.3	3168.1
47.5°	5187.0	5161.3	5006.7	4390.7	3645.9	3311.2	3340.7	3353.1	3533.4	3577.2	3644.0
50°	5593.2	5583.7	5445.4	5048.7	4406.0	3779.4	3789.8	3763.2	4033.1	4141.8	4268.6
52.5°	5976.7	6009.1	5907.0	5660.0	5217.6	4392.6	4390.7	4264.8	4629.1	4793.1	5009.6
55°	6322.8	6334.3	6344.7	6283.8	6033.9	5090.7	5072.5	4866.6	5320.5	5490.3	5724.8
57.5°	6648.0	6652.8	6746.2	6871.2	6883.6	5840.2	5806.9	5559.9	6075.8	6196.9	6341.0
60°	6866.4	6888.3	7085.7	7432.9	7584.5	6613.7	6595.6	6343.8	6844.4	6900.7	6874.1
62.5°	6551.7	6685.3	7183.0	7871.6	8246.3	7471.0	7462.4	7225.9	7653.2	7607.4	7378.6
65°	5303.3	5529.4	6404.8	8168.1	8895.8	8428.5	8440.9	8189.1	8483.8	8335.1	7788.6
67.5°	3709.8	3948.2	4983.9	8192.0	9621.6	9552.9	9624.4	9229.6	9365.9	9032.2	7885.8
70°	2565.4	2688.4	3362.6	7678.9	10187.1	11101.7	11099.7	10507.5	10243.3	9349.7	7389.9
72.5°	1725.2	1789.0	2183.9	6092.0	9771.3	12021.9	11966.7	11484.1	10538.9	8744.2	6037.7
75°	727.6	774.4	1010.9	3423.7	7730.4	10998.7	10848.9	10148.9	9364.1	6885.4	3767.0
77.5°	230.8	250.8	398.6	1225.5	4258.2	8267.3	8109.1	6338.1	6276.1	3454.1	1377.1
80°	109.7	127.8	224.1	492.1	1675.6	4496.6	4474.6	2875.3	2699.8	932.6	276.5
82.5°	47.7	56.3	124.0	263.2	749.6	1604.0	1636.5	978.5	809.6	353.8	84.9
85°	15.3	20.0	57.2	121.2	316.6	398.6	393.9	232.7	326.2	192.6	29.5
87.5°	0.0	0.0	19.1	27.7	32.4	22.9	25.7	20.0	90.6	53.4	10.5
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°	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6	1530.6
2.5°	1538.2	1523.0	1496.3	1471.5	1449.6	1427.6	1414.3	1395.2	1393.3	1393.3	1398.1
5°	1548.8	1524.0	1476.3	1425.8	1367.6	1312.2	1257.0	1203.6	1186.3	1173.9	1179.7
7.5°	1579.3	1540.2	1464.8	1368.5	1257.9	1136.7	1051.9	960.3	925.1	906.0	908.9
10°	1623.2	1569.8	1455.3	1286.5	1107.2	942.2	821.1	721.9	683.8	667.6	667.6
12.5°	1671.8	1606.0	1438.2	1184.5	942.2	744.8	626.6	580.8	575.0	575.0	575.0
15°	1730.0	1649.8	1408.6	1064.3	769.6	589.4	547.5	549.3	555.0	558.8	558.8
17.5°	1790.1	1696.6	1361.8	929.8	617.0	530.2	531.2	534.0	538.8	542.6	542.6
20°	1854.8	1743.3	1299.8	786.8	529.3	513.1	516.0	518.8	522.6	524.5	525.5
22.5°	1924.5	1787.2	1226.4	646.6	499.7	498.8	499.7	502.6	507.4	507.4	509.2
25°	1998.9	1835.8	1142.5	544.6	484.4	484.4	486.4	488.3	492.1	492.1	493.0
27.5°	2075.2	1880.7	1053.8	491.2	471.1	470.2	470.2	473.0	474.9	475.9	476.8
30°	2159.1	1933.0	965.1	479.7	460.6	455.8	452.9	454.9	456.8	457.8	459.7
32.5°	2245.0	1983.6	885.9	484.4	450.2	441.6	432.0	430.1	430.1	433.9	436.8
35°	2340.3	2038.9	824.9	500.7	444.4	420.6	405.3	396.7	397.7	403.4	406.3
37.5°	2454.8	2105.7	780.1	515.0	440.5	396.7	372.0	361.4	354.8	361.4	359.6
40°	2604.4	2204.0	747.6	526.4	435.8	369.1	335.7	318.6	306.2	310.0	308.0
42.5°	2824.8	2358.4	735.2	527.4	425.4	336.6	298.5	275.6	257.5	258.4	254.6
45°	3133.7	2602.6	799.2	515.0	402.4	301.3	259.4	228.9	217.4	214.5	210.7
47.5°	3557.2	2958.3	947.0	489.2	369.1	267.0	221.3	195.5	187.0	182.1	179.3
50°	4124.6	3415.1	1111.0	460.6	335.7	234.6	189.8	173.5	167.9	163.1	162.2
52.5°	4782.6	3878.6	1245.5	432.0	302.3	206.0	169.7	160.2	155.5	151.6	150.7
55°	5386.3	4198.1	1237.9	401.5	269.9	183.1	155.5	149.8	144.0	140.2	138.3
57.5°	5762.0	4242.9	1020.4	368.1	232.7	165.0	142.1	138.3	131.6	126.8	125.9
60°	5934.6	3987.2	715.2	324.2	195.5	147.8	127.8	125.9	117.3	110.6	108.8
62.5°	5966.1	3512.4	476.8	269.9	163.1	131.6	113.5	110.6	99.2	87.7	82.0
65°	5838.4	2833.3	329.9	210.7	139.2	114.4	97.3	91.5	79.1	67.8	63.9
67.5°	5434.0	1989.3	229.8	151.6	118.3	90.6	77.3	75.3	65.8	56.3	53.4
70°	4693.0	1134.0	153.5	113.5	93.5	62.0	61.0	62.9	53.4	45.8	41.9
72.5°	3598.2	518.8	95.3	82.9	63.9	41.9	48.7	49.6	41.0	34.3	30.5
75°	2118.1	222.2	60.1	53.4	32.4	27.7	35.3	36.3	27.7	21.9	19.1
77.5°	721.0	83.9	38.1	31.5	16.2	15.3	22.9	22.9	15.3	8.6	6.7
80°	164.0	31.5	19.1	12.4	7.6	6.7	7.6	6.7	3.8	0.9	0.0
82.5°	46.7	12.4	7.6	4.8	2.9	2.9	0.9	0.0	0.0	0.0	0.0
85°	13.3	5.7	1.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	5.7	0.9	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)