

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: P963141

Luminaire Tested: **NAV-SB2D-830-U-T2-HSS**

Issue Date: 1/21/2025

Test Information

Test Method: LM-79-08
Report Number: P963141
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 1/21/2025
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-830-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13686.8 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

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

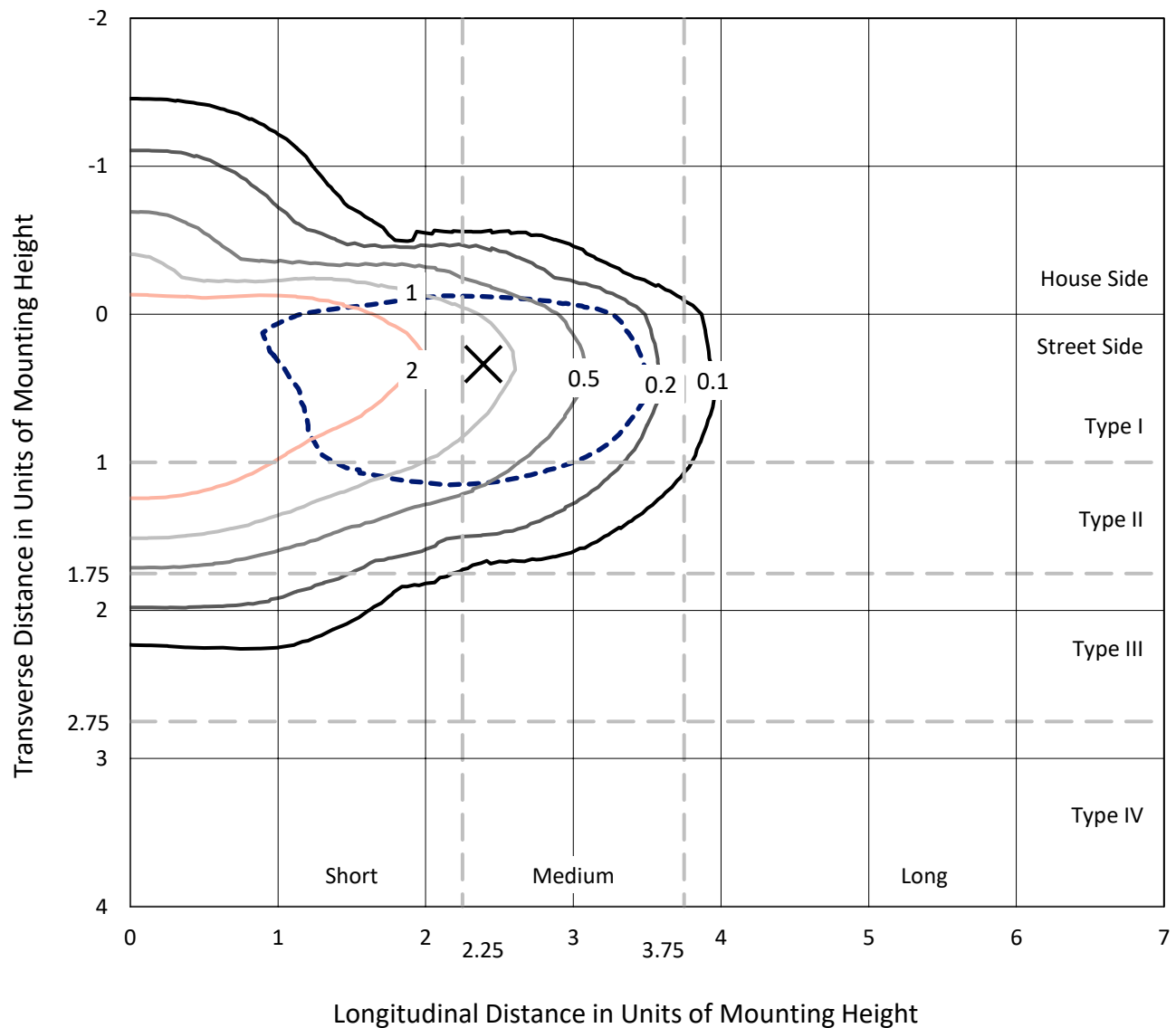


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Iso-Footcandle Lines of Horizontal Illumination

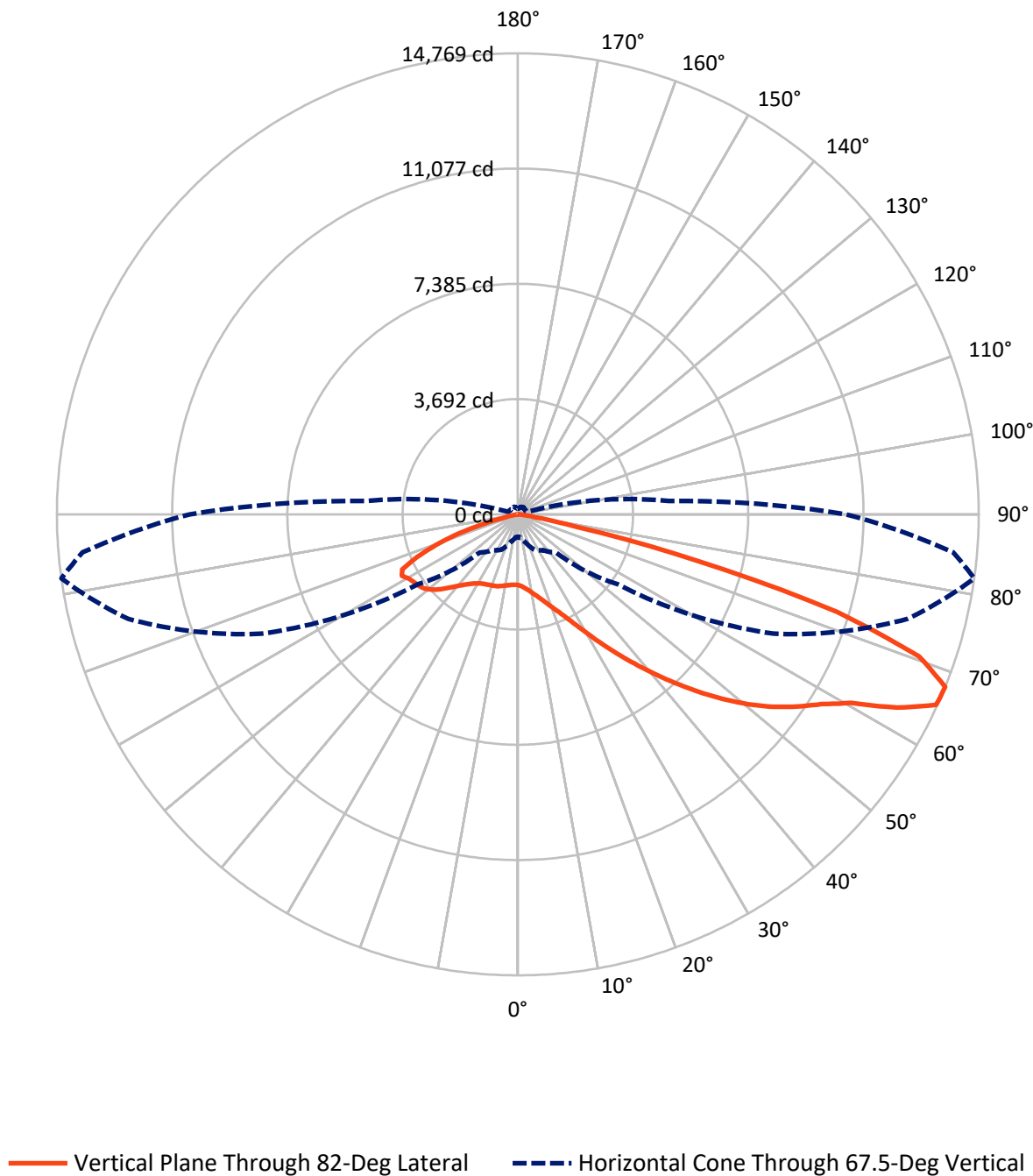
× Max cd
- - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 fc
Type II - Medium - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2479.2	0.0	2479.2
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	11207.6	0.0	11207.6
	% Fixture	81.9	0.0	81.9
Total	Lumens	13686.8	0.0	13686.8
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.0	1.5
10°-20°	525.0	3.8
20°-30°	840.8	6.1
30°-40°	1486.8	10.9
40°-50°	2605.0	19.0
50°-60°	3474.3	25.4
60°-70°	3234.4	23.6
70°-80°	1241.4	9.1
80°-90°	77.1	0.6
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°	13686.8	100.0
0°-180°	13686.8	100.0

Coefficient of Utilization



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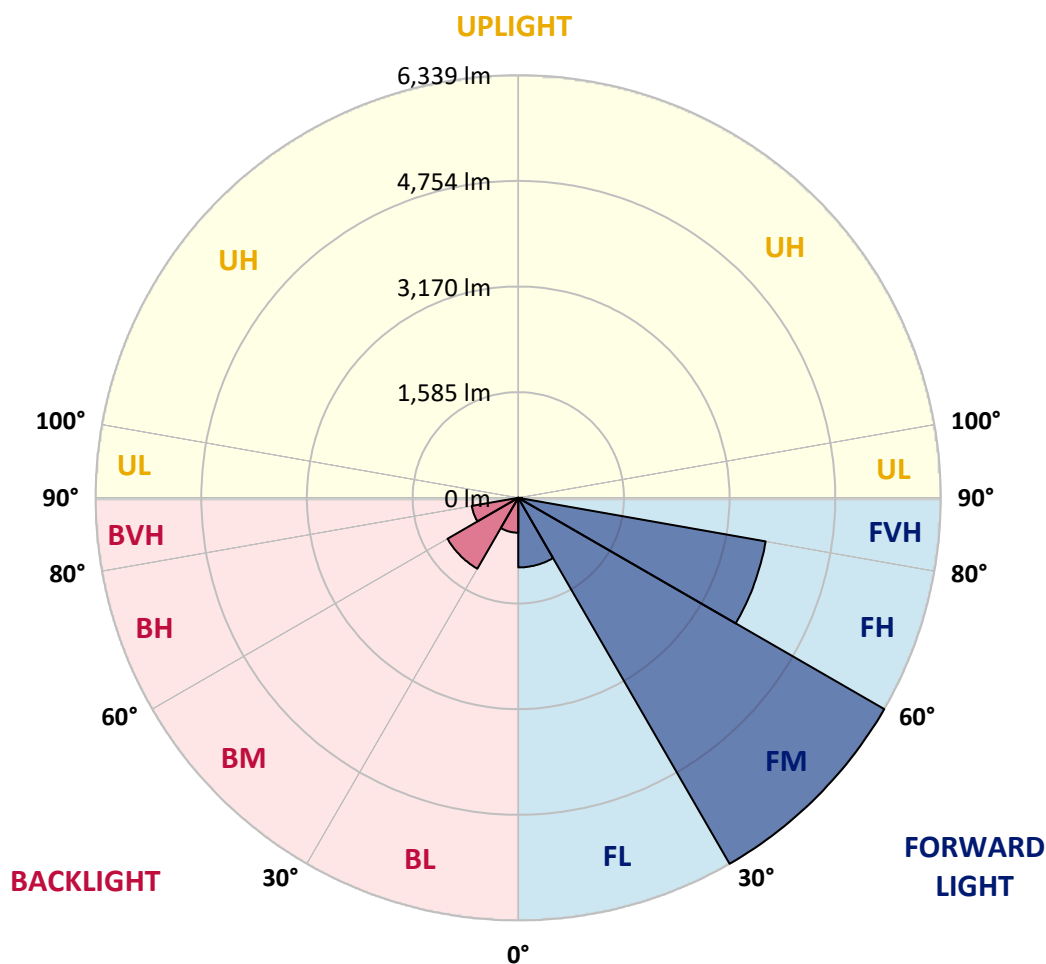
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1044.2	7.6			
FM	(30°-60°)	6339.2	46.3			
FH	(60°-80°)	3768.2	27.5			G2/5000
FVH	(80°-90°)	56.0	0.4			G1/100
BL	(0°-30°)	523.6	3.8	B2/1000		
BM	(30°-60°)	1227.0	9.0	B2/2500		
BH	(60°-80°)	707.6	5.2	B2/1000		G2/1000
BVH	(80°-90°)	21.0	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4
2.5°	2396.6	2410.3	2402.4	2398.5	2391.6	2381.8	2373.9	2349.2	2323.6	2306.9	2300.9
5°	2444.8	2458.6	2457.6	2461.5	2466.5	2469.4	2467.5	2439.9	2403.4	2374.8	2358.1
7.5°	2403.4	2419.2	2432.0	2451.7	2486.2	2522.6	2540.4	2534.5	2497.0	2457.6	2436.9
10°	2286.2	2302.9	2333.5	2379.7	2452.7	2531.5	2597.6	2628.1	2604.4	2561.1	2532.6
12.5°	2071.3	2088.1	2148.2	2248.7	2370.9	2507.9	2634.0	2715.8	2721.7	2678.3	2644.8
15°	1829.9	1846.6	1910.7	2036.9	2223.1	2442.9	2653.7	2808.4	2860.7	2823.3	2782.8
17.5°	1680.2	1694.9	1743.2	1844.7	2038.8	2312.8	2646.9	2907.0	3026.2	2996.7	2948.4
20°	1634.8	1647.6	1670.2	1741.3	1902.8	2177.8	2601.4	2999.6	3204.6	3187.9	3133.6
22.5°	1683.0	1694.9	1701.8	1733.4	1834.9	2089.1	2544.4	3094.2	3411.5	3413.5	3347.4
25°	1794.5	1806.3	1798.4	1818.0	1862.4	2061.5	2522.6	3205.6	3671.7	3693.4	3618.5
27.5°	1977.7	1978.8	1960.0	1959.0	1966.0	2102.9	2545.3	3324.8	3999.8	4040.2	3947.6
30°	2345.3	2330.5	2258.6	2180.7	2145.2	2227.0	2608.4	3465.7	4387.1	4459.1	4342.7
32.5°	2911.9	2890.2	2758.2	2571.9	2384.7	2427.1	2721.7	3626.3	4808.8	4938.9	4797.0
35°	3526.8	3520.9	3382.9	3106.1	2778.9	2711.8	2906.0	3837.2	5269.0	5476.0	5307.4
37.5°	4098.4	4095.4	4016.6	3690.4	3292.3	3109.0	3201.6	4113.1	5761.7	6061.3	5862.3
40°	4620.6	4629.5	4550.7	4259.0	3857.9	3618.5	3603.7	4454.0	6309.6	6698.9	6462.3
42.5°	5071.9	5081.7	5002.0	4786.1	4416.6	4182.1	4097.3	4871.9	6844.7	7383.7	7103.9
45°	5378.4	5439.5	5427.7	5255.3	4990.1	4746.8	4690.6	5396.1	7454.7	8110.0	7781.8
47.5°	5465.1	5521.3	5609.9	5633.6	5472.1	5232.5	5299.6	6027.8	8071.6	8837.2	8463.7
50°	5251.3	5303.6	5487.7	5733.1	5845.5	5771.6	5891.8	6704.7	8703.2	9562.5	9132.9
52.5°	4829.5	4882.7	5115.3	5503.5	5961.8	6194.3	6486.0	7371.9	9315.1	10249.3	9766.5
55°	4219.5	4275.7	4574.3	5013.8	5740.1	6368.7	6981.7	8038.0	9875.9	10867.2	10338.0
57.5°	3389.9	3431.2	3741.7	4356.6	5182.3	6195.3	7347.3	8765.3	10404.1	11474.2	10904.7
60°	2209.3	2245.8	2606.5	3292.3	4258.0	5615.9	7420.2	9576.3	11105.7	12263.5	11668.3
62.5°	1469.2	1493.9	1707.8	2211.2	2998.6	4503.3	6993.5	10223.7	12134.5	13637.2	12977.9
65°	1008.1	1032.7	1246.5	1597.4	1937.4	2979.0	5766.6	10138.0	13066.6	14728.0	13948.6
67.5°	719.3	740.0	921.4	1252.4	1402.2	1730.4	3909.1	9042.1	12932.6	14769.4	14000.8
70°	515.4	527.2	677.0	975.6	1114.5	1039.7	2173.8	6915.7	11323.4	13638.1	12934.6
72.5°	360.7	364.6	470.1	743.0	897.7	758.8	1034.7	4610.8	8564.3	10704.6	10027.6
75°	244.4	249.3	316.3	544.9	720.4	579.4	547.9	2472.4	5027.6	5925.3	5311.3
77.5°	149.8	151.8	204.0	372.5	539.0	441.5	352.8	1047.4	1945.2	1909.8	1627.9
80°	84.8	84.8	130.1	231.5	367.6	284.7	247.3	445.4	615.9	541.0	476.9
82.5°	47.3	48.3	94.6	143.9	243.4	168.5	136.0	205.9	266.1	235.5	205.0
85°	19.7	21.7	58.1	68.0	116.2	83.7	55.1	86.7	98.5	87.7	64.1
87.5°	1.9	3.0	17.7	12.8	13.8	16.7	7.9	16.7	13.8	13.8	9.8
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°	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4	2267.4
2.5°	2282.3	2267.4	2230.0	2186.6	2129.4	2101.9	2064.5	2038.8	2017.1	2019.1	1999.4
5°	2326.5	2289.1	2205.4	2100.9	1970.9	1878.2	1779.7	1711.6	1656.5	1644.6	1618.1
7.5°	2387.6	2328.5	2181.7	1993.5	1773.8	1607.2	1458.4	1362.8	1294.9	1273.2	1251.5
10°	2466.5	2380.8	2151.2	1858.5	1542.2	1330.3	1170.7	1095.8	1049.5	1033.7	1021.9
12.5°	2558.1	2440.8	2110.8	1693.9	1303.7	1099.7	998.2	960.7	946.0	941.1	938.1
15°	2673.4	2515.8	2049.7	1498.9	1101.7	958.8	915.4	910.5	912.5	910.5	909.6
17.5°	2810.4	2597.6	1950.2	1297.8	965.8	886.8	871.1	875.0	880.0	879.0	877.0
20°	2960.2	2678.3	1823.1	1119.4	873.1	835.7	826.8	830.7	834.7	832.7	831.7
22.5°	3130.7	2765.0	1682.1	980.5	811.0	788.3	778.5	779.5	779.5	775.5	773.6
25°	3334.6	2860.7	1534.3	881.9	763.7	746.0	734.1	730.2	724.3	712.5	710.5
27.5°	3578.1	2962.1	1392.4	812.9	726.2	709.5	695.7	685.8	671.1	651.4	649.4
30°	3852.0	3085.4	1272.1	769.6	696.7	680.0	664.2	649.4	627.7	603.1	601.1
32.5°	4174.2	3217.4	1184.5	741.1	670.0	652.3	633.7	615.9	592.2	567.6	568.6
35°	4558.6	3377.1	1133.2	721.3	649.4	625.8	605.1	585.4	567.6	545.9	544.0
37.5°	4975.3	3546.5	1117.5	711.5	635.6	599.1	575.4	561.7	559.8	546.9	545.9
40°	5431.6	3747.5	1129.2	705.5	620.8	573.5	547.9	544.9	549.9	527.2	528.2
42.5°	5914.5	3986.0	1149.0	698.6	600.1	547.9	523.3	523.3	519.3	487.8	487.8
45°	6436.7	4260.9	1168.7	681.9	575.4	522.2	503.6	496.6	479.9	449.4	448.3
47.5°	6962.9	4540.8	1183.5	651.4	545.9	500.6	483.8	468.1	443.4	415.8	414.8
50°	7462.5	4792.1	1167.7	606.0	512.4	479.9	462.2	440.4	413.9	395.1	392.2
52.5°	7909.0	5009.9	1100.7	552.8	476.9	458.2	442.5	419.7	398.1	378.4	376.4
55°	8297.2	5186.3	982.5	502.6	445.4	439.5	423.7	395.1	365.6	348.8	346.9
57.5°	8669.7	5320.3	834.7	461.1	416.9	418.8	395.1	369.5	341.9	324.2	322.3
60°	9165.3	5499.6	684.9	422.7	386.3	392.2	366.5	347.9	313.3	290.7	287.7
62.5°	9957.7	5778.4	544.0	375.5	350.9	352.8	341.9	319.3	277.9	251.3	249.3
65°	10586.3	5676.0	428.7	324.2	310.4	313.3	313.3	288.7	244.4	213.8	210.8
67.5°	10515.4	4860.0	341.9	274.0	271.9	274.0	280.8	260.1	216.8	192.2	188.2
70°	9686.7	3865.8	274.0	227.7	236.5	231.5	251.3	237.5	195.2	170.5	167.5
72.5°	7904.0	2784.8	208.9	188.2	181.3	189.2	226.6	213.8	162.6	135.0	132.0
75°	4618.6	1486.0	155.7	148.8	131.1	157.6	201.0	182.3	124.1	99.5	96.6
77.5°	1503.8	518.3	114.3	109.4	97.6	127.1	171.5	153.8	101.5	78.8	75.8
80°	403.0	156.7	77.8	72.0	63.0	94.6	136.0	122.2	72.9	51.2	50.2
82.5°	161.6	66.0	45.3	40.4	34.4	65.1	107.4	98.5	54.2	32.5	32.5
85°	52.3	21.7	16.7	12.8	15.8	40.4	64.1	67.0	38.4	16.7	12.8
87.5°	6.9	3.0	3.0	3.9	3.0	6.9	19.7	18.8	10.9	1.9	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)