

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: P883816

Luminaire Tested: **NAV-SB4B-830-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883816
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB4B-830-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14581 lumens
Efficiency: N/A
Efficacy: 99.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

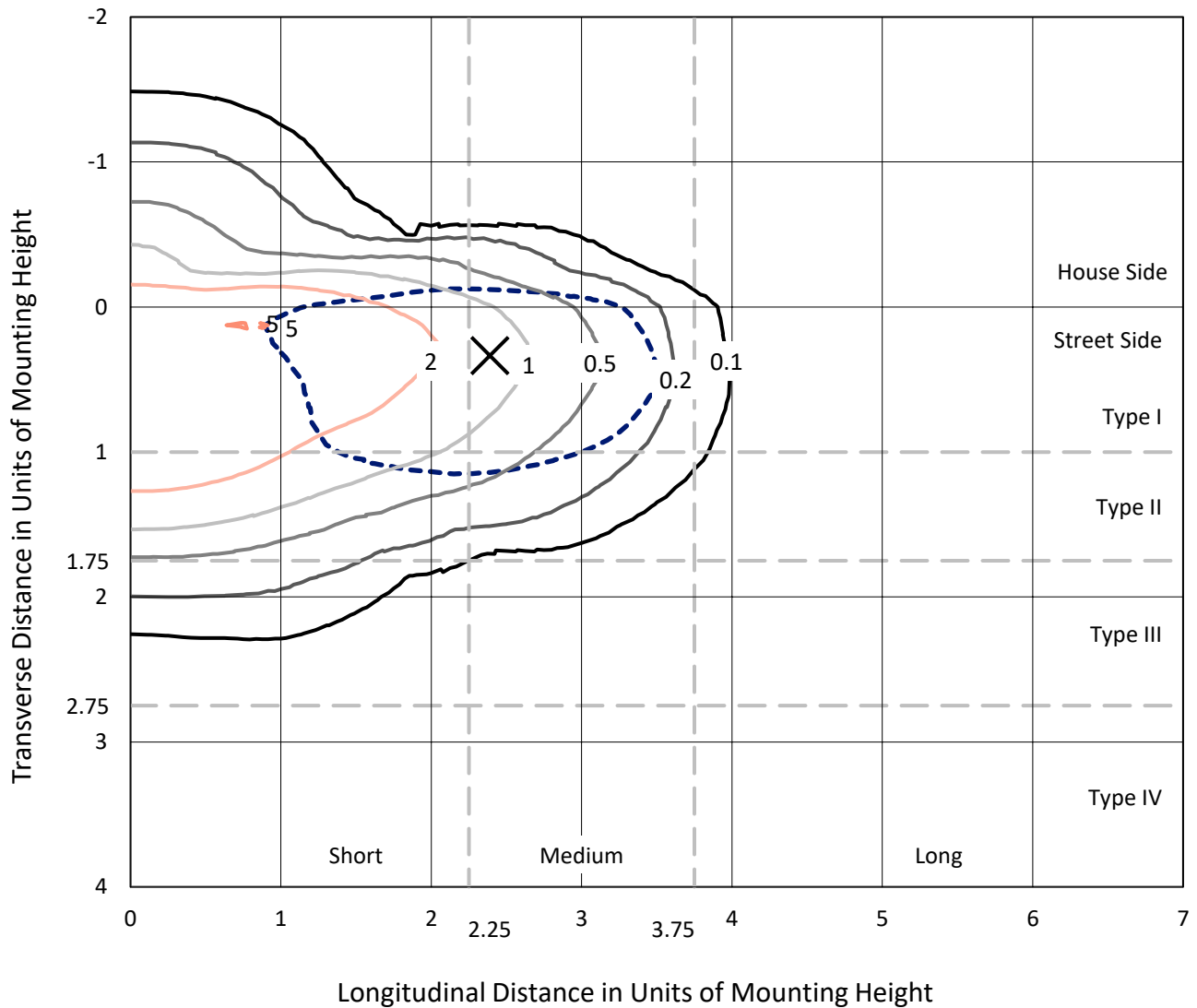
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

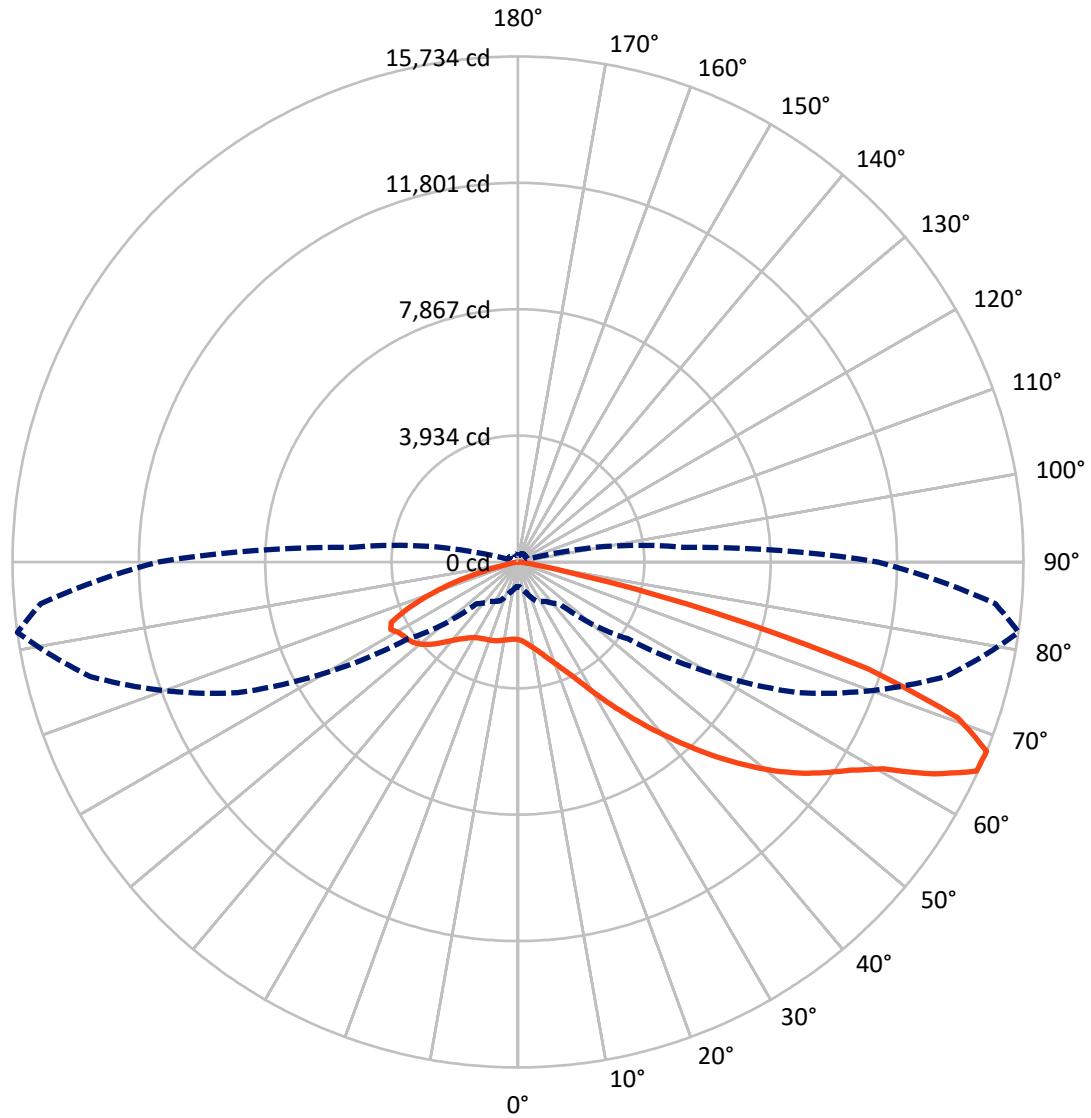
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.1 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2641.2	0.0	2641.2
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	11939.8	0.0	11939.8
	% Fixture	81.9	0.0	81.9
Total	Lumens	14581.0	0.0	14581.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.2	1.5
10°-20°	559.2	3.8
20°-30°	895.7	6.1
30°-40°	1583.9	10.9
40°-50°	2775.2	19.0
50°-60°	3701.3	25.4
60°-70°	3445.7	23.6
70°-80°	1322.5	9.1
80°-90°	82.1	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°	14581.0	100.0
0°-180°	14581.0	100.0

Coefficient of Utilization



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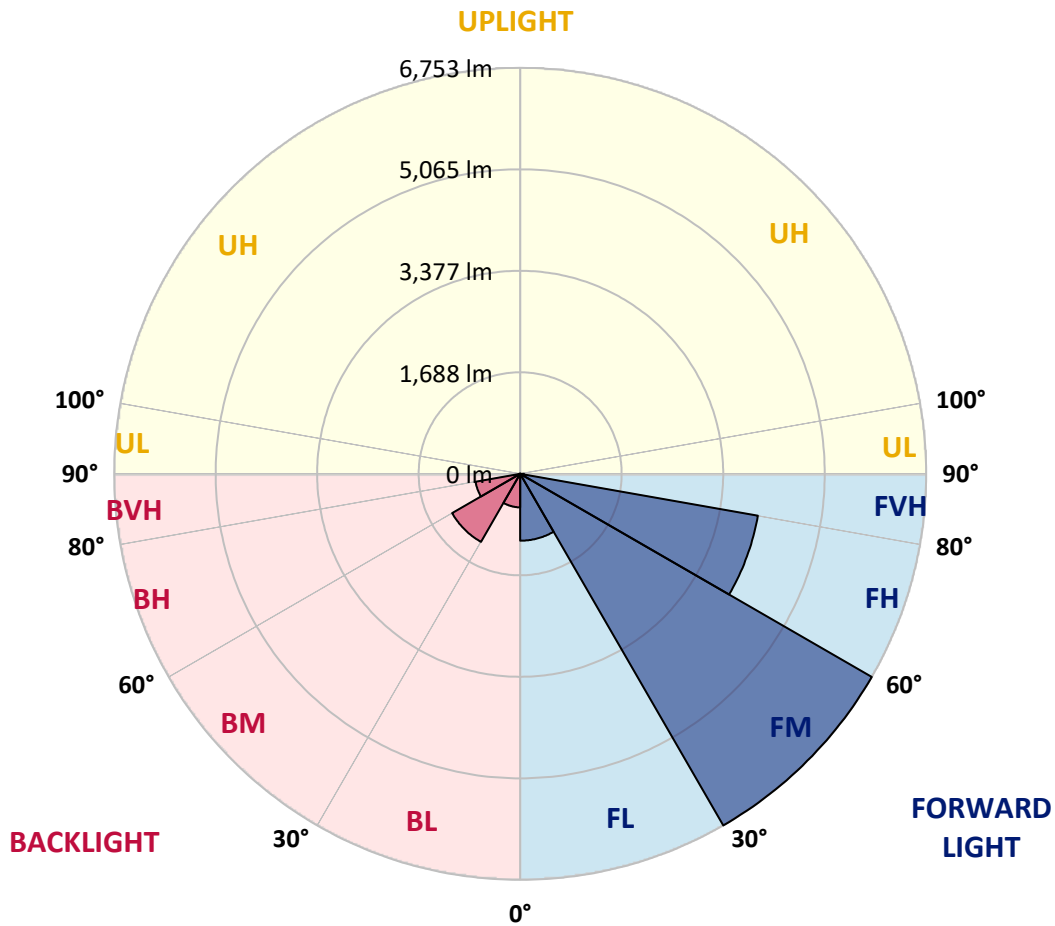
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1112.4	7.6			
FM (30°-60°)	6753.3	46.3			
FH (60°-80°)	4014.4	27.5			G2/5000
FVH (80°-90°)	59.7	0.4			G1/100
BL (0°-30°)	557.8	3.8	B2/1000		
BM (30°-60°)	1307.1	9.0	B2/2500		
BH (60°-80°)	753.9	5.2	B2/1000		G2/1000
BVH (80°-90°)	22.4	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°	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6
2.5°	2553.1	2567.8	2559.4	2555.2	2547.9	2537.4	2529.0	2502.7	2475.4	2457.6	2451.3
5°	2604.5	2619.2	2618.2	2622.4	2627.6	2630.8	2628.7	2599.3	2560.4	2530.0	2512.2
7.5°	2560.4	2577.2	2590.9	2611.9	2648.6	2687.5	2706.4	2700.1	2660.2	2618.2	2596.1
10°	2435.5	2453.4	2485.9	2535.3	2612.9	2696.9	2767.3	2799.8	2774.6	2728.4	2698.0
12.5°	2206.7	2224.5	2288.6	2395.6	2525.8	2671.7	2806.1	2893.2	2899.5	2853.3	2817.6
15°	1949.5	1967.3	2035.6	2169.9	2368.3	2602.4	2827.1	2991.9	3047.6	3007.7	2964.6
17.5°	1789.9	1805.6	1857.1	1965.2	2172.0	2463.9	2819.7	3096.9	3223.9	3192.4	3141.0
20°	1741.6	1755.3	1779.4	1855.0	2027.2	2320.0	2771.5	3195.6	3413.9	3396.1	3338.3
22.5°	1793.0	1805.6	1813.0	1846.6	1954.7	2225.6	2710.6	3296.4	3634.4	3636.5	3566.2
25°	1911.7	1924.3	1915.9	1936.9	1984.1	2196.2	2687.5	3415.0	3911.5	3934.6	3854.8
27.5°	2106.9	2108.0	2088.0	2087.0	2094.3	2240.3	2711.6	3542.0	4261.1	4304.2	4205.5
30°	2498.5	2482.8	2406.1	2323.2	2285.4	2372.5	2778.8	3692.1	4673.7	4750.3	4626.4
32.5°	3102.1	3079.0	2938.4	2740.0	2540.5	2585.6	2899.5	3863.2	5123.0	5261.6	5110.4
35°	3757.2	3750.9	3603.9	3309.0	2960.4	2889.0	3095.8	4087.9	5613.3	5833.7	5654.2
37.5°	4366.1	4362.9	4279.0	3931.5	3507.4	3312.1	3410.8	4381.8	6138.2	6457.3	6245.2
40°	4922.5	4931.9	4848.0	4537.2	4109.9	3854.8	3839.1	4745.1	6721.8	7136.5	6884.6
42.5°	5403.3	5413.8	5328.8	5098.9	4705.2	4455.3	4365.0	5190.2	7291.9	7866.1	7568.0
45°	5729.8	5794.9	5782.3	5598.6	5316.2	5056.9	4997.0	5748.7	7941.7	8639.8	8290.2
47.5°	5822.2	5882.0	5976.5	6001.7	5829.5	5574.4	5645.8	6421.6	8598.9	9414.6	9016.7
50°	5594.4	5650.0	5846.3	6107.7	6227.4	6148.6	6276.7	7142.8	9271.8	10187.2	9729.5
52.5°	5145.0	5201.7	5449.5	5863.1	6351.3	6599.0	6909.8	7853.5	9923.7	10918.9	10404.5
55°	4495.2	4555.1	4873.1	5341.4	6115.1	6784.8	7437.8	8563.2	10521.0	11577.1	11013.4
57.5°	3611.3	3655.4	3986.1	4641.1	5520.9	6600.1	7827.3	9337.9	11083.7	12223.8	11617.0
60°	2353.6	2392.5	2776.7	3507.4	4536.2	5982.8	7905.0	10201.9	11831.2	13064.7	12430.6
62.5°	1565.2	1591.5	1819.3	2355.7	3194.5	4797.6	7450.4	10891.6	12927.2	14528.1	13825.8
65°	1073.9	1100.2	1328.0	1701.7	2063.9	3173.5	6143.4	10800.3	13920.3	15690.2	14859.8
67.5°	766.4	788.4	981.6	1334.3	1493.9	1843.4	4164.5	9632.9	13777.5	15734.3	14915.5
70°	549.0	561.6	721.2	1039.3	1187.3	1107.5	2315.8	7367.5	12063.2	14529.2	13779.6
72.5°	384.2	388.4	500.8	791.5	956.4	808.3	1102.3	4912.0	9123.8	11403.9	10682.7
75°	260.3	265.6	337.0	580.5	767.4	617.3	583.7	2633.9	5356.1	6312.4	5658.4
77.5°	159.6	161.7	217.3	396.8	574.2	470.3	375.8	1115.9	2072.3	2034.5	1734.3
80°	90.3	90.3	138.6	246.7	391.6	303.4	263.5	474.5	656.1	576.3	508.1
82.5°	50.4	51.4	100.8	153.3	259.3	179.5	144.9	219.4	283.4	250.9	218.4
85°	21.0	23.1	61.9	72.4	123.9	89.2	58.8	92.4	105.0	93.4	68.2
87.5°	2.1	3.1	18.9	13.6	14.7	17.8	8.4	17.8	14.7	14.7	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°	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6	2415.6
2.5°	2431.3	2415.6	2375.7	2329.5	2268.6	2239.2	2199.3	2172.0	2148.9	2151.0	2130.0
5°	2478.6	2438.7	2349.4	2238.2	2099.6	2000.9	1895.9	1823.5	1764.7	1752.1	1723.8
7.5°	2543.7	2480.7	2324.2	2123.7	1889.6	1712.2	1553.7	1451.9	1379.4	1356.3	1333.2
10°	2627.6	2536.3	2291.7	1979.9	1642.9	1417.2	1247.2	1167.4	1118.0	1101.2	1088.6
12.5°	2725.3	2600.3	2248.7	1804.6	1388.9	1171.6	1063.4	1023.6	1007.8	1002.6	999.4
15°	2848.1	2680.1	2183.6	1596.7	1173.7	1021.5	975.3	970.0	972.1	970.0	969.0
17.5°	2994.0	2767.3	2077.5	1382.6	1028.8	944.8	928.0	932.2	937.5	936.4	934.3
20°	3153.6	2853.3	1942.1	1192.6	930.1	890.2	880.8	885.0	889.2	887.1	886.0
22.5°	3335.2	2945.7	1792.0	1044.5	864.0	839.8	829.3	830.4	830.4	826.2	824.1
25°	3552.5	3047.6	1634.5	939.6	813.6	794.7	782.1	777.9	771.6	759.0	756.9
27.5°	3811.8	3155.7	1483.4	866.1	773.7	755.9	741.2	730.7	714.9	693.9	691.8
30°	4103.6	3286.9	1355.3	819.9	742.2	724.4	707.6	691.8	668.7	642.5	640.4
32.5°	4446.9	3427.6	1261.9	789.4	713.9	695.0	675.0	656.1	630.9	604.7	605.7
35°	4856.4	3597.6	1207.3	768.4	691.8	666.6	644.6	623.6	604.7	581.6	579.5
37.5°	5300.4	3778.2	1190.5	758.0	677.1	638.3	613.1	598.4	596.3	582.6	581.6
40°	5786.5	3992.4	1203.1	751.7	661.4	611.0	583.7	580.5	585.8	561.6	562.7
42.5°	6300.9	4246.4	1224.1	744.3	639.3	583.7	557.4	557.4	553.2	519.6	519.6
45°	6857.3	4539.3	1245.1	726.5	613.1	556.4	536.4	529.1	511.3	478.7	477.7
47.5°	7417.9	4837.5	1260.8	693.9	581.6	533.3	515.4	498.7	472.4	443.0	442.0
50°	7950.1	5105.2	1244.0	645.6	545.9	511.3	492.4	469.3	440.9	421.0	417.8
52.5°	8425.7	5337.2	1172.6	588.9	508.1	488.2	471.4	447.2	424.1	403.1	401.0
55°	8839.3	5525.1	1046.6	535.4	474.5	468.2	451.4	421.0	389.5	371.6	369.5
57.5°	9236.1	5667.8	889.2	491.3	444.1	446.2	421.0	393.7	364.3	345.4	343.3
60°	9764.1	5858.9	729.6	450.4	411.5	417.8	390.5	370.6	333.8	309.7	306.5
62.5°	10608.2	6156.0	579.5	400.0	373.7	375.8	364.3	340.1	296.0	267.7	265.6
65°	11277.9	6046.8	456.7	345.4	330.7	333.8	333.8	307.6	260.3	227.8	224.7
67.5°	11202.4	5177.6	364.3	291.8	289.7	291.8	299.2	277.1	231.0	204.7	200.5
70°	10319.5	4118.3	291.8	242.5	252.0	246.7	267.7	253.0	207.9	181.6	178.5
72.5°	8420.4	2966.7	222.6	200.5	193.2	201.6	241.5	227.8	173.2	143.8	140.7
75°	4920.4	1583.1	165.9	158.5	139.6	168.0	214.2	194.2	132.3	106.0	102.9
77.5°	1602.0	552.2	121.8	116.5	103.9	135.4	182.7	163.8	108.1	84.0	80.8
80°	429.4	166.9	82.9	76.6	67.2	100.8	144.9	130.2	77.7	54.6	53.5
82.5°	172.2	70.3	48.3	43.0	36.7	69.3	114.4	105.0	57.7	34.6	34.6
85°	55.6	23.1	17.8	13.6	16.8	43.0	68.2	71.4	40.9	17.8	13.6
87.5°	7.3	3.1	3.1	4.2	3.1	7.3	21.0	19.9	11.5	2.1	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)