

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: P882796

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

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882796
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-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: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13251 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

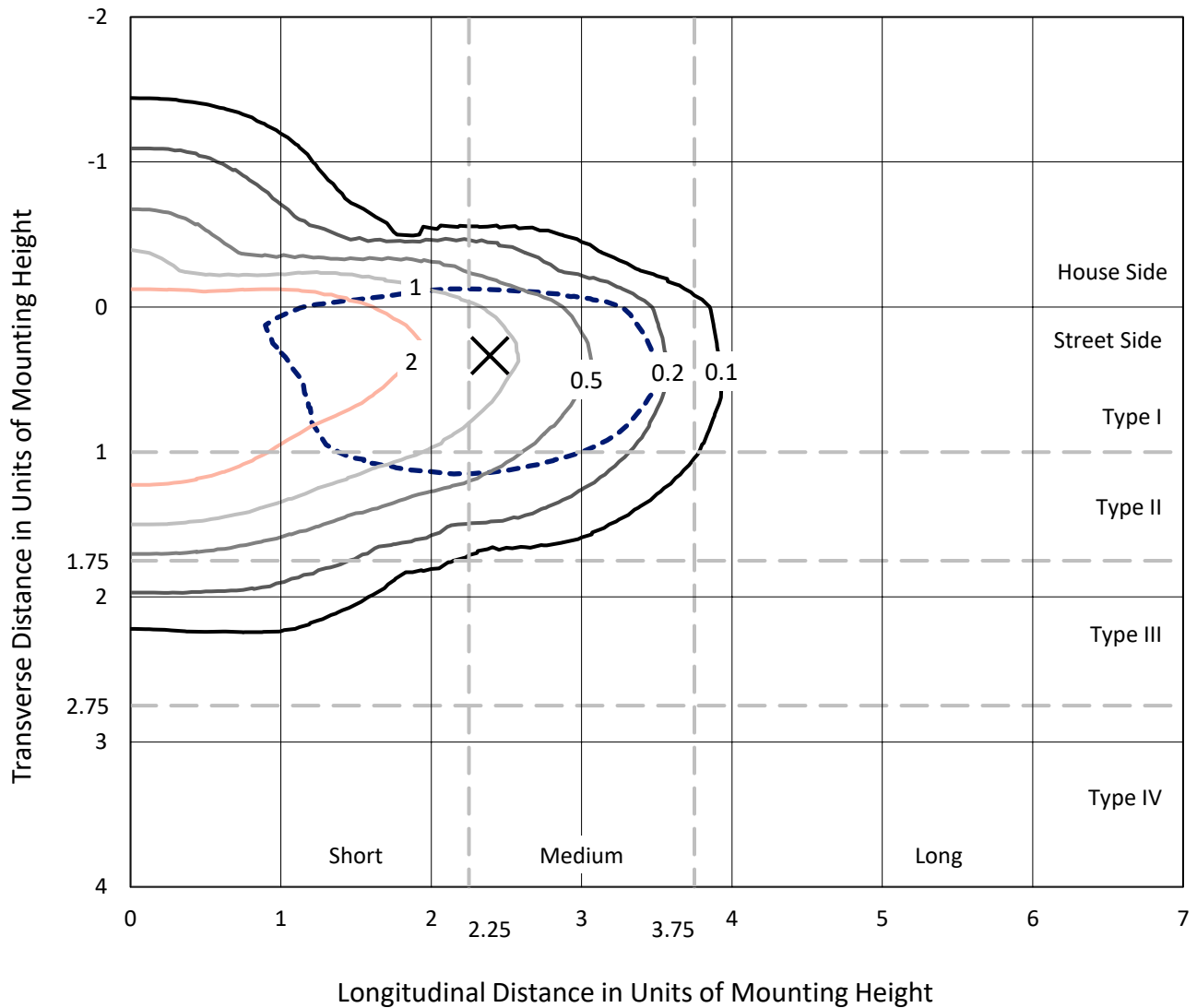
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

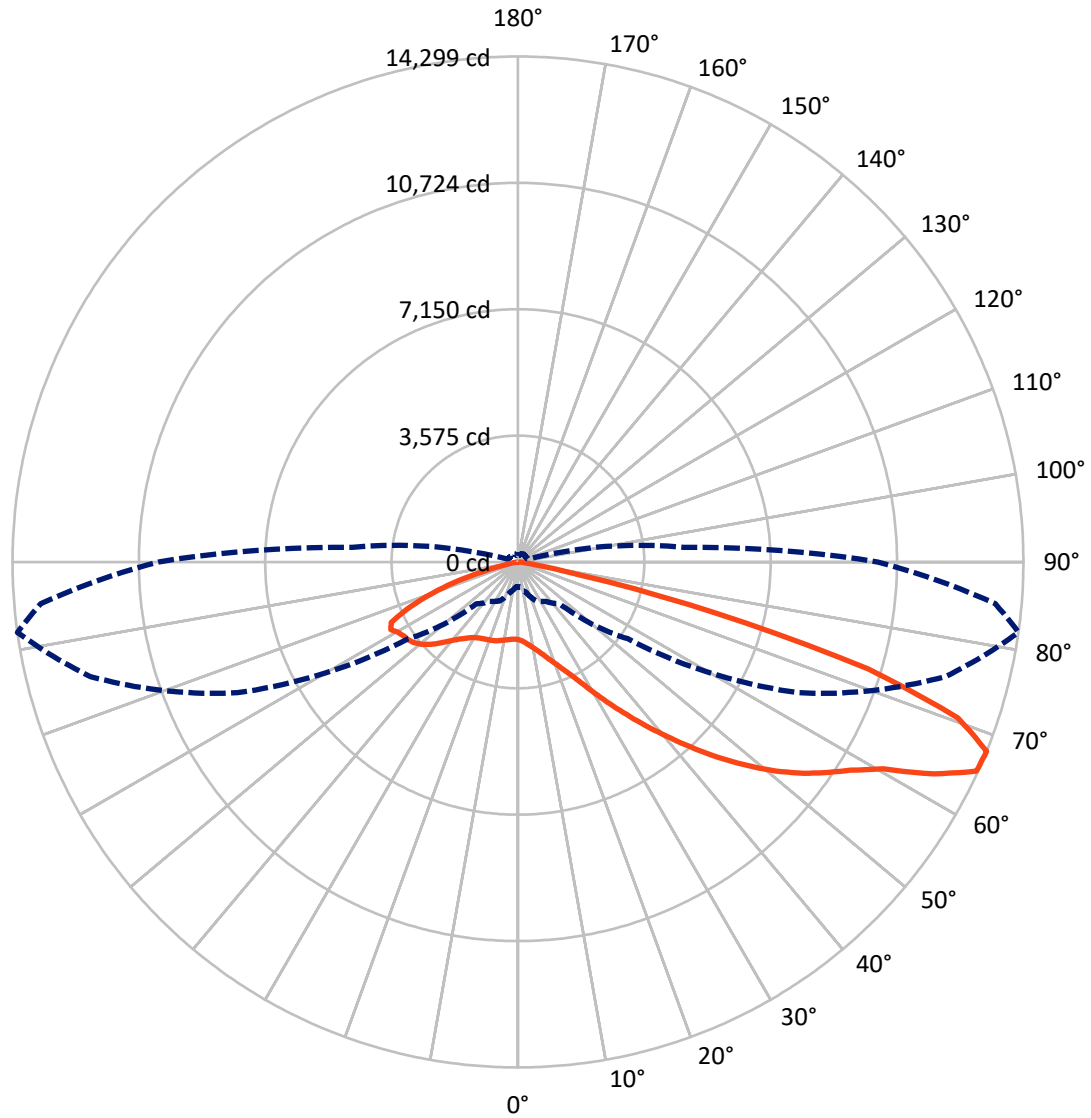
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 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	2400.3	0.0	2400.3
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	10850.7	0.0	10850.7
	% Fixture	81.9	0.0	81.9
Total	Lumens	13251.0	0.0	13251.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	195.6	1.5
10°-20°	508.2	3.8
20°-30°	814.0	6.1
30°-40°	1439.5	10.9
40°-50°	2522.1	19.0
50°-60°	3363.7	25.4
60°-70°	3131.4	23.6
70°-80°	1201.8	9.1
80°-90°	74.7	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°	13251.0	100.0
0°-180°	13251.0	100.0

Coefficient of Utilization



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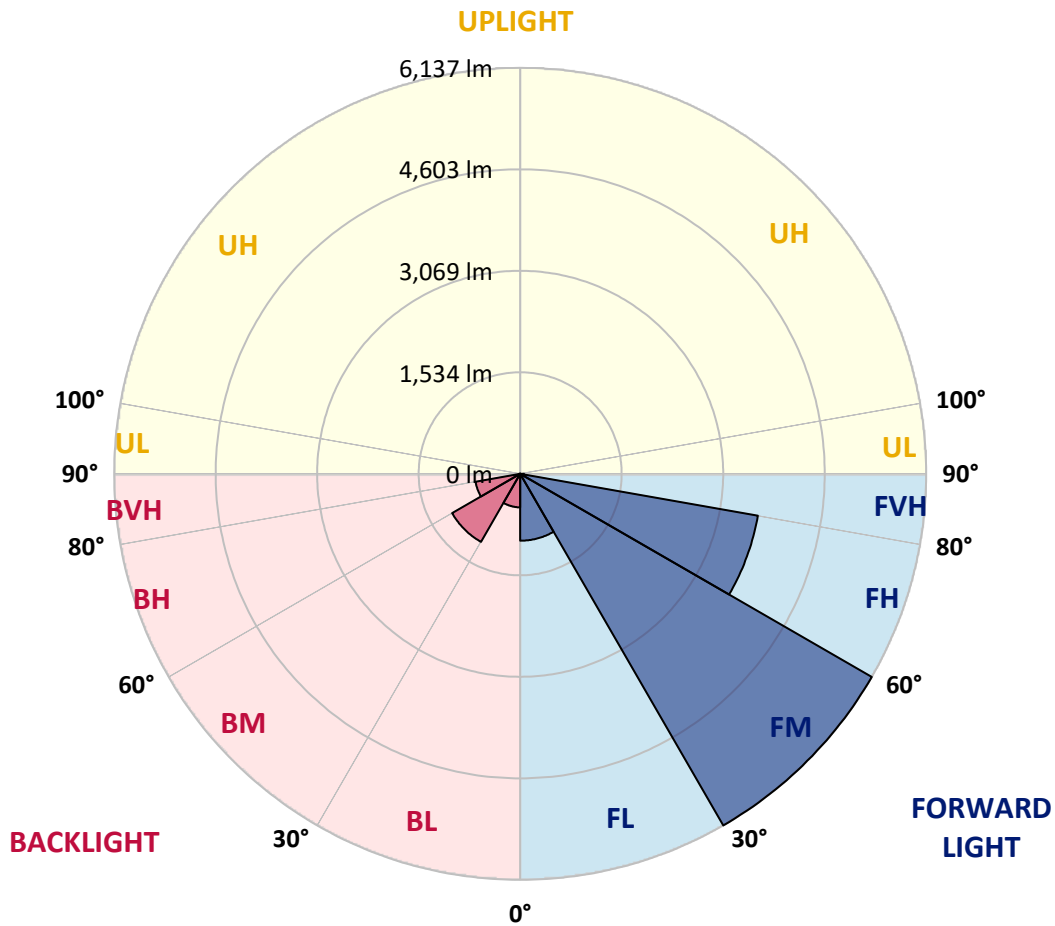
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1010.9	7.6			
FM (30°-60°)	6137.3	46.3			
FH (60°-80°)	3648.2	27.5			G2/5000
FVH (80°-90°)	54.3	0.4			G1/100
BL (0°-30°)	506.9	3.8	B2/1000		
BM (30°-60°)	1187.9	9.0	B2/2500		
BH (60°-80°)	685.1	5.2	B2/1000		G2/1000
BVH (80°-90°)	20.4	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°	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2
2.5°	2320.2	2333.6	2325.9	2322.1	2315.5	2305.9	2298.3	2274.4	2249.6	2233.4	2227.7
5°	2367.0	2380.3	2379.4	2383.2	2388.0	2390.8	2388.9	2362.2	2326.9	2299.2	2283.0
7.5°	2326.9	2342.2	2354.6	2373.6	2407.0	2442.3	2459.5	2453.8	2417.5	2379.4	2359.3
10°	2213.4	2229.6	2259.2	2304.0	2374.6	2450.9	2514.8	2544.4	2521.5	2479.5	2451.9
12.5°	2005.4	2021.6	2079.8	2177.1	2295.4	2428.0	2550.1	2629.3	2635.1	2593.1	2560.6
15°	1771.6	1787.9	1849.9	1972.0	2152.3	2365.1	2569.2	2719.0	2769.6	2733.3	2694.2
17.5°	1626.6	1640.9	1687.7	1786.0	1973.9	2239.1	2562.5	2814.4	2929.9	2901.2	2854.5
20°	1582.7	1595.2	1617.1	1685.8	1842.2	2108.4	2518.7	2904.1	3102.5	3086.3	3033.8
22.5°	1629.5	1640.9	1647.6	1678.2	1776.4	2022.6	2463.3	2995.7	3302.9	3304.8	3240.9
25°	1737.3	1748.8	1741.1	1760.2	1803.1	1995.8	2442.3	3103.5	3554.7	3575.7	3503.2
27.5°	1914.8	1915.7	1897.6	1896.6	1903.3	2035.9	2464.3	3218.9	3872.4	3911.6	3821.9
30°	2270.6	2256.3	2186.7	2111.3	2076.9	2156.1	2525.3	3355.4	4247.4	4317.0	4204.4
32.5°	2819.2	2798.2	2670.4	2490.0	2308.8	2349.8	2635.1	3510.9	4655.7	4781.6	4644.3
35°	3414.5	3408.8	3275.2	3007.1	2690.4	2625.5	2813.5	3715.0	5101.2	5301.6	5138.5
37.5°	3967.8	3965.0	3888.7	3572.9	3187.4	3010.0	3099.7	3982.2	5578.3	5868.3	5675.6
40°	4473.5	4482.1	4405.7	4123.4	3735.1	3503.2	3488.9	4312.3	6108.7	6485.6	6256.6
42.5°	4910.4	4920.0	4842.7	4633.8	4276.0	4048.9	3966.9	4716.8	6626.8	7148.6	6877.7
45°	5207.1	5266.3	5254.8	5087.9	4831.3	4595.6	4541.2	5224.3	7217.3	7851.7	7534.0
47.5°	5291.1	5345.5	5431.3	5454.2	5297.8	5065.9	5130.8	5835.9	7814.5	8555.8	8194.2
50°	5084.1	5134.6	5313.0	5550.6	5659.4	5587.8	5704.2	6491.3	8426.1	9258.0	8842.0
52.5°	4675.7	4727.3	4952.4	5328.3	5771.9	5997.1	6279.5	7137.2	9018.5	9923.0	9455.5
55°	4085.2	4139.6	4428.6	4854.1	5557.3	6165.9	6759.4	7782.1	9561.4	10521.1	10008.8
57.5°	3281.9	3322.0	3622.5	4217.8	5017.3	5998.0	7113.3	8486.2	10072.7	11108.8	10557.4
60°	2139.0	2174.3	2523.4	3187.4	4122.4	5437.1	7183.9	9271.3	10752.0	11873.0	11296.8
62.5°	1422.5	1446.3	1653.3	2140.9	2903.1	4360.0	6770.8	9898.1	11748.0	13202.9	12564.7
65°	976.0	999.8	1206.9	1546.5	1875.6	2884.1	5583.0	9815.1	12650.5	14259.1	13504.4
67.5°	696.4	716.5	892.0	1212.6	1357.6	1675.3	3784.7	8754.3	12520.8	14299.1	13555.0
70°	499.0	510.4	655.4	944.5	1079.0	1006.5	2104.6	6695.4	10962.9	13203.9	12522.7
72.5°	349.2	353.0	455.1	719.3	869.1	734.6	1001.7	4463.9	8291.5	10363.7	9708.3
75°	236.6	241.4	306.2	527.6	697.4	561.0	530.4	2393.7	4867.5	5736.6	5142.3
77.5°	145.0	146.9	197.5	360.6	521.9	427.4	341.5	1014.1	1883.3	1848.9	1576.1
80°	82.0	82.0	125.9	224.2	355.9	275.7	239.5	431.2	596.3	523.8	461.8
82.5°	45.8	46.7	91.6	139.3	235.6	163.1	131.7	199.4	257.6	228.0	198.4
85°	19.1	21.0	56.3	65.8	112.6	81.1	53.4	84.0	95.4	84.9	62.0
87.5°	1.9	2.9	17.2	12.4	13.4	16.2	7.6	16.2	13.4	13.4	9.5
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°	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2	2195.2
2.5°	2209.6	2195.2	2159.0	2117.0	2061.7	2035.0	1998.7	1973.9	1952.9	1954.8	1935.7
5°	2252.5	2216.2	2135.1	2034.0	1908.1	1818.4	1723.0	1657.2	1603.7	1592.3	1566.5
7.5°	2311.6	2254.4	2112.2	1930.0	1717.3	1556.0	1412.0	1319.4	1253.6	1232.6	1211.6
10°	2388.0	2305.0	2082.7	1799.3	1493.1	1288.0	1133.4	1060.9	1016.1	1000.8	989.3
12.5°	2476.7	2363.2	2043.6	1640.0	1262.2	1064.7	966.4	930.2	915.9	911.1	908.2
15°	2588.3	2435.7	1984.4	1451.1	1066.6	928.3	886.3	881.5	883.4	881.5	880.6
17.5°	2720.9	2514.8	1888.0	1256.5	935.0	858.6	843.4	847.2	852.0	851.0	849.1
20°	2865.9	2593.1	1765.0	1083.8	845.3	809.0	800.4	804.3	808.1	806.2	805.2
22.5°	3031.0	2677.0	1628.5	949.3	785.2	763.2	753.7	754.6	754.6	750.8	748.9
25°	3228.5	2769.6	1485.4	853.9	739.4	722.2	710.8	706.9	701.2	689.8	687.9
27.5°	3464.1	2867.8	1348.1	787.1	703.1	686.9	673.6	664.0	649.7	630.6	628.7
30°	3729.3	2987.1	1231.7	745.1	674.5	658.3	643.0	628.7	607.7	583.9	582.0
32.5°	4041.3	3114.9	1146.8	717.4	648.7	631.6	613.4	596.3	573.4	549.5	550.5
35°	4413.4	3269.5	1097.1	698.4	628.7	605.8	585.8	566.7	549.5	528.5	526.6
37.5°	4816.9	3433.6	1081.9	688.8	615.4	580.1	557.2	543.8	541.9	529.5	528.5
40°	5258.7	3628.2	1093.3	683.1	601.0	555.3	530.4	527.6	532.4	510.4	511.4
42.5°	5726.1	3859.1	1112.4	676.4	581.0	530.4	506.6	506.6	502.8	472.2	472.2
45°	6231.8	4125.3	1131.5	660.2	557.2	505.6	487.5	480.8	464.6	435.0	434.1
47.5°	6741.2	4396.2	1145.8	630.6	528.5	484.7	468.4	453.2	429.3	402.6	401.7
50°	7224.9	4639.5	1130.5	586.7	496.1	464.6	447.4	426.5	400.7	382.6	379.7
52.5°	7657.1	4850.3	1065.7	535.2	461.8	443.6	428.4	406.4	385.4	366.4	364.4
55°	8033.0	5021.1	951.2	486.6	431.2	425.5	410.2	382.6	353.9	337.7	335.8
57.5°	8393.6	5150.9	808.1	446.5	403.6	405.5	382.6	357.8	331.1	313.9	312.0
60°	8873.5	5324.5	663.1	409.3	374.0	379.7	354.9	336.8	303.4	281.4	278.6
62.5°	9640.6	5594.5	526.6	363.5	339.6	341.5	331.1	309.1	269.0	243.3	241.4
65°	10249.2	5495.3	415.0	313.9	300.5	303.4	303.4	279.5	236.6	207.0	204.2
67.5°	10180.5	4705.3	331.1	265.2	263.3	265.2	271.9	251.9	209.9	186.0	182.2
70°	9378.2	3742.7	265.2	220.4	229.0	224.2	243.3	229.9	188.9	165.0	162.2
72.5°	7652.3	2696.1	202.3	182.2	175.5	183.2	219.4	207.0	157.4	130.7	127.8
75°	4471.6	1438.7	150.7	144.1	126.9	152.6	194.6	176.5	120.2	96.4	93.5
77.5°	1455.9	501.8	110.7	105.9	94.4	123.1	166.0	148.8	98.3	76.3	73.5
80°	390.2	151.7	75.4	69.6	61.1	91.6	131.7	118.3	70.6	49.6	48.7
82.5°	156.5	63.9	43.9	39.1	33.4	63.0	104.0	95.4	52.5	31.5	31.5
85°	50.6	21.0	16.2	12.4	15.3	39.1	62.0	64.9	37.2	16.2	12.4
87.5°	6.7	2.9	2.9	3.8	2.9	6.7	19.1	18.1	10.5	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)