

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: P884836

Luminaire Tested: **NAV-SB5D-830-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884836
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-SB5D-830-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 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: 32993 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

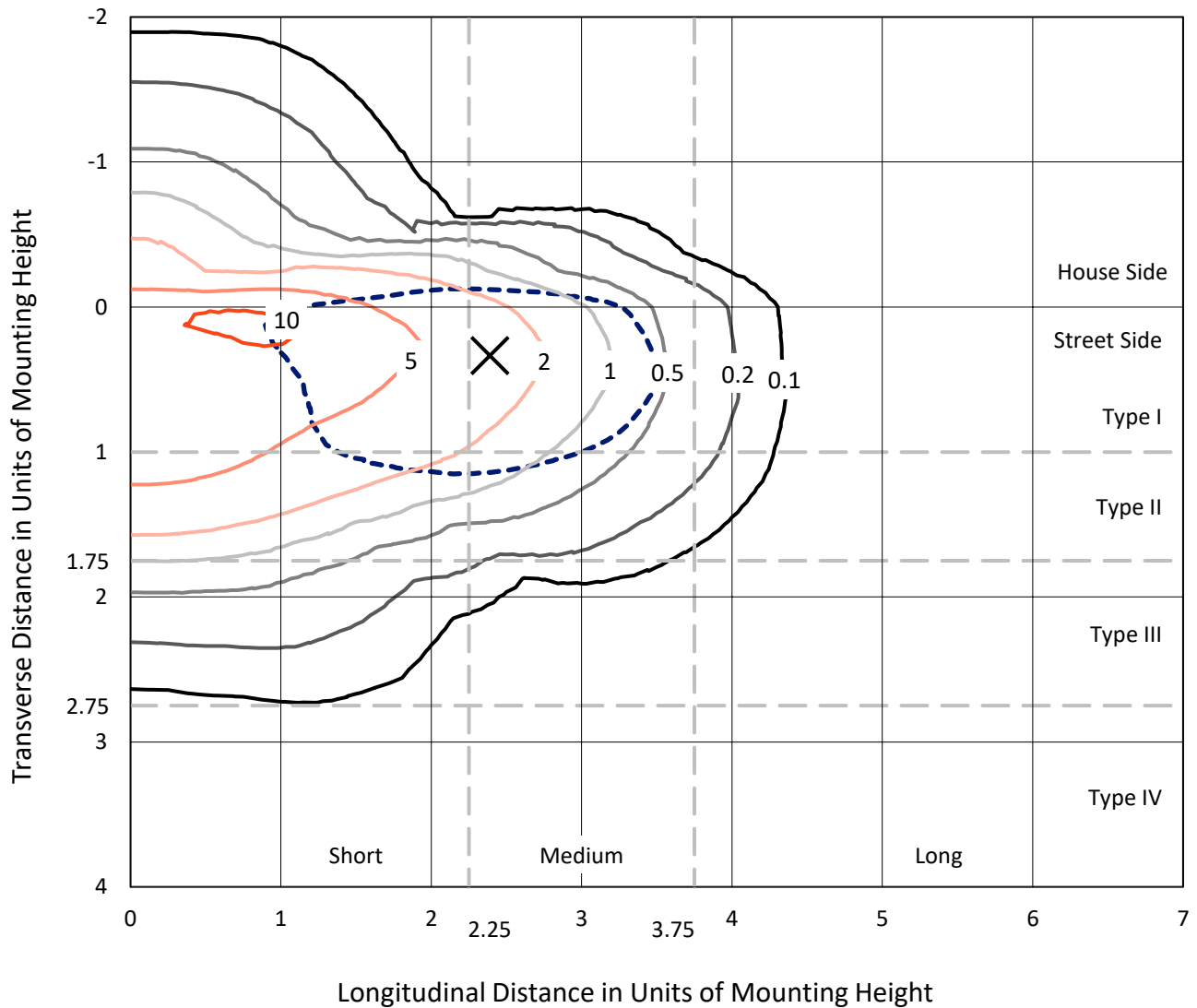
Input Watts (W): 364.9
Input Voltage (V): 120.0
Input Current (Ain): 3.094
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 3.28
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P884836
 CATALOG NUMBER: NAV-SB5D-830-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

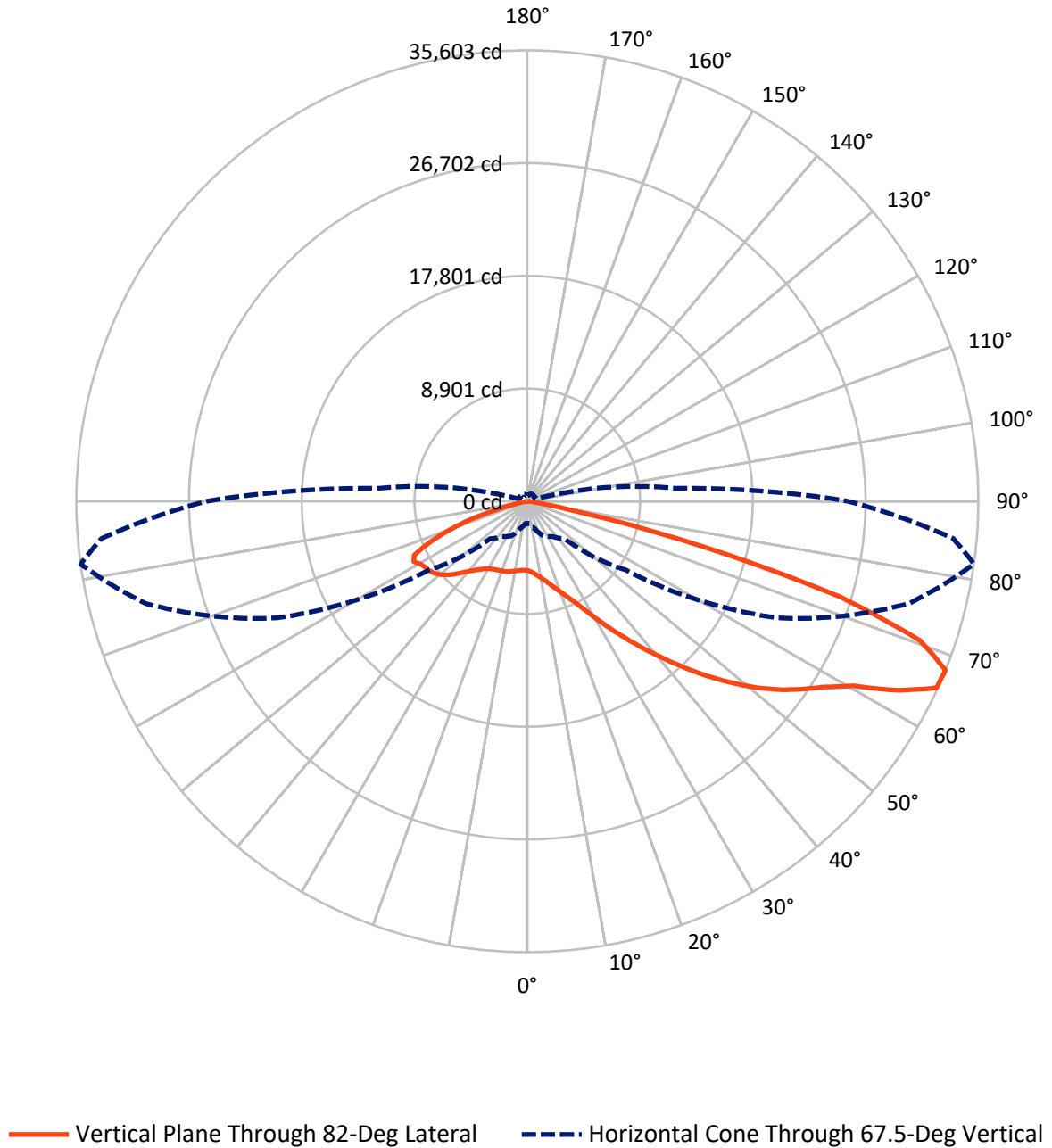
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.6 fc
 Type II - Medium - N/A

REPORT NUMBER: P884836
CATALOG NUMBER: NAV-SB5D-830-U-T2-HSS

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5976.4	0.0	5976.4
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	27016.6	0.0	27016.6
	% Fixture	81.9	0.0	81.9
Total	Lumens	32993.0	0.0	32993.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	487.0	1.5
10°-20°	1265.4	3.8
20°-30°	2026.8	6.1
30°-40°	3584.0	10.9
40°-50°	6279.5	19.0
50°-60°	8375.2	25.4
60°-70°	7796.8	23.6
70°-80°	2992.4	9.1
80°-90°	185.9	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°	32993.0	100.0
0°-180°	32993.0	100.0

Coefficient of Utilization



REPORT NUMBER: P884836

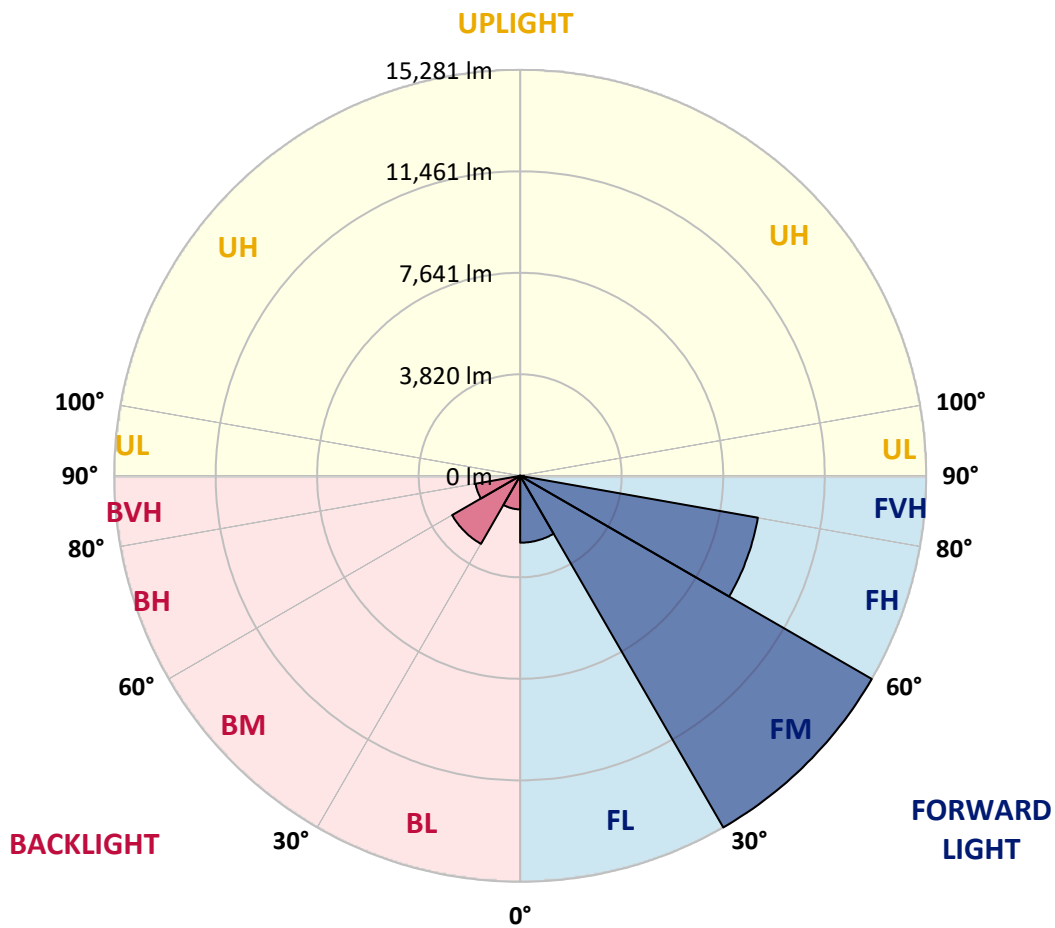
CATALOG NUMBER: NAV-SB5D-830-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2517.0	7.6			
FM (30°-60°)	15281.0	46.3			
FH (60°-80°)	9083.5	27.5			G4/12000
FVH (80°-90°)	135.1	0.4			G2/225
BL (0°-30°)	1262.2	3.8	B3/2500		
BM (30°-60°)	2957.7	9.0	B3/5000		
BH (60°-80°)	1705.8	5.2	B3/2500		G3/2500
BVH (80°-90°)	50.7	0.2			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G4

Type II Medium



REPORT NUMBER: P884836

CATALOG NUMBER: NAV-SB5D-830-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8
2.5°	5777.0	5810.3	5791.3	5781.8	5765.1	5741.4	5722.4	5663.0	5601.2	5560.8	5546.6
5°	5893.4	5926.7	5924.3	5933.8	5945.7	5952.8	5948.0	5881.5	5793.6	5724.7	5684.4
7.5°	5793.6	5831.6	5862.5	5910.0	5993.2	6081.1	6123.8	6109.6	6019.3	5924.3	5874.4
10°	5511.0	5551.3	5625.0	5736.6	5912.4	6102.4	6261.6	6335.2	6278.2	6173.7	6104.8
12.5°	4993.1	5033.5	5178.4	5420.7	5715.2	6045.4	6349.5	6546.6	6560.9	6456.4	6375.6
15°	4411.1	4451.5	4605.9	4910.0	5358.9	5888.6	6397.0	6769.9	6895.8	6805.6	6708.2
17.5°	4050.1	4085.7	4202.1	4446.8	4914.7	5575.1	6380.4	7007.5	7294.9	7223.6	7107.2
20°	3940.8	3971.7	4026.3	4197.4	4586.9	5249.7	6271.1	7230.8	7724.8	7684.5	7553.8
22.5°	4057.2	4085.7	4102.3	4178.4	4423.0	5035.9	6133.3	7458.8	8223.7	8228.4	8069.3
25°	4325.6	4354.1	4335.1	4382.6	4489.5	4969.4	6081.1	7727.2	8850.8	8903.0	8722.5
27.5°	4767.5	4769.8	4724.7	4722.3	4738.9	5069.1	6135.7	8014.6	9641.8	9739.2	9515.9
30°	5653.5	5617.8	5444.4	5256.8	5171.3	5368.4	6287.7	8354.3	10575.3	10748.7	10468.4
32.5°	7019.3	6967.1	6648.8	6199.8	5748.5	5850.6	6560.9	8741.5	11592.0	11905.6	11563.5
35°	8501.6	8487.3	8154.8	7487.3	6698.7	6537.1	7005.1	9249.9	12701.3	13200.2	12794.0
37.5°	9879.3	9872.2	9682.2	8895.9	7936.3	7494.4	7717.7	9915.0	13889.0	14611.2	14131.3
40°	11138.3	11159.7	10969.7	10266.5	9299.7	8722.5	8686.9	10736.9	15209.8	16148.1	15578.0
42.5°	12226.2	12250.0	12057.6	11537.4	10646.6	10081.2	9877.0	11744.0	16499.6	17799.0	17124.3
45°	12965.0	13112.3	13083.8	12668.1	12029.1	11442.4	11307.0	13007.8	17970.0	19549.6	18758.6
47.5°	13174.0	13309.4	13523.2	13580.2	13190.7	12613.4	12775.0	14530.4	19457.0	21302.7	20402.4
50°	12658.6	12784.5	13228.7	13820.1	14090.9	13912.8	14202.6	16162.3	20979.6	23051.0	22015.3
52.5°	11641.9	11770.2	12330.8	13266.7	14371.2	14931.8	15635.0	17770.5	22454.8	24706.7	23542.7
55°	10171.5	10306.9	11026.7	12086.1	13836.8	15352.3	16829.8	19376.2	23806.4	26196.0	24920.4
57.5°	8171.4	8271.2	9019.4	10501.7	12492.3	14934.2	17711.1	21129.3	25079.6	27659.3	26286.3
60°	5325.7	5413.6	6283.0	7936.3	10264.2	13537.5	17886.9	23084.3	26770.9	29562.0	28127.3
62.5°	3541.7	3601.1	4116.6	5330.4	7228.4	10855.6	16858.3	24644.9	29250.8	32873.3	31284.2
65°	2430.0	2489.4	3004.9	3850.5	4670.1	7180.9	13900.9	24438.2	31498.0	35502.9	33624.0
67.5°	1734.1	1783.9	2221.0	3019.1	3380.2	4171.2	9423.3	21796.8	31174.9	35602.7	33749.9
70°	1242.3	1270.8	1631.9	2351.7	2686.6	2506.1	5240.2	16670.6	27295.9	32875.7	31179.7
72.5°	869.4	878.9	1133.1	1791.1	2164.0	1829.1	2494.2	11114.6	20644.7	25804.1	24172.2
75°	589.1	601.0	762.5	1313.6	1736.4	1396.7	1320.7	5959.9	12119.4	14283.4	12803.5
77.5°	361.1	365.8	491.7	897.9	1299.4	1064.2	850.4	2525.1	4689.1	4603.5	3924.2
80°	204.3	204.3	313.6	558.2	886.0	686.5	596.2	1073.7	1484.6	1304.1	1149.7
82.5°	114.0	116.4	228.0	346.8	586.7	406.2	327.8	496.5	641.4	567.7	494.1
85°	47.5	52.3	140.1	163.9	280.3	201.9	133.0	209.0	237.5	211.4	154.4
87.5°	4.8	7.1	42.8	30.9	33.3	40.4	19.0	40.4	33.3	33.3	23.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

REPORT NUMBER: P884836

CATALOG NUMBER: NAV-SB5D-830-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8	5465.8
2.5°	5501.5	5465.8	5375.6	5271.0	5133.3	5066.8	4976.5	4914.7	4862.5	4867.2	4819.7
5°	5608.3	5518.1	5316.2	5064.4	4750.8	4527.5	4290.0	4126.1	3993.1	3964.6	3900.4
7.5°	5755.6	5613.1	5259.2	4805.5	4275.7	3874.3	3515.6	3285.2	3121.3	3069.0	3016.8
10°	5945.7	5739.0	5185.5	4480.0	3717.5	3206.8	2822.0	2641.5	2529.8	2491.8	2463.3
12.5°	6166.6	5883.9	5088.1	4083.3	3142.7	2651.0	2406.3	2316.0	2280.4	2268.5	2261.4
15°	6444.5	6064.4	4940.9	3613.0	2655.7	2311.3	2206.8	2194.9	2199.6	2194.9	2192.5
17.5°	6774.7	6261.6	4700.9	3128.4	2327.9	2137.9	2099.9	2109.4	2121.2	2118.9	2114.1
20°	7135.7	6456.4	4394.5	2698.5	2104.6	2014.3	1993.0	2002.5	2012.0	2007.2	2004.8
22.5°	7546.7	6665.4	4054.8	2363.5	1955.0	1900.3	1876.6	1879.0	1879.0	1869.4	1864.7
25°	8038.4	6895.8	3698.5	2126.0	1840.9	1798.2	1769.7	1760.2	1745.9	1717.4	1712.7
27.5°	8625.1	7140.5	3356.5	1959.7	1750.7	1710.3	1677.0	1653.3	1617.7	1570.1	1565.4
30°	9285.5	7437.4	3066.7	1855.2	1679.4	1639.0	1601.0	1565.4	1513.1	1453.8	1449.0
32.5°	10062.2	7755.7	2855.2	1786.3	1615.3	1572.5	1527.4	1484.6	1427.6	1368.2	1370.6
35°	10988.7	8140.5	2731.7	1738.8	1565.4	1508.4	1458.5	1411.0	1368.2	1316.0	1311.2
37.5°	11993.5	8549.1	2693.7	1715.0	1532.1	1444.3	1387.2	1354.0	1349.2	1318.4	1316.0
40°	13093.3	9033.7	2722.2	1700.8	1496.5	1382.5	1320.7	1313.6	1325.5	1270.8	1273.2
42.5°	14257.2	9608.5	2769.7	1684.2	1446.6	1320.7	1261.3	1261.3	1251.8	1175.8	1175.8
45°	15516.2	10271.3	2817.2	1643.8	1387.2	1259.0	1213.8	1197.2	1156.8	1083.2	1080.8
47.5°	16784.7	10945.9	2852.9	1570.1	1316.0	1206.7	1166.3	1128.3	1068.9	1002.4	1000.0
50°	17989.0	11551.6	2814.9	1460.9	1235.2	1156.8	1114.1	1061.8	997.7	952.5	945.4
52.5°	19065.1	12076.6	2653.3	1332.6	1149.7	1104.6	1066.6	1011.9	959.7	912.2	907.4
55°	20001.0	12501.8	2368.3	1211.5	1073.7	1059.4	1021.4	952.5	881.3	840.9	836.1
57.5°	20898.9	12824.9	2012.0	1111.7	1004.8	1009.6	952.5	890.8	824.3	781.5	776.8
60°	22093.7	13257.2	1650.9	1019.1	931.2	945.4	883.7	838.5	755.4	700.7	693.6
62.5°	24003.5	13929.4	1311.2	905.0	845.6	850.4	824.3	769.6	669.9	605.7	601.0
65°	25519.1	13682.4	1033.3	781.5	748.3	755.4	755.4	696.0	589.1	515.5	508.3
67.5°	25348.0	11715.5	824.3	660.4	655.6	660.4	677.0	627.1	522.6	463.2	453.7
70°	23350.3	9318.7	660.4	548.7	570.1	558.2	605.7	572.5	470.3	410.9	403.8
72.5°	19053.2	6712.9	503.6	453.7	437.1	456.1	546.3	515.5	391.9	325.4	318.3
75°	11133.6	3582.1	375.3	358.7	315.9	380.1	484.6	439.5	299.3	239.9	232.8
77.5°	3624.9	1249.5	275.5	263.7	235.2	306.4	413.3	370.6	244.7	190.0	182.9
80°	971.5	377.7	187.7	173.4	152.0	228.0	327.8	294.6	175.8	123.5	121.1
82.5°	389.6	159.2	109.3	97.4	83.1	156.8	258.9	237.5	130.6	78.4	78.4
85°	125.9	52.3	40.4	30.9	38.0	97.4	154.4	161.5	92.6	40.4	30.9
87.5°	16.6	7.1	7.1	9.5	7.1	16.6	47.5	45.1	26.1	4.8	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)