

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: P883746

Luminaire Tested: **NAV-SB4B-727-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883746
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-727-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 CRI, 2700K, 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: 15102 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

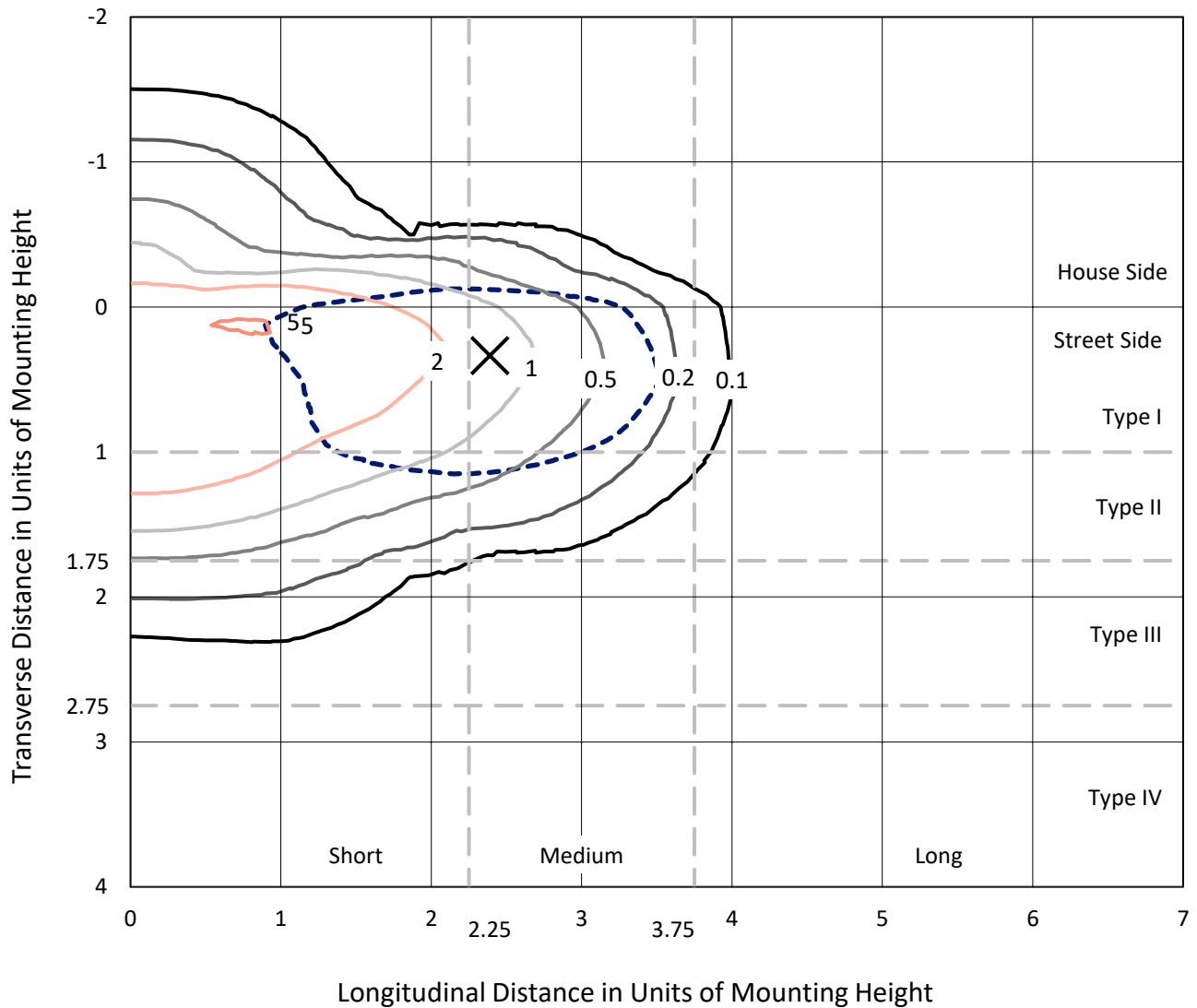
Input Watts (W): 147
Input Voltage (V): 120.0
Input Current (Ain): 1.255
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P883746
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Iso-Footcandle Lines of Horizontal Illumination

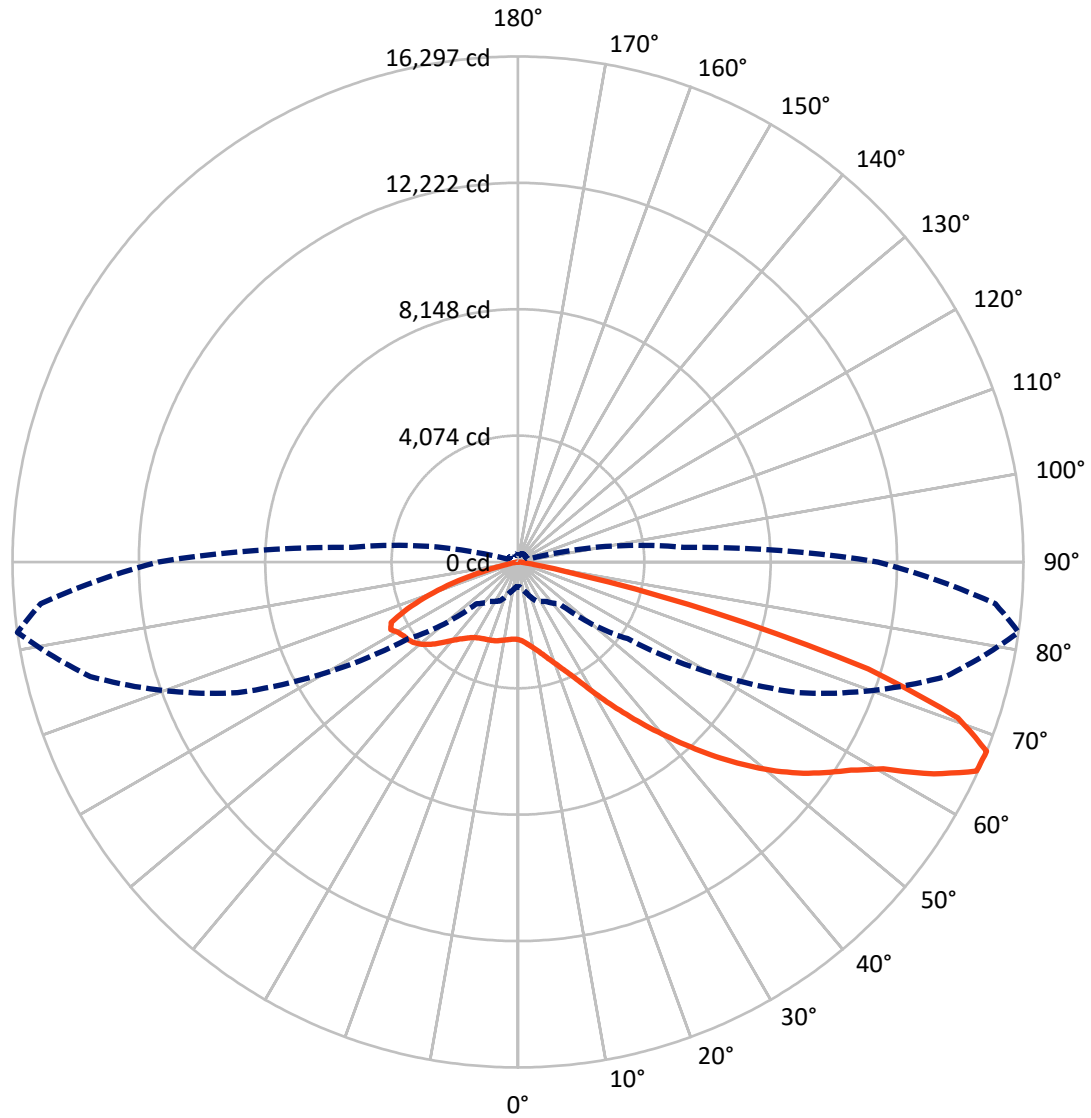
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.3 fc
 Type II - Medium - N/A

REPORT NUMBER: P883746
CATALOG NUMBER: NAV-SB4B-727-U-T2-HSS

Luminous Intensity Polar Plot



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

REPORT NUMBER: P883746

CATALOG NUMBER: NAV-SB4B-727-U-T2-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2735.6	0.0	2735.6
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	12366.4	0.0	12366.4
	% Fixture	81.9	0.0	81.9
Total	Lumens	15102.0	0.0	15102.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.9	1.5
10°-20°	579.2	3.8
20°-30°	927.7	6.1
30°-40°	1640.5	10.9
40°-50°	2874.4	19.0
50°-60°	3833.6	25.4
60°-70°	3568.9	23.6
70°-80°	1369.7	9.1
80°-90°	85.1	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°	15102.0	100.0
0°-180°	15102.0	100.0

Coefficient of Utilization



REPORT NUMBER: P883746

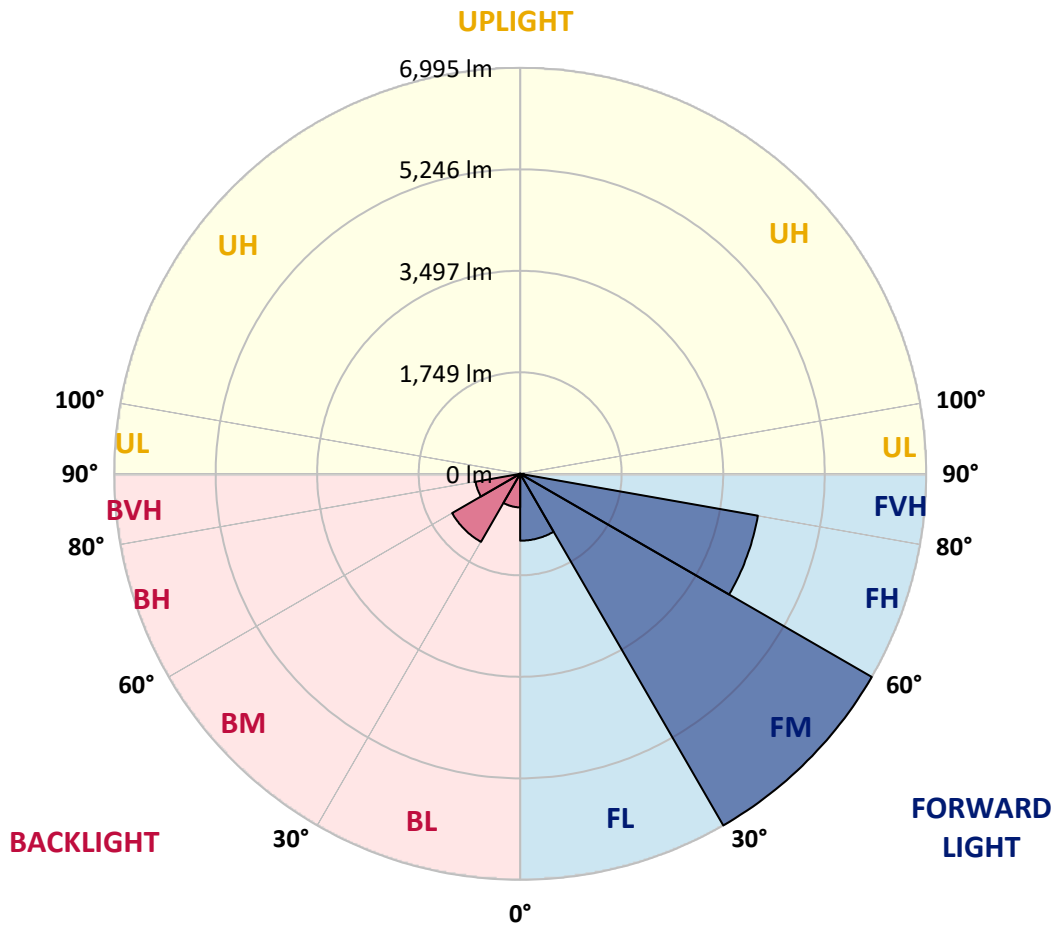
CATALOG NUMBER: NAV-SB4B-727-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1152.1	7.6			
FM (30°-60°)	6994.6	46.3			
FH (60°-80°)	4157.8	27.5			G2/5000
FVH (80°-90°)	61.9	0.4			G1/100
BL (0°-30°)	577.7	3.8	B2/1000		
BM (30°-60°)	1353.8	9.0	B2/2500		
BH (60°-80°)	780.8	5.2	B2/1000		G2/1000
BVH (80°-90°)	23.2	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



REPORT NUMBER: P883746
 CATALOG NUMBER: NAV-SB4B-727-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9
2.5°	2644.3	2659.5	2650.9	2646.5	2638.9	2628.0	2619.3	2592.1	2563.9	2545.4	2538.9
5°	2697.6	2712.8	2711.7	2716.1	2721.5	2724.8	2722.6	2692.2	2651.9	2620.4	2601.9
7.5°	2651.9	2669.3	2683.5	2705.2	2743.3	2783.5	2803.1	2796.6	2755.2	2711.7	2688.9
10°	2522.5	2541.0	2574.7	2625.8	2706.3	2793.3	2866.1	2899.8	2873.7	2825.9	2794.4
12.5°	2285.5	2304.0	2370.3	2481.2	2616.1	2767.2	2906.4	2996.6	3003.1	2955.3	2918.3
15°	2019.1	2037.6	2108.3	2247.5	2453.0	2695.4	2928.1	3098.8	3156.4	3115.1	3070.6
17.5°	1853.9	1870.2	1923.4	2035.4	2249.6	2551.9	2920.5	3207.6	3339.1	3306.5	3253.2
20°	1803.8	1818.0	1843.0	1921.3	2099.6	2402.9	2870.5	3309.8	3535.9	3517.4	3457.6
22.5°	1857.1	1870.2	1877.8	1912.6	2024.6	2305.1	2807.4	3414.1	3764.3	3766.4	3693.6
25°	1980.0	1993.0	1984.3	2006.1	2055.0	2274.6	2783.5	3537.0	4051.3	4075.2	3992.6
27.5°	2182.2	2183.3	2162.7	2161.6	2169.2	2320.3	2808.5	3668.6	4413.4	4458.0	4355.7
30°	2587.8	2571.5	2492.1	2406.2	2367.1	2457.3	2878.1	3824.1	4840.7	4920.1	4791.8
32.5°	3213.0	3189.1	3043.4	2837.9	2631.3	2678.0	3003.1	4001.3	5306.1	5449.6	5293.0
35°	3891.5	3884.9	3732.7	3427.2	3066.2	2992.3	3206.5	4234.0	5813.8	6042.2	5856.2
37.5°	4522.1	4518.8	4431.9	4072.0	3632.7	3430.4	3532.7	4538.4	6357.5	6688.0	6468.4
40°	5098.4	5108.2	5021.2	4699.3	4256.8	3992.6	3976.3	4914.6	6962.0	7391.5	7130.6
42.5°	5596.4	5607.2	5519.2	5281.0	4873.3	4614.5	4521.0	5375.6	7552.4	8147.2	7838.4
45°	5934.5	6001.9	5988.9	5798.6	5506.1	5237.6	5175.6	5954.1	8225.5	8948.5	8586.5
47.5°	6030.2	6092.2	6190.0	6216.1	6037.8	5773.6	5847.5	6651.0	8906.1	9751.0	9338.9
50°	5794.3	5851.9	6055.2	6325.9	6449.9	6368.3	6501.0	7398.0	9603.1	10551.2	10077.1
52.5°	5328.9	5387.6	5644.2	6072.6	6578.2	6834.8	7156.6	8134.1	10278.3	11309.1	10776.3
55°	4655.8	4717.8	5047.3	5532.2	6333.6	7027.3	7703.6	8869.2	10897.0	11990.8	11406.9
57.5°	3740.3	3786.0	4128.5	4807.0	5718.1	6835.9	8107.0	9671.6	11479.8	12660.6	12032.1
60°	2437.7	2478.0	2875.9	3632.7	4698.2	6196.6	8187.4	10566.4	12253.9	13531.5	12874.8
62.5°	1621.2	1648.4	1884.3	2439.9	3308.7	4969.0	7716.6	11280.8	13389.1	15047.2	14319.8
65°	1112.3	1139.5	1375.4	1762.5	2137.6	3286.9	6362.9	11186.2	14417.7	16250.9	15390.8
67.5°	793.7	816.6	1016.6	1382.0	1547.2	1909.3	4313.3	9977.1	14269.8	16296.5	15448.4
70°	568.7	581.7	747.0	1076.4	1229.7	1147.1	2398.6	7630.7	12494.2	15048.3	14272.0
72.5°	398.0	402.3	518.6	819.8	990.5	837.2	1141.7	5087.5	9449.8	11811.4	11064.4
75°	269.7	275.1	349.0	601.3	794.8	639.3	604.5	2728.0	5547.4	6538.0	5860.6
77.5°	165.3	167.4	225.1	411.0	594.8	487.1	389.3	1155.8	2146.3	2107.2	1796.2
80°	93.5	93.5	143.5	255.5	405.6	314.2	272.9	491.5	679.6	596.9	526.3
82.5°	52.2	53.3	104.4	158.7	268.6	185.9	150.0	227.2	293.6	259.9	226.2
85°	21.7	23.9	64.2	75.0	128.3	92.4	60.9	95.7	108.7	96.8	70.7
87.5°	2.2	3.3	19.6	14.1	15.2	18.5	8.7	18.5	15.2	15.2	10.9
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: P883746
 CATALOG NUMBER: NAV-SB4B-727-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9	2501.9
2.5°	2518.2	2501.9	2460.6	2412.7	2349.7	2319.2	2277.9	2249.6	2225.7	2227.9	2206.1
5°	2567.1	2525.8	2433.4	2318.1	2174.6	2072.4	1963.7	1888.6	1827.8	1814.7	1785.4
7.5°	2634.5	2569.3	2407.3	2199.6	1957.2	1773.4	1609.2	1503.7	1428.7	1404.8	1380.9
10°	2721.5	2626.9	2373.6	2050.7	1701.6	1467.9	1291.7	1209.1	1158.0	1140.6	1127.5
12.5°	2822.6	2693.3	2329.0	1869.1	1438.5	1213.4	1101.4	1060.1	1043.8	1038.4	1035.1
15°	2949.9	2775.9	2261.6	1653.8	1215.6	1057.9	1010.1	1004.7	1006.8	1004.7	1003.6
17.5°	3101.0	2866.1	2151.8	1432.0	1065.6	978.6	961.2	965.5	971.0	969.9	967.7
20°	3266.3	2955.3	2011.5	1235.2	963.4	922.0	912.2	916.6	920.9	918.8	917.7
22.5°	3454.4	3051.0	1856.0	1081.9	894.9	869.8	859.0	860.1	860.1	855.7	853.5
25°	3679.4	3156.4	1692.9	973.1	842.7	823.1	810.0	805.7	799.2	786.1	783.9
27.5°	3948.0	3268.4	1536.4	897.0	801.3	782.9	767.6	756.8	740.5	718.7	716.5
30°	4250.3	3404.4	1403.7	849.2	768.7	750.2	732.8	716.5	692.6	665.4	663.3
32.5°	4605.8	3550.1	1306.9	817.7	739.4	719.8	699.1	679.6	653.5	626.3	627.4
35°	5029.9	3726.2	1250.4	795.9	716.5	690.4	667.6	645.9	626.3	602.4	600.2
37.5°	5489.8	3913.2	1233.0	785.0	701.3	661.1	635.0	619.8	617.6	603.5	602.4
40°	5993.2	4135.0	1246.1	778.5	685.0	632.8	604.5	601.3	606.7	581.7	582.8
42.5°	6526.0	4398.2	1267.8	770.9	662.2	604.5	577.4	577.4	573.0	538.2	538.2
45°	7102.3	4701.5	1289.5	752.4	635.0	576.3	555.6	548.0	529.5	495.8	494.7
47.5°	7682.9	5010.3	1305.9	718.7	602.4	552.4	533.9	516.5	489.3	458.8	457.8
50°	8234.2	5287.6	1288.5	668.7	565.4	529.5	509.9	486.0	456.7	436.0	432.7
52.5°	8726.7	5527.9	1214.5	610.0	526.3	505.6	488.2	463.2	439.3	417.5	415.4
55°	9155.1	5722.5	1084.0	554.5	491.5	484.9	467.5	436.0	403.4	384.9	382.7
57.5°	9566.1	5870.4	920.9	508.9	459.9	462.1	436.0	407.7	377.3	357.7	355.5
60°	10113.0	6068.3	755.7	466.5	426.2	432.7	404.5	383.8	345.8	320.8	317.5
62.5°	10987.2	6376.0	600.2	414.3	387.1	389.3	377.3	352.3	306.6	277.3	275.1
65°	11680.9	6262.9	473.0	357.7	342.5	345.8	345.8	318.6	269.7	235.9	232.7
67.5°	11602.6	5362.6	377.3	302.3	300.1	302.3	309.9	287.0	239.2	212.0	207.7
70°	10688.2	4265.5	302.3	251.2	261.0	255.5	277.3	262.0	215.3	188.1	184.8
72.5°	8721.3	3072.7	230.5	207.7	200.1	208.8	250.1	235.9	179.4	149.0	145.7
75°	5096.2	1639.7	171.8	164.2	144.6	174.0	221.8	201.2	137.0	109.8	106.6
77.5°	1659.2	571.9	126.1	120.7	107.6	140.3	189.2	169.6	112.0	87.0	83.7
80°	444.7	172.9	85.9	79.4	69.6	104.4	150.0	134.8	80.5	56.5	55.5
82.5°	178.3	72.8	50.0	44.6	38.1	71.8	118.5	108.7	59.8	35.9	35.9
85°	57.6	23.9	18.5	14.1	17.4	44.6	70.7	73.9	42.4	18.5	14.1
87.5°	7.6	3.3	3.3	4.3	3.3	7.6	21.7	20.7	12.0	2.2	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)