

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: P884830

Luminaire Tested: **NAV-SB5D-827-U-T4FT-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884830
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-25)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-827-U-T4FT-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 31766 lumens
Efficiency: N/A
Efficacy: 87.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G5

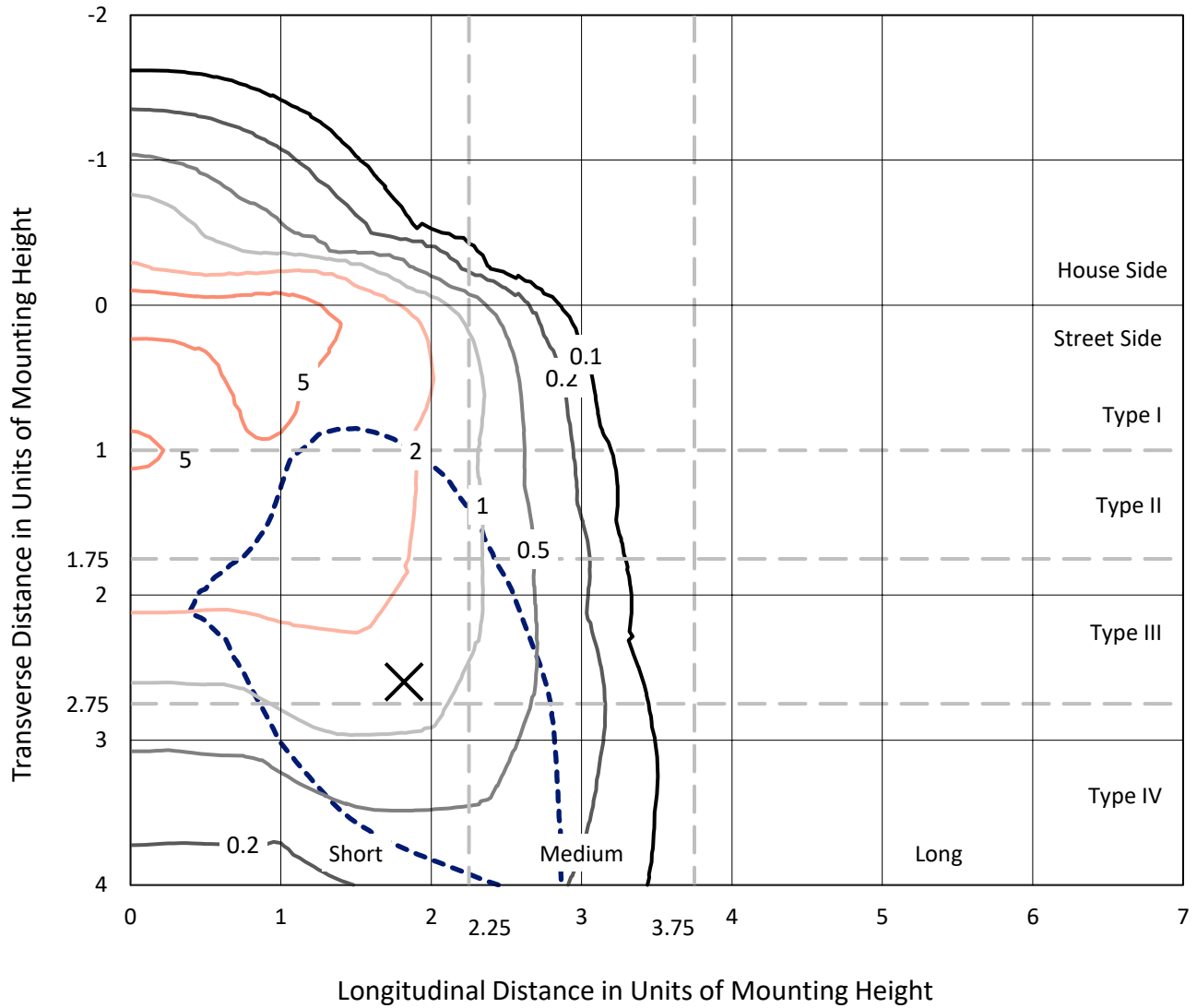
Input Watts (W): 364.9
Input Voltage (V): 120.0
Input Current (Ain): 3.094
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 3.28
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

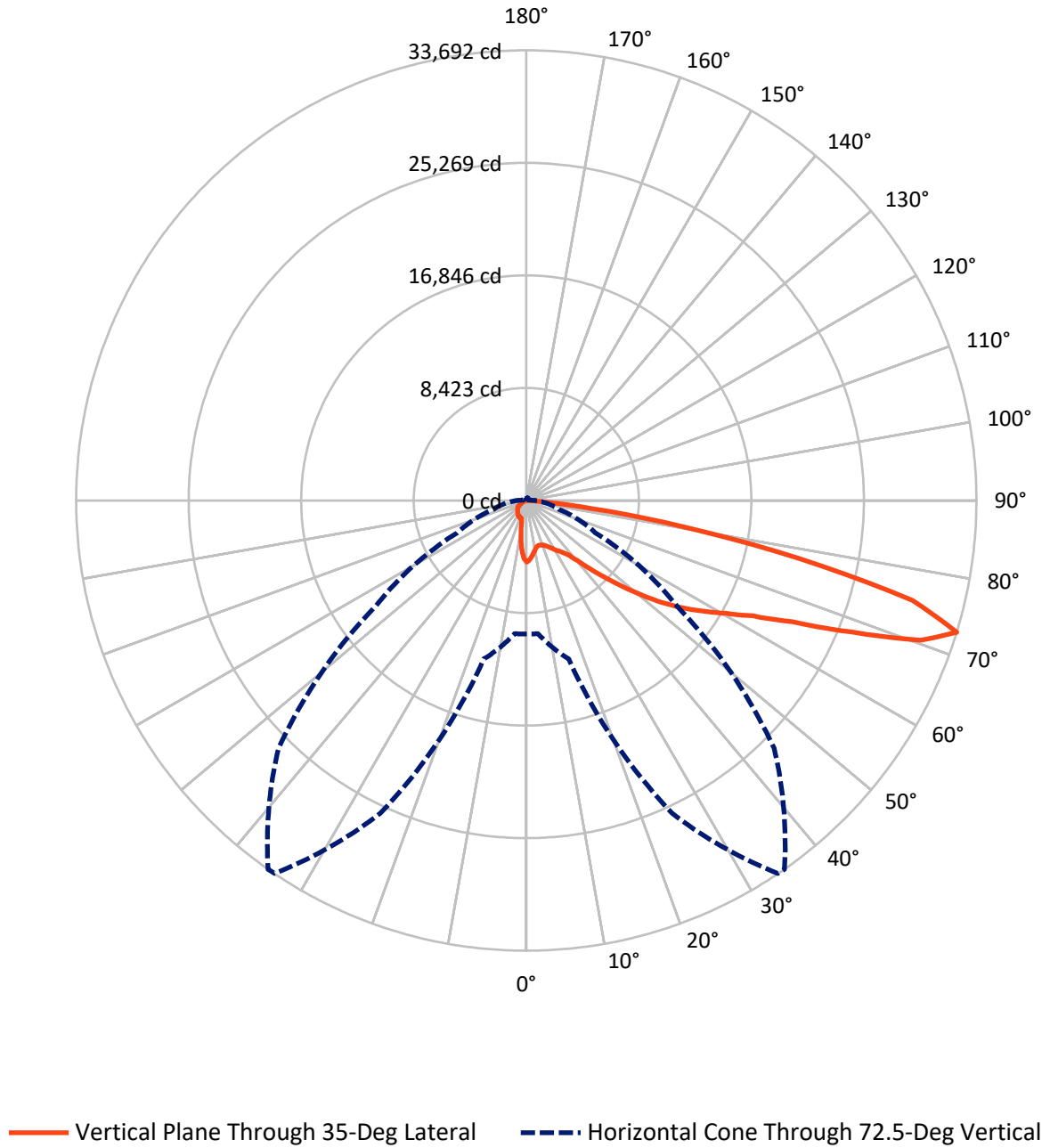
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7.4 fc
 Type IV - Short - N/A

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CATALOG NUMBER: NAV-SB5D-827-U-T4FT-HSS

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3575.1	0.0	3575.1
	% Fixture	11.3	0.0	11.3
Street Side	Lumens	28190.9	0.0	28190.9
	% Fixture	88.7	0.0	88.7
Total	Lumens	31766.0	0.0	31766.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	378.3	1.2
10°-20°	885.0	2.8
20°-30°	1437.7	4.5
30°-40°	2398.8	7.6
40°-50°	4538.7	14.3
50°-60°	7211.9	22.7
60°-70°	8921.6	28.1
70°-80°	5545.7	17.5
80°-90°	448.2	1.4
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°	31766.0	100.0
0°-180°	31766.0	100.0

Coefficient of Utilization



REPORT NUMBER: P884830

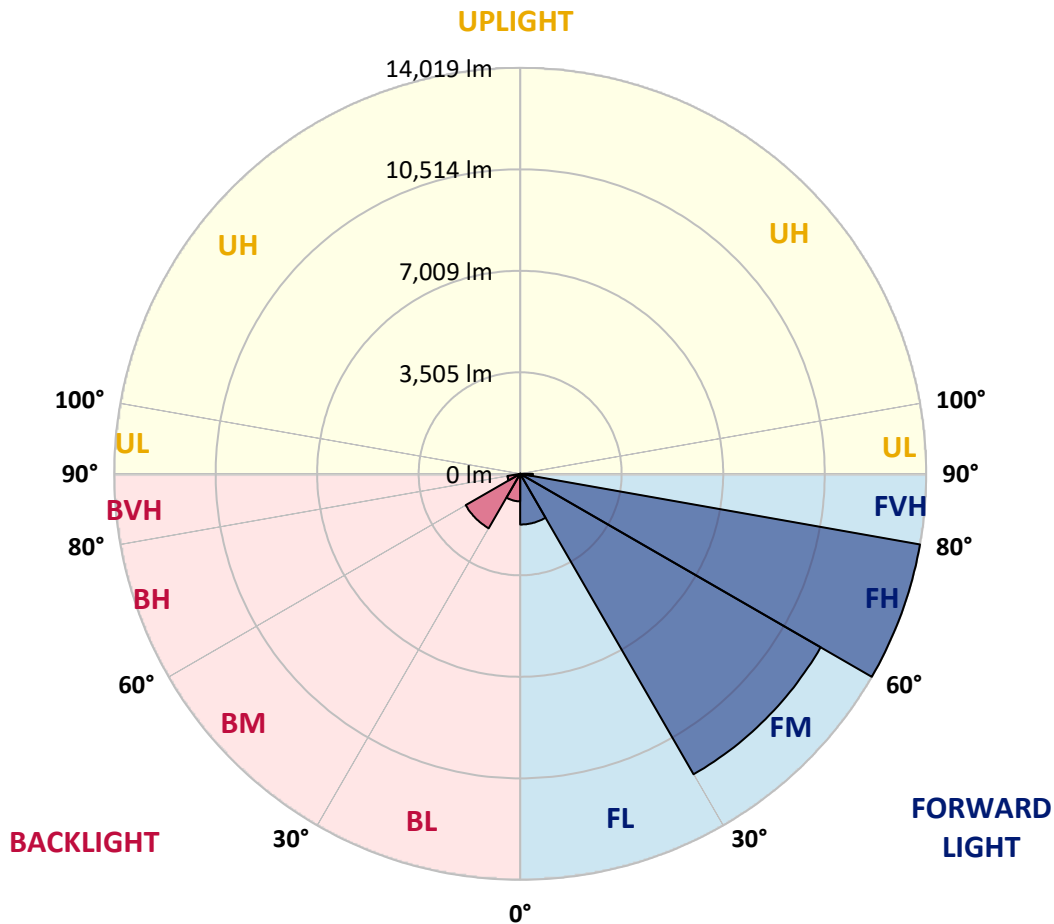
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1751.1	5.5			
FM (30°-60°)	11979.0	37.7			
FH (60°-80°)	14018.7	44.1			G5
FVH (80°-90°)	442.1	1.4			G3/500
BL (0°-30°)	950.0	3.0	B2/1000		
BM (30°-60°)	2170.4	6.8	B2/2500		
BH (60°-80°)	448.6	1.4	B1/500		G1/500
BVH (80°-90°)	6.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0
2.5°	4399.1	4436.4	4443.4	4455.0	4455.0	4469.0	4492.2	4524.8	4578.4	4606.3	4624.9
5°	4054.6	4082.6	4117.5	4145.4	4199.0	4205.9	4296.7	4385.2	4508.5	4601.6	4666.8
7.5°	3707.8	3740.4	3787.0	3854.5	3924.3	3945.3	4082.6	4231.5	4427.1	4601.6	4711.0
10°	3463.4	3465.8	3507.7	3575.2	3686.9	3712.5	3880.1	4091.9	4336.3	4573.7	4752.9
12.5°	3326.1	3342.4	3361.0	3412.2	3519.3	3535.6	3714.8	3963.9	4245.5	4557.4	4801.8
15°	3326.1	3337.8	3349.4	3375.0	3461.1	3475.1	3633.4	3882.4	4199.0	4564.4	4880.9
17.5°	3361.0	3379.6	3370.3	3400.6	3491.4	3500.7	3640.3	3859.1	4196.6	4608.6	5002.0
20°	3444.8	3458.8	3440.2	3458.8	3549.6	3568.2	3712.5	3903.4	4236.2	4685.4	5153.3
22.5°	3577.5	3584.5	3540.3	3554.2	3647.3	3670.6	3838.2	4029.0	4331.6	4808.8	5355.8
25°	3745.1	3759.0	3691.5	3707.8	3796.3	3824.2	4017.4	4217.6	4482.9	4978.7	5614.1
27.5°	3938.3	3945.3	3887.1	3884.7	3998.8	4038.4	4233.9	4450.3	4685.4	5192.8	5940.0
30°	4159.4	4180.3	4124.5	4115.2	4259.5	4292.1	4485.3	4736.6	4983.4	5514.0	6403.2
32.5°	4334.0	4350.3	4317.7	4340.9	4487.6	4513.2	4790.2	5141.6	5451.2	5970.2	7034.0
35°	4585.3	4594.6	4520.2	4562.1	4729.6	4794.8	5206.8	5709.6	6040.1	6542.8	7857.9
37.5°	5495.4	5495.4	5178.9	4971.7	5132.3	5190.5	5777.1	6424.1	6766.3	7310.9	8896.0
40°	6754.6	6733.7	6270.5	5846.9	5825.9	5940.0	6589.4	7324.9	7704.3	8232.7	10064.5
42.5°	8097.7	8065.1	7434.3	7015.3	6945.5	6985.1	7527.4	8435.2	8821.5	9356.9	11321.4
45°	9289.4	9280.1	8702.8	8139.6	8013.9	8139.6	8698.2	9734.0	10010.9	10574.2	12575.9
47.5°	10287.9	10287.9	9866.6	9498.9	9433.7	9508.2	10283.3	11174.7	11149.1	11870.7	13797.9
50°	11437.7	11428.4	11028.1	10869.8	10937.3	11042.1	12108.1	12692.3	12326.9	13143.9	14889.5
52.5°	12243.1	12298.9	12161.6	12136.0	12480.5	12662.0	13960.8	14177.3	13381.3	14351.9	15706.5
55°	12880.8	12946.0	13104.3	13283.5	13946.9	14184.3	15755.4	15585.5	14263.4	15399.3	16176.7
57.5°	13783.9	13690.8	13935.2	14289.0	15362.0	15648.3	17494.1	16914.5	14973.3	16248.9	16227.9
60°	14880.2	14894.2	14936.1	15383.0	16774.9	17142.6	19207.2	18171.4	15429.5	16770.2	15660.0
62.5°	16197.6	16218.6	16304.7	16991.4	18671.9	19018.7	21032.0	19200.2	15639.0	16623.6	14193.6
65°	16106.9	16195.3	17156.6	19505.1	21555.7	21897.9	23161.8	19921.8	15322.5	15282.9	11556.4
67.5°	14673.1	14817.4	16425.8	22507.7	25903.7	26285.4	25736.1	20063.8	13956.2	11884.6	7539.0
70°	12792.4	12843.6	14777.8	25207.7	30938.2	31324.6	28040.4	18502.0	10590.5	6629.0	3377.3
72.5°	9990.0	10001.6	12271.0	25833.8	33670.8	33691.8	26231.9	13735.1	5695.6	2546.4	1173.1
75°	7136.4	7066.5	8218.7	20950.6	29623.1	29860.6	19665.7	6442.7	2176.3	1203.4	584.2
77.5°	3826.5	3903.4	4650.5	12424.6	20464.1	20869.1	10730.2	1857.4	1107.9	819.3	386.4
80°	1182.4	1247.6	1906.3	5688.6	11591.4	11835.8	3977.8	826.3	772.8	584.2	253.7
82.5°	372.4	386.4	889.1	2390.4	4811.1	4922.8	1152.2	467.8	528.4	386.4	149.0
85°	107.1	109.4	395.7	891.5	1189.4	1212.7	323.5	181.6	302.6	239.7	76.8
87.5°	11.6	37.2	149.0	149.0	104.7	102.4	34.9	39.6	86.1	30.3	14.0
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°	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0	4604.0
2.5°	4613.3	4615.6	4585.3	4534.1	4478.3	4431.7	4373.5	4327.0	4294.4	4285.1	4301.4
5°	4645.9	4629.6	4543.4	4387.5	4201.3	4040.7	3861.5	3719.5	3626.4	3586.8	3600.8
7.5°	4694.7	4648.2	4459.6	4152.4	3796.3	3479.7	3158.5	2909.5	2751.2	2672.1	2683.7
10°	4736.6	4643.5	4320.0	3812.6	3267.9	2788.4	2355.5	2055.3	1887.7	1808.5	1810.9
12.5°	4776.2	4641.2	4138.4	3409.9	2672.1	2085.5	1682.8	1533.9	1487.3	1471.0	1466.4
15°	4850.7	4648.2	3910.3	2949.0	2078.5	1575.8	1429.1	1426.8	1436.1	1431.5	1429.1
17.5°	4953.1	4655.2	3652.0	2460.3	1603.7	1389.6	1382.6	1403.5	1417.5	1410.5	1408.2
20°	5085.8	4683.1	3377.3	1976.1	1377.9	1343.0	1359.3	1377.9	1389.6	1377.9	1375.6
22.5°	5272.0	4732.0	3077.1	1587.4	1305.8	1315.1	1329.0	1350.0	1361.6	1345.3	1343.0
25°	5500.1	4808.8	2781.5	1380.3	1270.9	1282.5	1303.4	1326.7	1340.7	1324.4	1322.1
27.5°	5795.7	4932.1	2509.1	1333.7	1235.9	1242.9	1273.2	1308.1	1326.7	1305.8	1305.8
30°	6224.0	5134.6	2274.0	1354.7	1215.0	1198.7	1240.6	1289.5	1310.4	1291.8	1289.5
32.5°	6791.9	5420.9	2129.7	1387.2	1205.7	1147.5	1187.1	1249.9	1284.8	1273.2	1273.2
35°	7536.7	5856.2	2073.9	1424.5	1198.7	1094.0	1121.9	1189.4	1249.9	1261.5	1261.5
37.5°	8439.8	6461.4	2090.2	1440.8	1177.8	1049.7	1063.7	1121.9	1201.0	1238.3	1247.6
40°	9466.3	7166.6	2183.3	1424.5	1154.5	1012.5	1014.8	1059.1	1128.9	1184.7	1203.4
42.5°	10525.3	7990.6	2355.5	1364.0	1133.5	979.9	972.9	1003.2	1049.7	1089.3	1105.6
45°	11533.2	8837.8	2525.4	1280.2	1107.9	947.3	931.0	942.7	952.0	968.3	977.6
47.5°	12413.0	9433.7	2476.5	1203.4	1073.0	910.1	882.2	877.5	849.6	847.2	844.9
50°	13020.5	9564.0	2199.6	1126.5	1021.8	868.2	824.0	796.0	747.2	723.9	726.2
52.5°	13213.7	9049.6	1796.9	1049.7	938.0	812.3	749.5	705.3	644.7	623.8	621.5
55°	12957.7	8041.8	1436.1	956.6	821.6	737.8	668.0	609.8	560.9	535.3	535.3
57.5°	12331.5	6759.3	1135.9	847.2	698.3	654.1	584.2	526.0	484.1	458.5	453.9
60°	11293.4	5367.4	898.4	716.9	595.9	563.3	491.1	453.9	416.6	386.4	379.4
62.5°	9717.7	3831.2	705.3	567.9	498.1	460.9	419.0	391.0	346.8	304.9	297.9
65°	7583.3	2343.9	544.7	416.6	400.3	381.7	356.1	330.5	277.0	235.1	228.1
67.5°	4783.2	1110.3	388.7	314.2	316.6	307.2	295.6	274.7	235.1	197.8	193.2
70°	2106.5	537.7	256.0	239.7	235.1	235.1	244.4	237.4	200.2	165.3	158.3
72.5°	716.9	288.6	190.9	181.6	169.9	167.6	204.8	197.8	160.6	128.0	121.0
75°	374.7	193.2	139.7	130.3	102.4	123.4	162.9	153.6	114.1	83.8	76.8
77.5°	244.4	137.3	95.4	83.8	58.2	81.5	121.0	107.1	67.5	41.9	37.2
80°	153.6	90.8	55.9	39.6	27.9	44.2	65.2	46.6	25.6	9.3	7.0
82.5°	81.5	46.6	20.9	14.0	11.6	14.0	16.3	11.6	4.7	0.0	0.0
85°	32.6	16.3	7.0	4.7	2.3	0.0	4.7	2.3	0.0	0.0	0.0
87.5°	11.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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)