

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: P884166

Luminaire Tested: **NAV-SB4D-835-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884166
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-SB4D-835-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 80 CRI, 3500K, 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: 25409 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

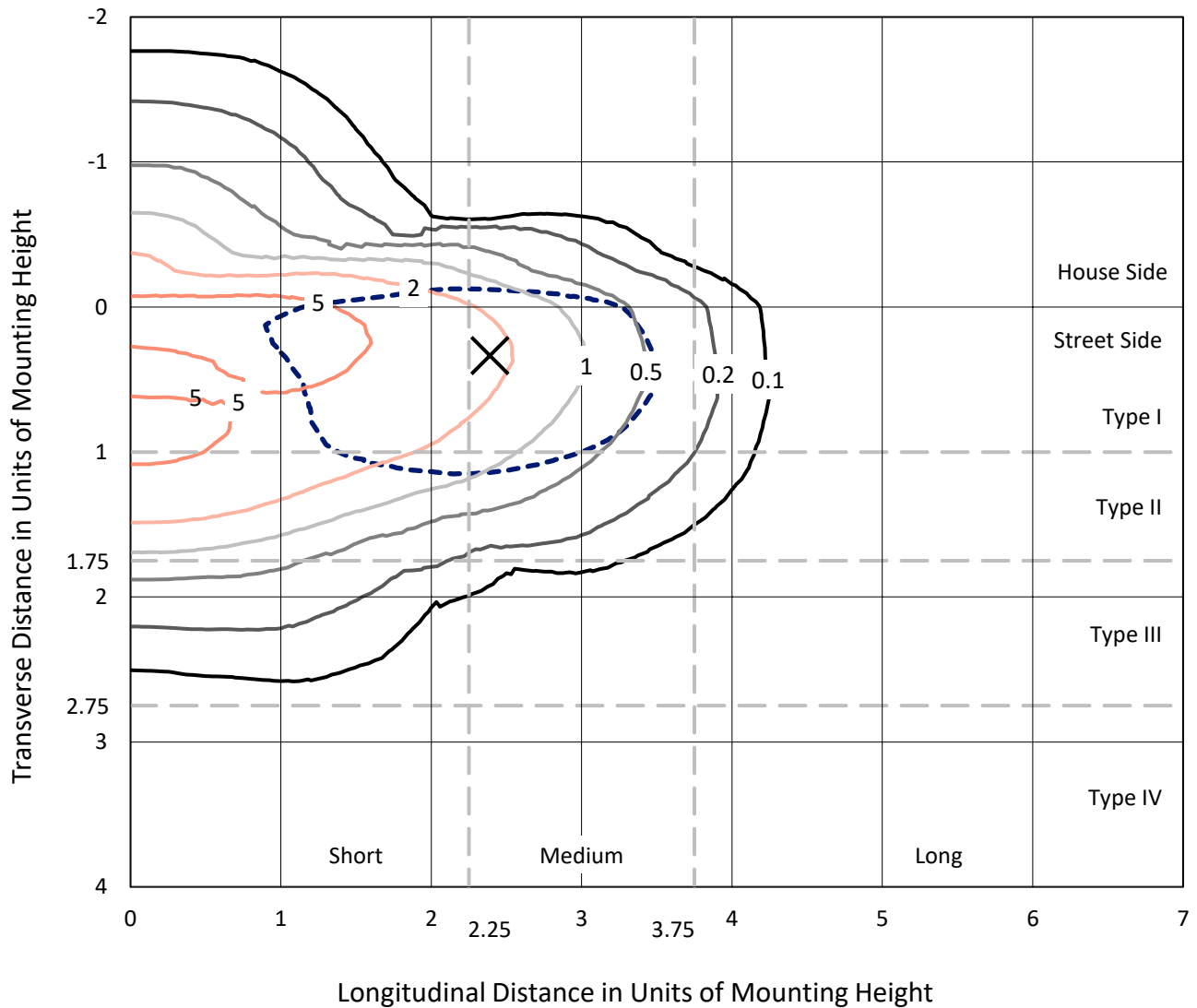
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P884166
 CATALOG NUMBER: NAV-SB4D-835-U-T2-HSS

Iso-Footcandle Lines of Horizontal Illumination

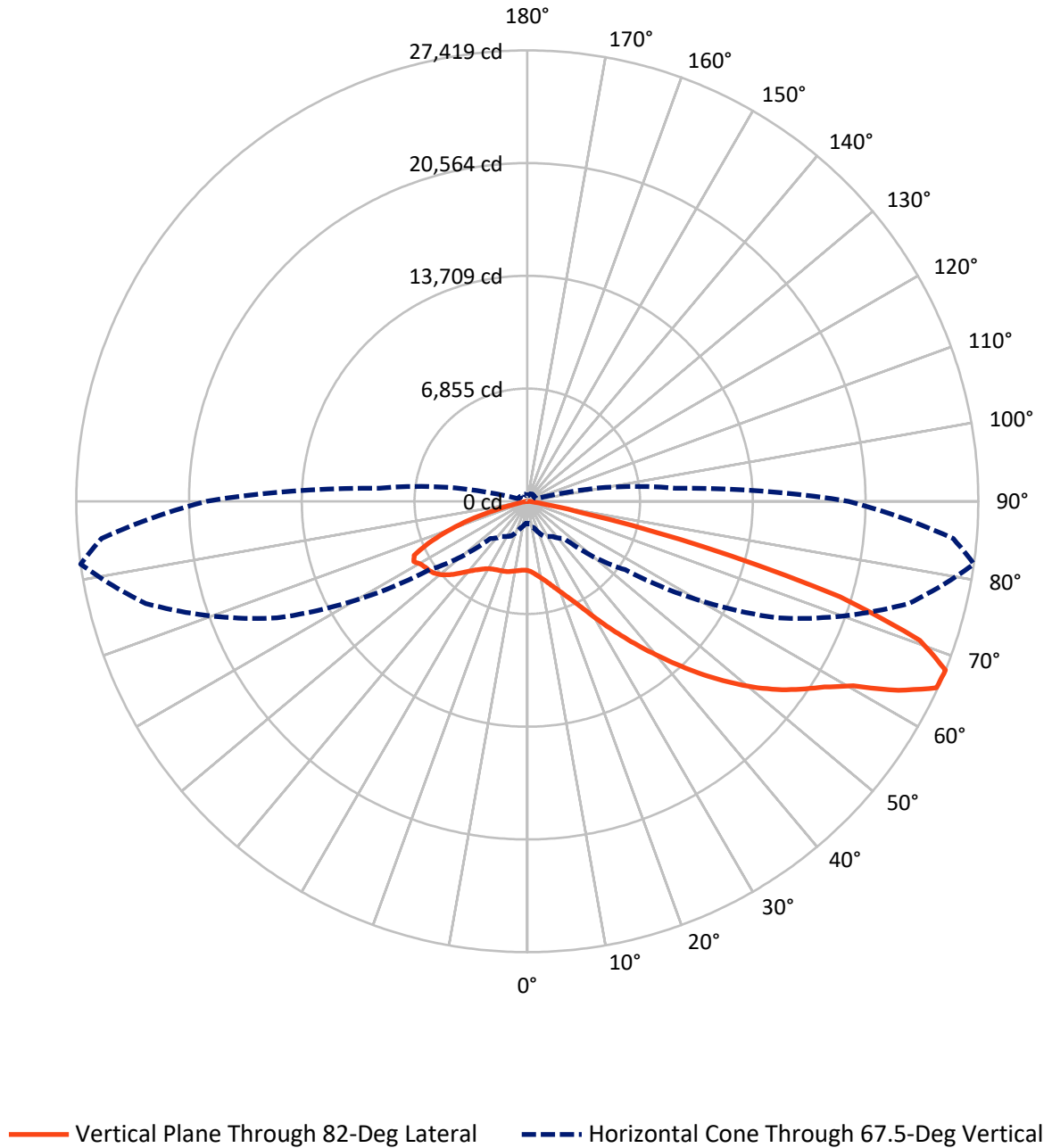
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.9 fc
 Type II - Medium - N/A

REPORT NUMBER: P884166
CATALOG NUMBER: NAV-SB4D-835-U-T2-HSS

Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4602.6	0.0	4602.6
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	20806.4	0.0	20806.4
	% Fixture	81.9	0.0	81.9
Total	Lumens	25409.0	0.0	25409.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	375.0	1.5
10°-20°	974.5	3.8
20°-30°	1560.9	6.1
30°-40°	2760.2	10.9
40°-50°	4836.1	19.0
50°-60°	6450.0	25.4
60°-70°	6004.6	23.6
70°-80°	2304.6	9.1
80°-90°	143.1	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°	25409.0	100.0
0°-180°	25409.0	100.0

Coefficient of Utilization



REPORT NUMBER: P884166

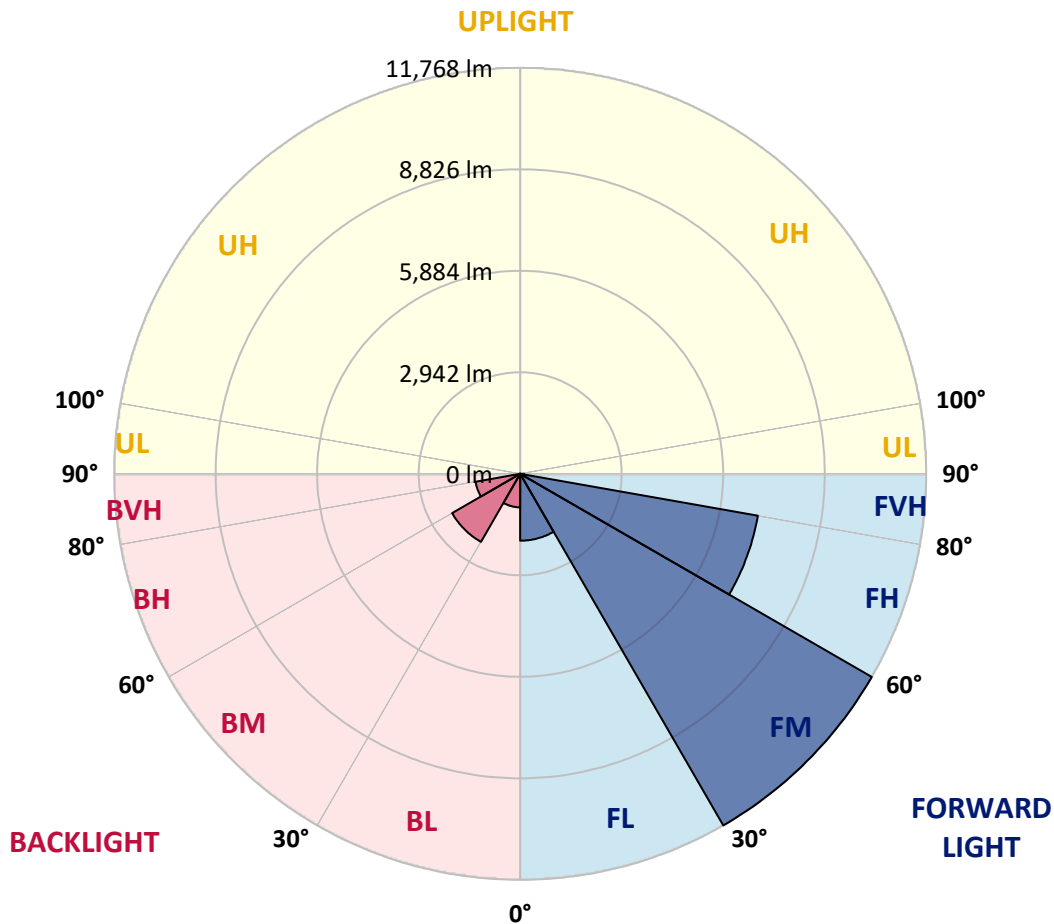
CATALOG NUMBER: NAV-SB4D-835-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1938.4	7.6			
FM (30°-60°)	11768.4	46.3			
FH (60°-80°)	6995.5	27.5			G3/7500
FVH (80°-90°)	104.1	0.4			G2/225
BL (0°-30°)	972.1	3.8	B2/1000		
BM (30°-60°)	2277.8	9.0	B2/2500		
BH (60°-80°)	1313.7	5.2	B3/2500		G3/2500
BVH (80°-90°)	39.1	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-G3

Type II Medium



REPORT NUMBER: P884166

CATALOG NUMBER: NAV-SB4D-835-U-T2-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4
2.5°	4449.1	4474.7	4460.0	4452.7	4439.9	4421.6	4407.0	4361.3	4313.7	4282.6	4271.6
5°	4538.7	4564.3	4562.5	4569.8	4578.9	4584.4	4580.8	4529.6	4461.9	4408.8	4377.7
7.5°	4461.9	4491.1	4514.9	4551.5	4615.5	4683.2	4716.2	4705.2	4635.7	4562.5	4524.1
10°	4244.2	4275.3	4332.0	4418.0	4553.3	4699.7	4822.3	4879.0	4835.1	4754.6	4701.5
12.5°	3845.4	3876.5	3988.1	4174.7	4401.5	4655.8	4889.9	5041.8	5052.8	4972.3	4910.1
15°	3397.2	3428.3	3547.2	3781.3	4127.1	4535.0	4926.5	5213.7	5310.7	5241.2	5166.2
17.5°	3119.1	3146.5	3236.2	3424.6	3785.0	4293.6	4913.7	5396.7	5618.0	5563.2	5473.5
20°	3034.9	3058.7	3100.8	3232.5	3532.5	4042.9	4829.6	5568.6	5949.2	5918.1	5817.4
22.5°	3124.6	3146.5	3159.3	3217.9	3406.3	3878.3	4723.5	5744.3	6333.3	6337.0	6214.4
25°	3331.3	3353.3	3338.6	3375.2	3457.5	3827.1	4683.2	5951.0	6816.3	6856.5	6717.5
27.5°	3671.6	3673.4	3638.6	3636.8	3649.6	3903.9	4725.3	6172.3	7425.5	7500.5	7328.5
30°	4353.9	4326.5	4192.9	4048.4	3982.6	4134.4	4842.4	6433.9	8144.4	8278.0	8062.1
32.5°	5405.8	5365.6	5120.4	4774.7	4427.1	4505.8	5052.8	6732.1	8927.4	9168.9	8905.4
35°	6547.4	6536.4	6280.3	5766.2	5158.9	5034.5	5394.9	7123.6	9781.7	10165.9	9853.1
37.5°	7608.4	7602.9	7456.6	6851.0	6112.0	5771.7	5943.7	7635.8	10696.4	11252.5	10883.0
40°	8578.0	8594.4	8448.1	7906.6	7162.0	6717.5	6690.1	8268.8	11713.5	12436.1	11997.1
42.5°	9415.8	9434.1	9286.0	8885.3	8199.3	7763.9	7606.6	9044.5	12706.9	13707.6	13188.0
45°	9984.8	10098.2	10076.2	9756.1	9264.0	8812.1	8707.9	10017.7	13839.3	15055.8	14446.6
47.5°	10145.8	10250.0	10414.7	10458.6	10158.6	9714.0	9838.4	11190.3	14984.5	16405.9	15712.6
50°	9748.8	9845.7	10187.8	10643.4	10851.9	10714.7	10937.9	12447.1	16157.1	17752.3	16954.7
52.5°	8965.8	9064.6	9496.3	10217.1	11067.8	11499.5	12041.0	13685.6	17293.2	19027.4	18131.0
55°	7833.4	7937.7	8492.0	9307.9	10656.2	11823.3	12961.2	14922.3	18334.1	20174.4	19192.1
57.5°	6293.1	6369.9	6946.2	8087.7	9620.7	11501.3	13639.9	16272.4	19314.6	21301.3	20244.0
60°	4101.5	4169.2	4838.7	6112.0	7904.8	10425.7	13775.3	17777.9	20617.2	22766.7	21661.7
62.5°	2727.6	2773.3	3170.3	4105.1	5566.8	8360.3	12983.1	18979.9	22527.0	25316.8	24093.0
65°	1871.5	1917.2	2314.2	2965.4	3596.6	5530.2	10705.6	18820.7	24257.6	27342.0	25894.9
67.5°	1335.4	1373.9	1710.5	2325.1	2603.2	3212.4	7257.2	16786.4	24008.8	27418.8	25991.9
70°	956.8	978.7	1256.8	1811.1	2069.0	1930.0	4035.6	12838.6	21021.4	25318.7	24012.5
72.5°	669.6	676.9	872.6	1379.4	1666.6	1408.6	1920.9	8559.7	15899.2	19872.6	18615.8
75°	453.7	462.8	587.2	1011.6	1337.3	1075.7	1017.1	4589.9	9333.5	11000.1	9860.4
77.5°	278.1	281.7	378.7	691.5	1000.7	819.6	654.9	1944.6	3611.2	3545.3	3022.1
80°	157.3	157.3	241.5	429.9	682.4	528.7	459.2	826.9	1143.4	1004.3	885.4
82.5°	87.8	89.6	175.6	267.1	451.9	312.8	252.5	382.3	493.9	437.2	380.5
85°	36.6	40.2	107.9	126.2	215.9	155.5	102.4	161.0	182.9	162.8	118.9
87.5°	3.7	5.5	32.9	23.8	25.6	31.1	14.6	31.1	25.6	25.6	18.3
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: P884166

CATALOG NUMBER: NAV-SB4D-835-U-T2-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4	4209.4
2.5°	4236.9	4209.4	4139.9	4059.4	3953.3	3902.1	3832.6	3785.0	3744.7	3748.4	3711.8
5°	4319.2	4249.7	4094.2	3900.2	3658.8	3486.8	3303.9	3177.6	3075.2	3053.2	3003.8
7.5°	4432.6	4322.8	4050.3	3700.8	3292.9	2983.7	2707.5	2530.0	2403.8	2363.6	2323.3
10°	4578.9	4419.8	3993.5	3450.2	2863.0	2469.7	2173.3	2034.3	1948.3	1919.0	1897.1
12.5°	4749.1	4531.4	3918.5	3144.7	2420.3	2041.6	1853.2	1783.6	1756.2	1747.1	1741.6
15°	4963.1	4670.4	3805.1	2782.5	2045.3	1780.0	1699.5	1690.4	1694.0	1690.4	1688.5
17.5°	5217.4	4822.3	3620.3	2409.3	1792.8	1646.4	1617.2	1624.5	1633.6	1631.8	1628.2
20°	5495.5	4972.3	3384.4	2078.2	1620.8	1551.3	1534.9	1542.2	1549.5	1545.8	1544.0
22.5°	5812.0	5133.3	3122.8	1820.2	1505.6	1463.5	1445.2	1447.0	1447.0	1439.7	1436.1
25°	6190.6	5310.7	2848.4	1637.3	1417.8	1384.8	1362.9	1355.6	1344.6	1322.6	1319.0
27.5°	6642.5	5499.1	2584.9	1509.2	1348.3	1317.2	1291.5	1273.3	1245.8	1209.2	1205.6
30°	7151.1	5727.8	2361.7	1428.7	1293.4	1262.3	1233.0	1205.6	1165.3	1119.6	1115.9
32.5°	7749.3	5972.9	2198.9	1375.7	1244.0	1211.1	1176.3	1143.4	1099.5	1053.7	1055.6
35°	8462.7	6269.3	2103.8	1339.1	1205.6	1161.7	1123.2	1086.7	1053.7	1013.5	1009.8
37.5°	9236.6	6584.0	2074.5	1320.8	1180.0	1112.3	1068.4	1042.7	1039.1	1015.3	1013.5
40°	10083.6	6957.1	2096.5	1309.8	1152.5	1064.7	1017.1	1011.6	1020.8	978.7	980.5
42.5°	10980.0	7399.9	2133.1	1297.0	1114.1	1017.1	971.4	971.4	964.1	905.5	905.5
45°	11949.5	7910.3	2169.6	1265.9	1068.4	969.6	934.8	922.0	890.9	834.2	832.4
47.5°	12926.4	8429.8	2197.1	1209.2	1013.5	929.3	898.2	869.0	823.2	772.0	770.2
50°	13853.9	8896.3	2167.8	1125.1	951.3	890.9	858.0	817.7	768.3	733.6	728.1
52.5°	14682.6	9300.6	2043.4	1026.3	885.4	850.7	821.4	779.3	739.1	702.5	698.8
55°	15403.4	9628.0	1823.9	933.0	826.9	815.9	786.6	733.6	678.7	647.6	643.9
57.5°	16094.9	9876.8	1549.5	856.2	773.8	777.5	733.6	686.0	634.8	601.9	598.2
60°	17015.1	10209.8	1271.4	784.8	717.1	728.1	680.5	645.8	581.7	539.7	534.2
62.5°	18485.9	10727.5	1009.8	697.0	651.3	654.9	634.8	592.7	515.9	466.5	462.8
65°	19653.1	10537.2	795.8	601.9	576.3	581.7	581.7	536.0	453.7	397.0	391.5
67.5°	19521.4	9022.5	634.8	508.6	504.9	508.6	521.4	483.0	402.5	356.7	349.4
70°	17982.8	7176.7	508.6	422.6	439.1	429.9	466.5	440.9	362.2	316.5	311.0
72.5°	14673.5	5169.8	387.8	349.4	336.6	351.2	420.8	397.0	301.8	250.6	245.1
75°	8574.3	2758.7	289.0	276.2	243.3	292.7	373.2	338.4	230.5	184.8	179.3
77.5°	2791.6	962.3	212.2	203.1	181.1	236.0	318.3	285.4	188.4	146.4	140.9
80°	748.2	290.9	144.5	133.5	117.1	175.6	252.5	226.8	135.4	95.1	93.3
82.5°	300.0	122.6	84.2	75.0	64.0	120.7	199.4	182.9	100.6	60.4	60.4
85°	97.0	40.2	31.1	23.8	29.3	75.0	118.9	124.4	71.3	31.1	23.8
87.5°	12.8	5.5	5.5	7.3	5.5	12.8	36.6	34.8	20.1	3.7	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)