

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: P884106

Luminaire Tested: **NAV-SB4D-735-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884106
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-735-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(4) 70 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: 30114 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

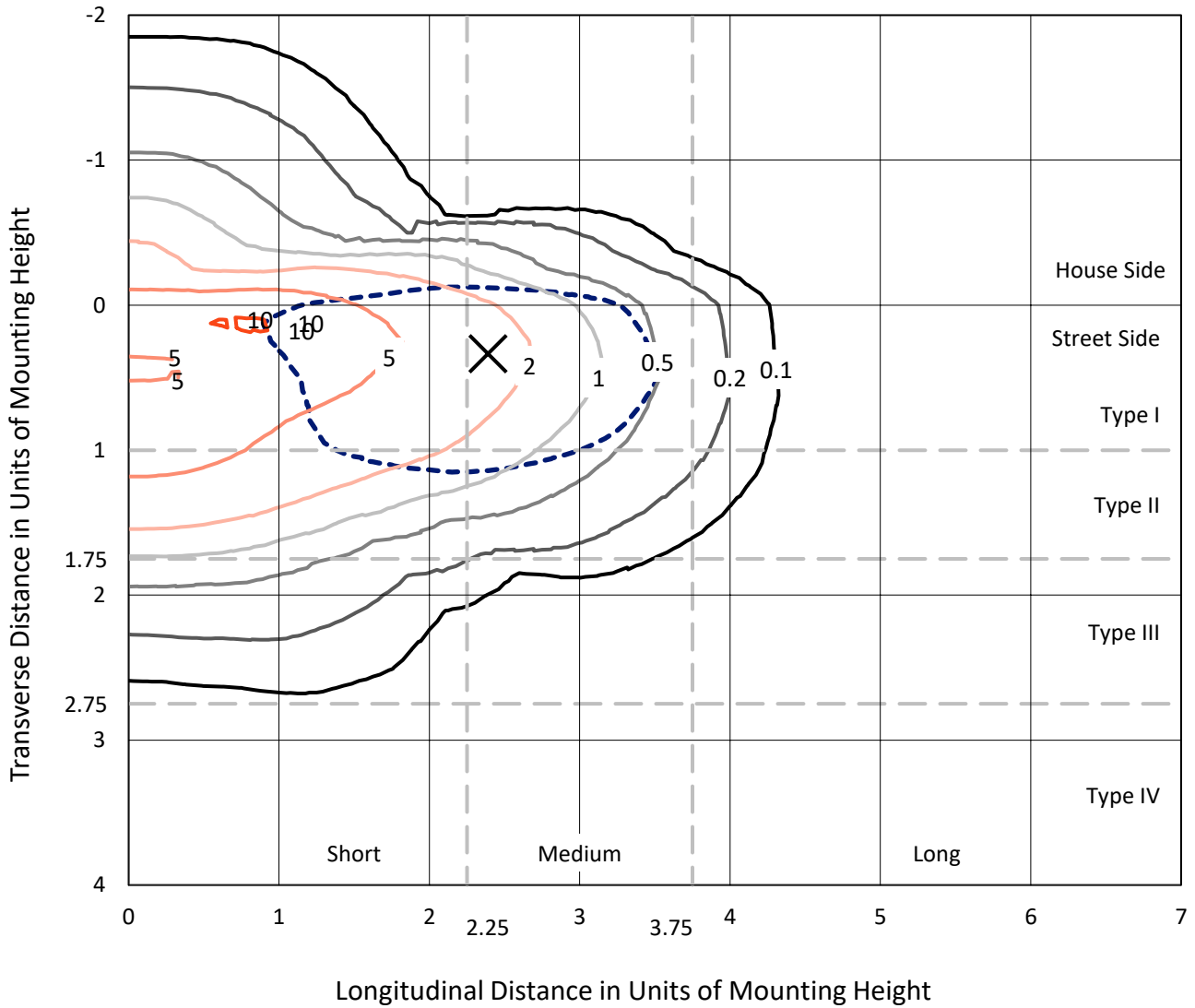
Input Watts (W): 293.6
Input Voltage (V): 120.0
Input Current (Ain): 2.469
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

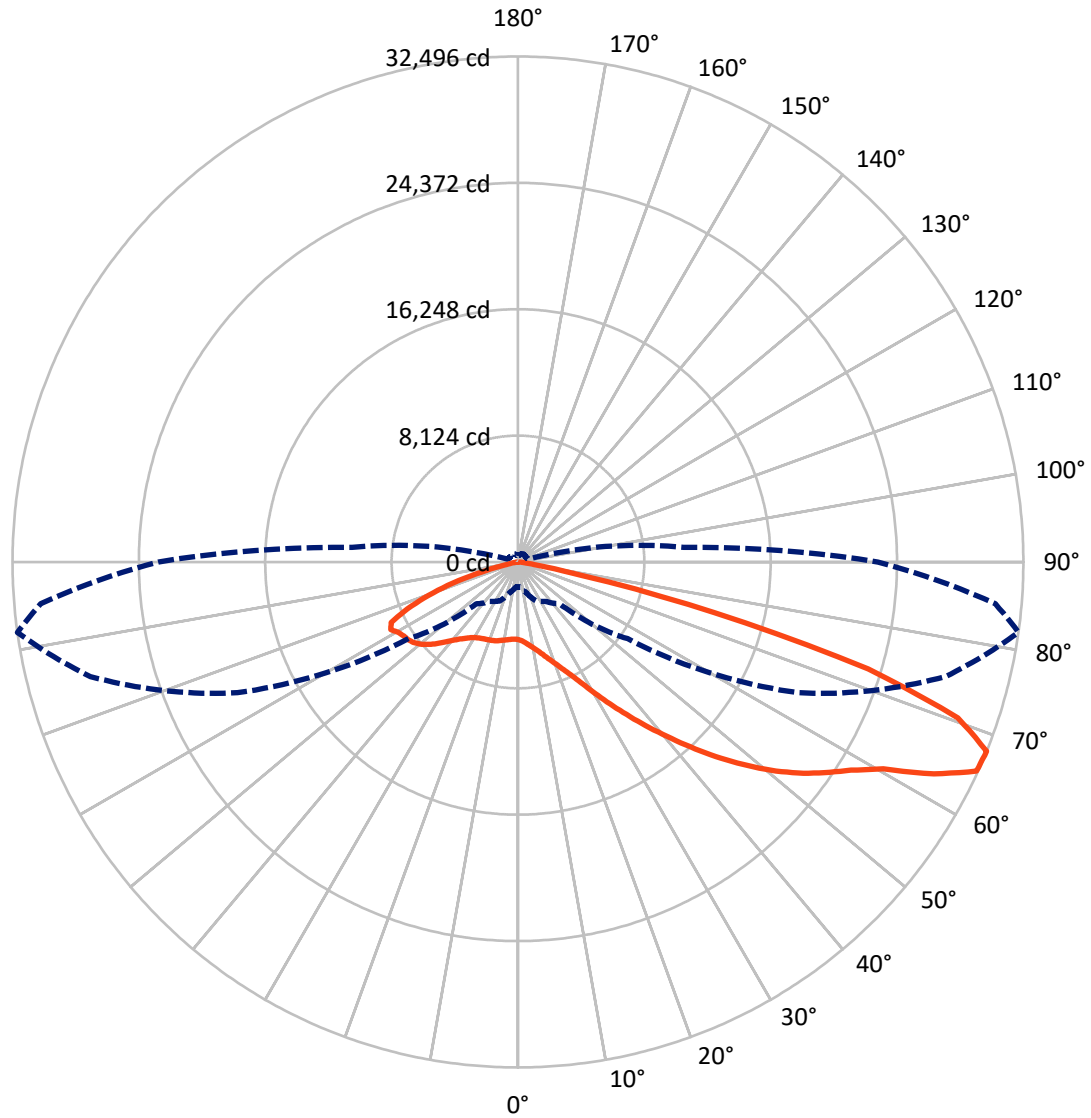
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.6 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	5454.9	0.0	5454.9
	% Fixture	18.1	0.0	18.1
Street Side	Lumens	24659.1	0.0	24659.1
	% Fixture	81.9	0.0	81.9
Total	Lumens	30114.0	0.0	30114.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	444.5	1.5
10°-20°	1155.0	3.8
20°-30°	1849.9	6.1
30°-40°	3271.3	10.9
40°-50°	5731.6	19.0
50°-60°	7644.3	25.4
60°-70°	7116.5	23.6
70°-80°	2731.3	9.1
80°-90°	169.6	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°	30114.0	100.0
0°-180°	30114.0	100.0

Coefficient of Utilization



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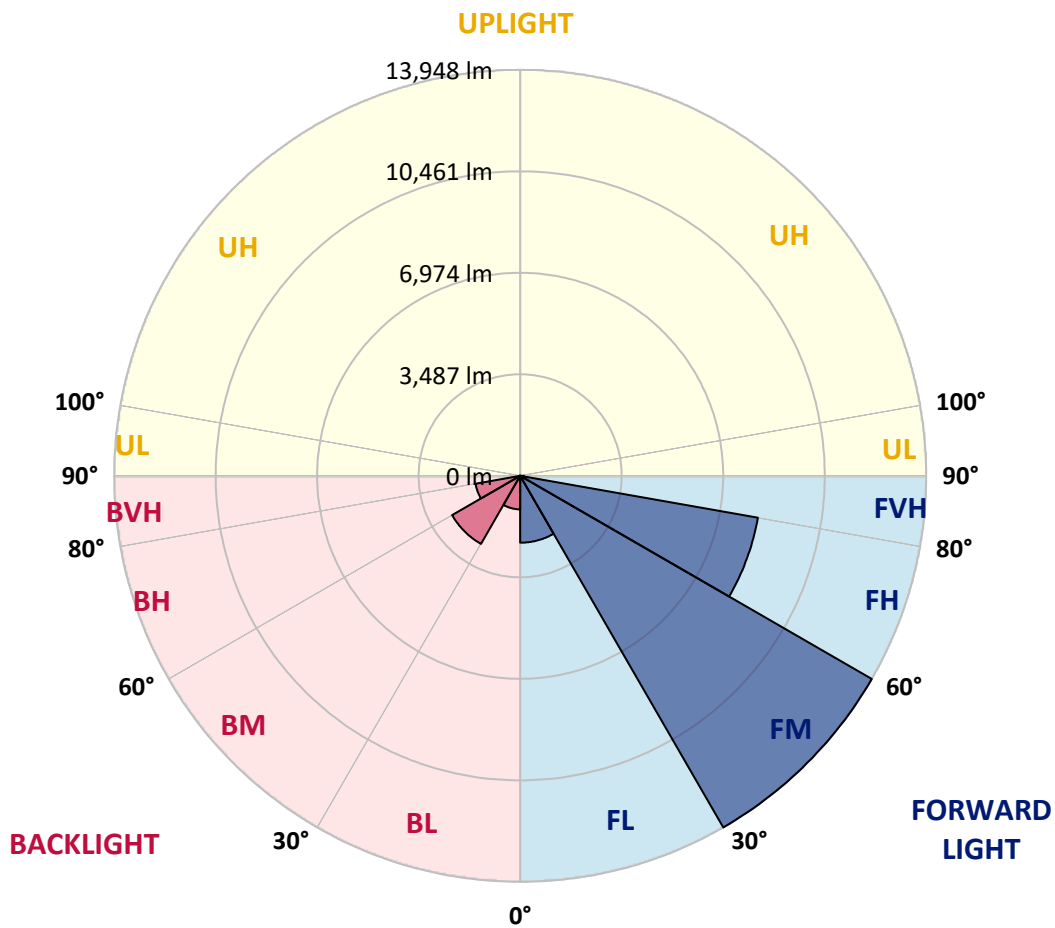
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2297.4	7.6			
FM (30°-60°)	13947.6	46.3			
FH (60°-80°)	8290.8	27.5			G4/12000
FVH (80°-90°)	123.3	0.4			G2/225
BL (0°-30°)	1152.1	3.8	B3/2500		
BM (30°-60°)	2699.6	9.0	B3/5000		
BH (60°-80°)	1556.9	5.2	B3/2500		G3/2500
BVH (80°-90°)	46.3	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



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	82°	85°
0°	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9
2.5°	5272.9	5303.2	5285.9	5277.2	5262.1	5240.4	5223.0	5168.8	5112.5	5075.6	5062.6
5°	5379.1	5409.5	5407.3	5416.0	5426.8	5433.3	5429.0	5368.3	5288.1	5225.2	5188.3
7.5°	5288.1	5322.8	5350.9	5394.3	5470.2	5550.4	5589.4	5576.4	5494.0	5407.3	5361.8
10°	5030.1	5066.9	5134.1	5236.0	5396.5	5569.9	5715.2	5782.4	5730.4	5635.0	5572.1
12.5°	4557.4	4594.3	4726.5	4947.7	5216.5	5517.9	5795.4	5975.4	5988.4	5893.0	5819.3
15°	4026.2	4063.1	4204.0	4481.5	4891.3	5374.8	5838.8	6179.2	6294.1	6211.7	6122.8
17.5°	3696.7	3729.2	3835.4	4058.7	4485.9	5088.6	5823.6	6396.0	6658.3	6593.3	6487.0
20°	3596.9	3625.1	3675.0	3831.1	4186.7	4791.6	5723.9	6599.8	7050.8	7013.9	6894.7
22.5°	3703.2	3729.2	3744.4	3813.7	4037.1	4596.4	5598.1	6807.9	7506.1	7510.4	7365.1
25°	3948.2	3974.2	3956.8	4000.2	4097.8	4535.7	5550.4	7052.9	8078.5	8126.2	7961.4
27.5°	4351.4	4353.6	4312.4	4310.2	4325.4	4626.8	5600.3	7315.3	8800.4	8889.3	8685.5
30°	5160.2	5127.6	4969.4	4798.1	4720.0	4900.0	5739.0	7625.3	9652.5	9810.8	9555.0
32.5°	6406.8	6359.1	6068.6	5658.8	5246.9	5340.1	5988.4	7978.7	10580.5	10866.7	10554.5
35°	7759.7	7746.7	7443.2	6834.0	6114.1	5966.7	6393.8	8442.7	11593.0	12048.3	11677.6
37.5°	9017.3	9010.8	8837.3	8119.7	7243.7	6840.5	7044.3	9049.8	12677.1	13336.2	12898.2
40°	10166.4	10185.9	10012.4	9370.7	8488.2	7961.4	7928.9	9800.0	13882.5	14739.0	14218.6
42.5°	11159.4	11181.1	11005.4	10530.6	9717.6	9201.6	9015.1	10719.2	15059.8	16245.8	15630.1
45°	11833.7	11968.1	11942.1	11562.6	10979.4	10443.9	10320.3	11872.7	16401.9	17843.7	17121.7
47.5°	12024.5	12148.0	12343.2	12395.2	12039.6	11512.8	11660.2	13262.5	17759.2	19443.8	18622.1
50°	11554.0	11668.9	12074.3	12614.2	12861.4	12698.7	12963.3	14752.0	19148.9	21039.5	20094.2
52.5°	10626.0	10743.1	11254.8	12109.0	13117.2	13628.9	14270.6	16219.8	20495.3	22550.7	21488.4
55°	9283.9	9407.5	10064.5	11031.5	12629.4	14012.6	15361.2	17685.4	21729.0	23910.2	22745.9
57.5°	7458.4	7549.4	8232.4	9585.3	11402.2	13631.0	16165.6	19285.5	22891.1	25245.7	23992.5
60°	4861.0	4941.2	5734.7	7243.7	9368.5	12356.2	16326.0	21069.9	24434.8	26982.4	25672.8
62.5°	3232.7	3286.9	3757.4	4865.3	6597.6	9908.4	15387.2	22494.4	26698.4	30004.8	28554.3
65°	2218.0	2272.2	2742.7	3514.5	4262.5	6554.3	12687.9	22305.7	28749.4	32404.9	30689.9
67.5°	1582.7	1628.3	2027.2	2755.7	3085.3	3807.2	8601.0	19894.8	28454.6	32496.0	30804.8
70°	1133.9	1160.0	1489.5	2146.5	2452.2	2287.4	4782.9	15215.9	24914.0	30006.9	28458.9
72.5°	793.5	802.2	1034.2	1634.8	1975.2	1669.5	2276.5	10144.7	18843.2	23552.4	22062.9
75°	537.7	548.5	696.0	1199.0	1584.9	1274.9	1205.5	5439.8	11061.8	13037.0	11686.2
77.5°	329.6	333.9	448.8	819.6	1186.0	971.3	776.2	2304.7	4279.9	4201.8	3581.8
80°	186.5	186.5	286.2	509.5	808.7	626.6	544.2	980.0	1355.1	1190.3	1049.4
82.5°	104.1	106.2	208.1	316.5	535.5	370.8	299.2	453.1	585.4	518.2	451.0
85°	43.4	47.7	127.9	149.6	255.8	184.3	121.4	190.8	216.8	193.0	140.9
87.5°	4.3	6.5	39.0	28.2	30.4	36.9	17.3	36.9	30.4	30.4	21.7
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°	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9	4988.9
2.5°	5021.4	4988.9	4906.5	4811.1	4685.3	4624.6	4542.2	4485.9	4438.2	4442.5	4399.1
5°	5119.0	5036.6	4852.3	4622.5	4336.3	4132.5	3915.6	3766.0	3644.6	3618.6	3560.1
7.5°	5253.4	5123.3	4800.2	4386.1	3902.6	3536.2	3208.8	2998.5	2848.9	2801.2	2753.5
10°	5426.8	5238.2	4733.0	4089.1	3393.1	2927.0	2575.7	2411.0	2309.1	2274.4	2248.4
12.5°	5628.5	5370.5	4644.1	3727.0	2868.4	2419.6	2196.3	2113.9	2081.4	2070.6	2064.1
15°	5882.1	5535.2	4509.7	3297.7	2424.0	2109.6	2014.2	2003.4	2007.7	2003.4	2001.2
17.5°	6183.5	5715.2	4290.7	2855.4	2124.8	1951.3	1916.6	1925.3	1936.1	1934.0	1929.6
20°	6513.1	5893.0	4011.0	2463.0	1921.0	1838.6	1819.1	1827.7	1836.4	1832.1	1829.9
22.5°	6888.2	6083.8	3701.0	2157.3	1784.4	1734.5	1712.8	1715.0	1715.0	1706.3	1702.0
25°	7337.0	6294.1	3375.8	1940.5	1680.3	1641.3	1615.3	1606.6	1593.6	1567.6	1563.2
27.5°	7872.5	6517.4	3063.6	1788.7	1597.9	1561.1	1530.7	1509.0	1476.5	1433.1	1428.8
30°	8475.2	6788.4	2799.1	1693.3	1532.9	1496.0	1461.3	1428.8	1381.1	1326.9	1322.6
32.5°	9184.2	7078.9	2606.1	1630.4	1474.3	1435.3	1394.1	1355.1	1303.0	1248.8	1251.0
35°	10029.8	7430.2	2493.4	1587.1	1428.8	1376.8	1331.2	1287.9	1248.8	1201.1	1196.8
37.5°	10946.9	7803.1	2458.7	1565.4	1398.4	1318.2	1266.2	1235.8	1231.5	1203.3	1201.1
40°	11950.7	8245.4	2484.7	1552.4	1365.9	1261.9	1205.5	1199.0	1209.8	1160.0	1162.1
42.5°	13013.1	8770.1	2528.0	1537.2	1320.4	1205.5	1151.3	1151.3	1142.6	1073.2	1073.2
45°	14162.2	9375.0	2571.4	1500.3	1266.2	1149.1	1107.9	1092.7	1055.9	988.7	986.5
47.5°	15320.0	9990.8	2603.9	1433.1	1201.1	1101.4	1064.6	1029.9	975.7	915.0	912.8
50°	16419.3	10543.6	2569.2	1333.4	1127.4	1055.9	1016.9	969.2	910.6	869.4	862.9
52.5°	17401.4	11022.8	2421.8	1216.3	1049.4	1008.2	973.5	923.6	875.9	832.6	828.2
55°	18255.7	11410.9	2161.6	1105.7	980.0	967.0	932.3	869.4	804.4	767.5	763.2
57.5°	19075.2	11705.7	1836.4	1014.7	917.1	921.5	869.4	813.0	752.3	713.3	709.0
60°	20165.8	12100.3	1506.9	930.1	849.9	862.9	806.5	765.4	689.5	639.6	633.1
62.5°	21909.0	12713.9	1196.8	826.1	771.9	776.2	752.3	702.5	611.4	552.9	548.5
65°	23292.2	12488.4	943.1	713.3	683.0	689.5	689.5	635.3	537.7	470.5	464.0
67.5°	23136.1	10693.2	752.3	602.7	598.4	602.7	617.9	572.4	477.0	422.8	414.1
70°	21312.7	8505.6	602.7	500.8	520.4	509.5	552.9	522.5	429.3	375.1	368.6
72.5°	17390.6	6127.1	459.6	414.1	398.9	416.3	498.7	470.5	357.7	297.0	290.5
75°	10162.0	3269.5	342.6	327.4	288.4	346.9	442.3	401.1	273.2	219.0	212.5
77.5°	3308.6	1140.4	251.5	240.7	214.6	279.7	377.3	338.2	223.3	173.5	166.9
80°	886.8	344.7	171.3	158.3	138.8	208.1	299.2	268.8	160.4	112.7	110.6
82.5°	355.6	145.3	99.7	88.9	75.9	143.1	236.3	216.8	119.2	71.5	71.5
85°	114.9	47.7	36.9	28.2	34.7	88.9	140.9	147.4	84.6	36.9	28.2
87.5°	15.2	6.5	6.5	8.7	6.5	15.2	43.4	41.2	23.8	4.3	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)