

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: P195624

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195624
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24257)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL2-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 38740 lumens
Efficiency: N/A
Efficacy: 101.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

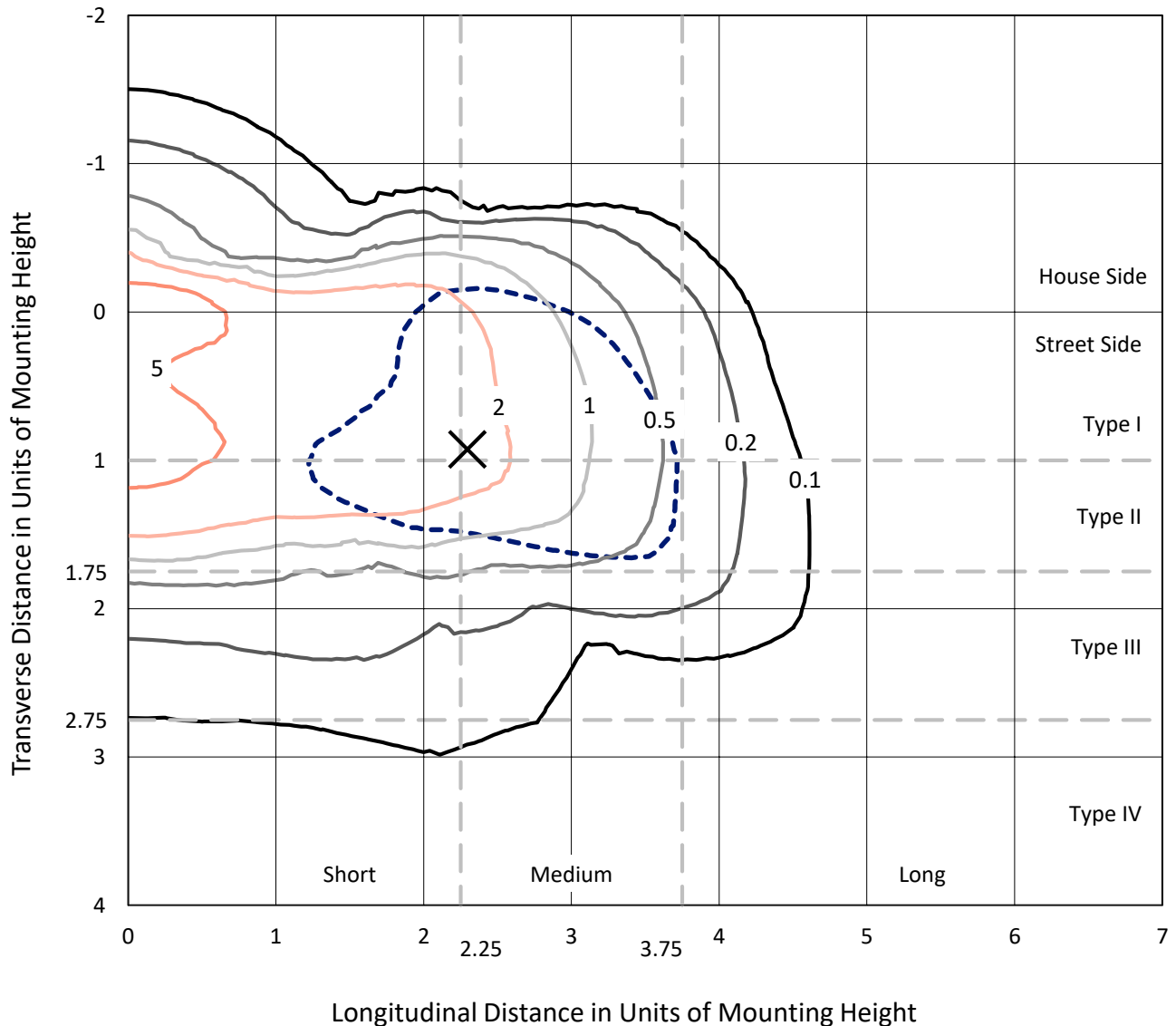


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Iso-Footcandle Lines of Horizontal Illumination

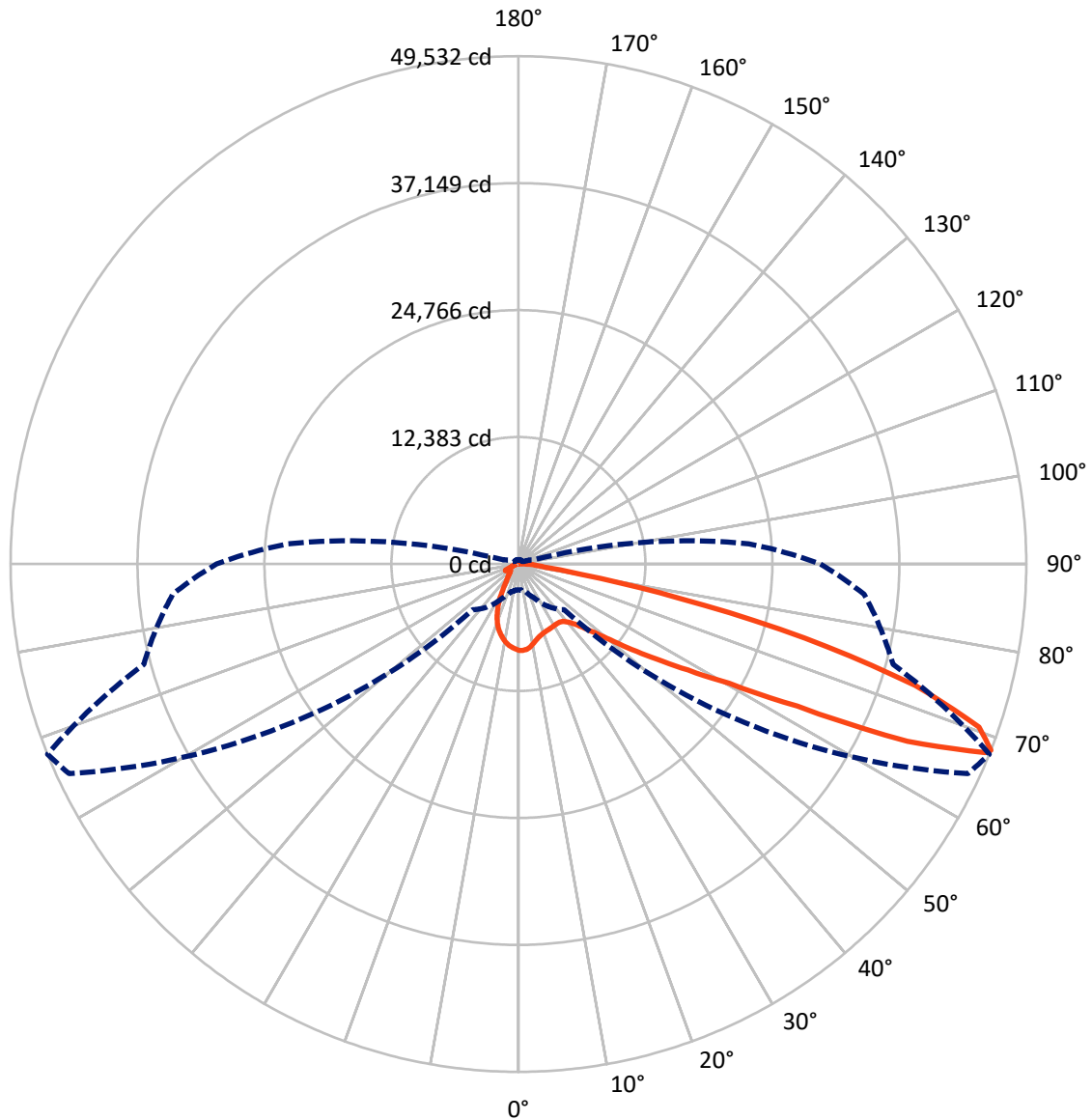
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9.4 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6338.0	0.0	6338.0
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	32402.0	0.0	32402.0
	% Fixture	83.6	0.0	83.6
Total	Lumens	38740.0	0.0	38740.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	722.2	1.9
10°-20°	1675.2	4.3
20°-30°	2265.6	5.8
30°-40°	3194.4	8.2
40°-50°	5252.9	13.6
50°-60°	8142.4	21.0
60°-70°	10557.2	27.3
70°-80°	6058.3	15.6
80°-90°	871.7	2.3
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°	38740.0	100.0
0°-180°	38740.0	100.0



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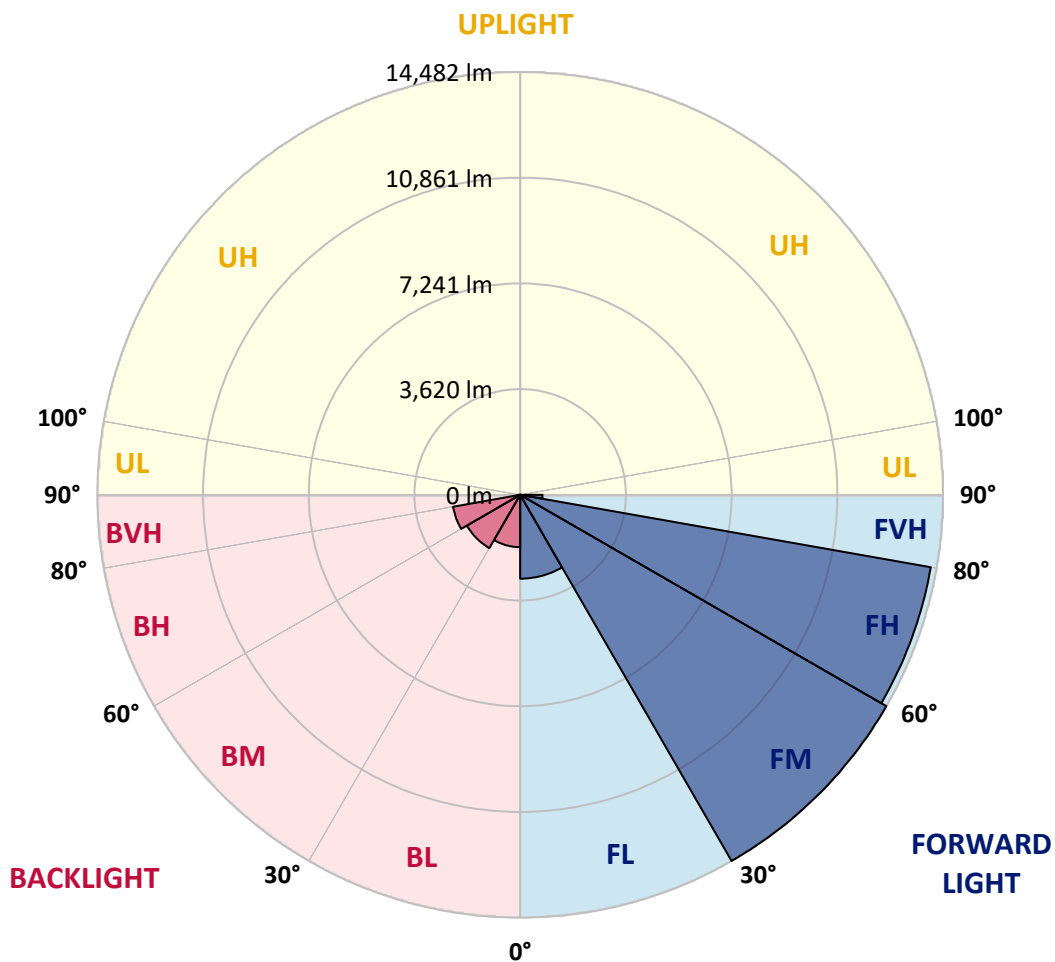
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2871.3	7.4			
FM	(30°-60°)	14481.7	37.4			
FH	(60°-80°)	14281.3	36.9			G5
FVH	(80°-90°)	767.8	2.0			G5
BL	(0°-30°)	1791.8	4.6	B3/2500		
BM	(30°-60°)	2108.1	5.4	B2/2500		
BH	(60°-80°)	2334.2	6.0	B3/2500		G3/2500
BVH	(80°-90°)	103.9	0.3			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5
2.5°	8204.3	8270.0	8270.0	8318.1	8361.2	8396.6	8426.9	8426.9	8426.9	8406.7	8389.0
5°	7341.3	7429.9	7442.5	7564.0	7723.4	7918.3	8135.9	8328.3	8366.2	8437.1	8464.9
7.5°	6741.6	6769.4	6817.5	6901.0	7062.9	7303.4	7645.0	8075.2	8178.9	8401.6	8518.0
10°	6316.4	6339.2	6379.7	6463.2	6610.0	6827.6	7164.2	7723.4	7895.5	8290.3	8520.6
12.5°	6005.1	6022.9	6060.8	6136.7	6286.0	6480.9	6825.1	7407.1	7619.7	8178.9	8556.0
15°	5762.2	5792.6	5822.9	5896.3	6048.2	6235.4	6584.7	7176.8	7407.1	8090.4	8621.8
17.5°	5666.0	5681.2	5686.3	5724.3	5860.9	6050.7	6399.9	7014.9	7252.7	8019.5	8672.4
20°	5726.8	5729.3	5678.7	5653.4	5731.8	5906.5	6245.6	6893.4	7136.3	7956.3	8692.7
22.5°	5992.5	5992.5	5860.9	5749.6	5696.4	5805.2	6141.8	6809.9	7073.1	7908.2	8692.7
25°	6498.6	6475.8	6270.9	6050.7	5815.4	5769.8	6076.0	6756.7	7025.0	7882.9	8659.8
27.5°	7164.2	7143.9	6883.3	6556.8	6131.7	5845.7	6053.2	6713.7	6976.9	7844.9	8588.9
30°	7974.0	7956.3	7660.2	7232.5	6604.9	6086.1	6106.4	6683.4	6938.9	7781.6	8470.0
32.5°	8781.2	8771.1	8535.8	8098.0	7257.8	6493.6	6245.6	6678.3	6918.7	7705.7	8325.7
35°	9593.6	9593.6	9449.3	9079.8	8135.9	7106.0	6536.6	6771.9	6956.7	7665.2	8201.7
37.5°	10793.1	10745.0	10476.7	10094.6	9241.8	7900.6	7007.3	6969.3	7103.4	7733.6	8161.2
40°	12650.5	12511.4	11840.7	11198.0	10448.9	8917.9	7695.6	7351.4	7432.4	7966.4	8257.4
42.5°	14594.1	14373.9	13485.6	12458.2	11696.5	10173.1	8599.0	7971.4	7968.9	8416.8	8563.6
45°	16261.7	16147.9	15186.2	13883.0	13121.2	11585.2	9740.3	8892.6	8801.5	9115.3	9153.2
47.5°	17231.0	17155.0	16575.5	15391.2	14811.7	13252.8	11187.8	10170.5	9998.5	10185.7	10127.5
50°	16962.7	17036.1	16869.1	16264.3	16628.7	15596.2	13032.7	11921.7	11595.3	11782.5	11640.8
52.5°	15550.6	15748.0	15897.3	16013.7	17673.8	18731.6	15350.7	14108.2	13837.4	13804.5	13667.9
55°	13007.4	13321.2	13791.9	14647.2	17392.9	21249.6	19399.7	16752.7	16357.9	16150.4	16203.5
57.5°	8852.1	9327.8	10342.6	11969.8	15932.8	22322.6	25387.1	20169.0	19500.9	18762.0	18934.1
60°	4876.5	5273.8	6480.9	8120.7	12599.9	22163.1	30693.8	25721.2	23618.2	21659.5	22013.8
62.5°	3155.7	3241.7	4140.1	5547.1	7733.6	19566.7	33642.0	35000.9	30544.5	25480.8	25979.3
65°	2535.7	2596.4	3036.7	4474.1	5387.7	12587.3	33773.6	44627.4	41689.4	30673.6	30688.8
67.5°	2477.5	2505.3	2760.9	3763.0	5053.6	6852.9	29193.2	48423.3	49104.1	36802.7	33839.4
68°	2512.9	2545.8	2803.9	3646.6	5051.1	6316.4	26981.4	48365.1	49531.7	37827.6	33839.4
70°	2216.8	2257.3	2859.6	3773.1	4836.0	5430.7	18476.0	45796.5	47674.3	40183.6	32108.4
72.5°	1159.0	1126.1	1414.6	2978.5	5443.4	5658.5	9760.6	38260.4	40451.9	37215.2	27740.6
75°	903.4	822.4	792.1	1176.7	4787.9	5868.5	5668.6	27194.0	28849.0	26827.0	18541.8
77.5°	850.3	751.6	693.4	695.9	2108.0	6106.4	4585.5	16003.6	16003.6	12797.3	5916.6
80°	683.3	592.2	554.2	632.7	1017.3	5628.1	4785.4	7293.2	6220.3	3307.5	1629.7
82.5°	450.4	402.4	404.9	513.7	771.8	3758.0	5542.0	3601.1	2705.2	1465.2	959.1
85°	286.0	245.5	273.3	359.3	577.0	1675.3	5486.4	2502.8	1791.7	822.4	478.3
87.5°	144.2	111.3	136.7	187.3	351.8	480.8	4517.1	2234.5	1328.6	341.6	260.7
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°	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5	8429.5
2.5°	8389.0	8333.3	8305.5	8259.9	8204.3	8148.6	8110.6	8092.9	8082.8	8087.8	8085.3
5°	8449.7	8376.3	8257.4	8087.8	7913.2	7728.5	7586.8	7478.0	7409.6	7389.4	7384.3
7.5°	8495.3	8389.0	8166.3	7857.6	7558.9	7235.0	6959.2	6739.0	6589.7	6521.4	6518.9
10°	8487.7	8351.0	7999.3	7543.8	7106.0	6630.2	6197.5	5828.0	5559.8	5430.7	5425.6
12.5°	8495.3	8308.0	7794.3	7176.8	6549.2	5868.5	5225.7	4651.3	4251.4	4061.6	4054.0
15°	8525.6	8262.5	7584.3	6766.9	5898.9	4937.2	4018.6	3297.4	2933.0	2809.0	2809.0
17.5°	8523.1	8186.5	7341.3	6291.1	5127.0	3838.9	2743.2	2297.8	2262.4	2376.2	2394.0
20°	8472.5	8065.1	7027.5	5726.8	4221.1	2657.1	1860.0	1796.7	2080.2	2394.0	2429.4
22.5°	8394.0	7908.2	6665.6	5071.4	3165.8	1730.9	1434.9	1531.0	1915.7	2305.4	2361.1
25°	8285.2	7718.4	6250.6	4309.6	2105.5	1245.1	1197.0	1315.9	1586.7	1847.3	1887.8
27.5°	8125.8	7478.0	5797.6	3484.7	1343.8	1024.9	1042.6	1126.1	1242.5	1353.9	1376.7
30°	7925.9	7197.1	5304.2	2571.1	1019.8	916.1	946.4	997.1	1047.7	1118.5	1133.7
32.5°	7723.4	6911.1	4790.5	1766.4	890.8	857.9	888.2	916.1	959.1	1007.2	1017.3
35°	7541.2	6645.4	4261.6	1232.4	835.1	819.9	835.1	852.8	895.8	943.9	949.0
37.5°	7409.6	6427.8	3709.9	974.3	802.2	787.0	794.6	802.2	852.8	923.7	931.3
40°	7391.9	6283.5	3150.6	875.6	776.9	756.7	751.6	756.7	822.4	903.4	911.0
42.5°	7564.0	6291.1	2604.0	835.1	756.7	733.9	713.6	723.8	782.0	845.2	850.3
45°	7971.4	6468.3	2130.8	817.4	738.9	721.2	690.9	695.9	723.8	756.7	761.7
47.5°	8690.1	6855.4	1768.9	807.3	723.8	708.6	670.6	655.4	658.0	675.7	675.7
50°	9839.0	7503.3	1548.7	797.1	711.1	683.3	640.2	609.9	602.3	612.4	614.9
52.5°	11552.3	8614.2	1442.5	776.9	688.3	650.4	602.3	571.9	559.3	569.4	569.4
55°	13867.8	10388.2	1391.8	749.1	660.5	609.9	566.9	541.6	531.4	539.0	539.0
57.5°	16507.2	12693.6	1477.9	711.1	625.1	566.9	536.5	518.8	511.2	518.8	521.3
60°	19642.6	15710.1	2070.0	663.0	587.1	528.9	511.2	501.1	496.0	503.6	503.6
62.5°	23810.6	19723.6	3203.8	625.1	546.6	493.5	488.4	483.3	478.3	485.9	485.9
65°	28310.0	23375.3	3297.4	602.3	511.2	463.1	465.6	465.6	460.6	468.2	468.2
67.5°	29742.3	23059.0	1842.3	574.4	468.2	432.7	442.9	442.9	440.3	447.9	445.4
68°	29438.6	22557.9	1604.4	566.9	460.6	425.1	435.3	437.8	435.3	442.9	440.3
70°	27176.3	19804.6	1055.3	523.8	427.7	399.8	415.0	417.6	415.0	425.1	422.6
72.5°	22433.9	14854.7	779.4	458.0	387.2	366.9	382.1	384.7	387.2	397.3	394.8
75°	14247.4	8204.3	614.9	389.7	346.7	329.0	344.2	351.8	356.8	372.0	364.4
77.5°	3902.2	2490.1	498.5	331.5	298.6	291.0	301.1	311.3	316.3	334.0	321.4
80°	1366.5	1100.8	415.0	280.9	248.0	245.5	255.6	265.7	270.8	286.0	270.8
82.5°	830.0	718.7	331.5	220.2	194.9	192.3	205.0	215.1	220.2	220.2	210.0
85°	432.7	379.6	242.9	154.4	134.1	126.5	149.3	162.0	164.5	162.0	154.4
87.5°	242.9	215.1	129.1	73.4	60.7	63.3	78.4	96.2	103.8	101.2	96.2
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)