

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: P195180

Luminaire Tested: **NAV-AF-06-D-UNV-SL3-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195180
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 29066 lumens
Efficiency: N/A
Efficacy: 116.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B3 - U0 - G4

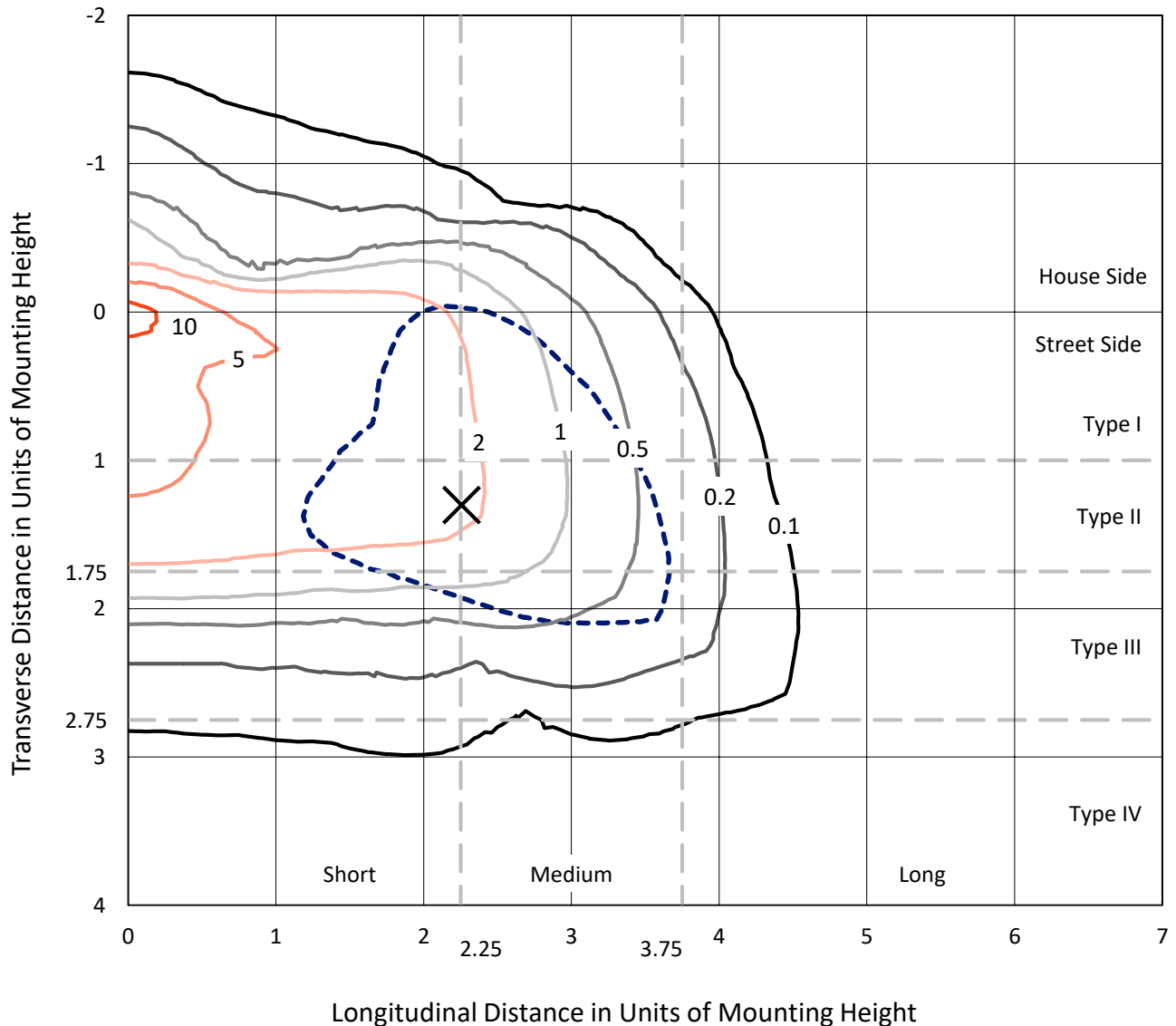
Input Watts (W): 249
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

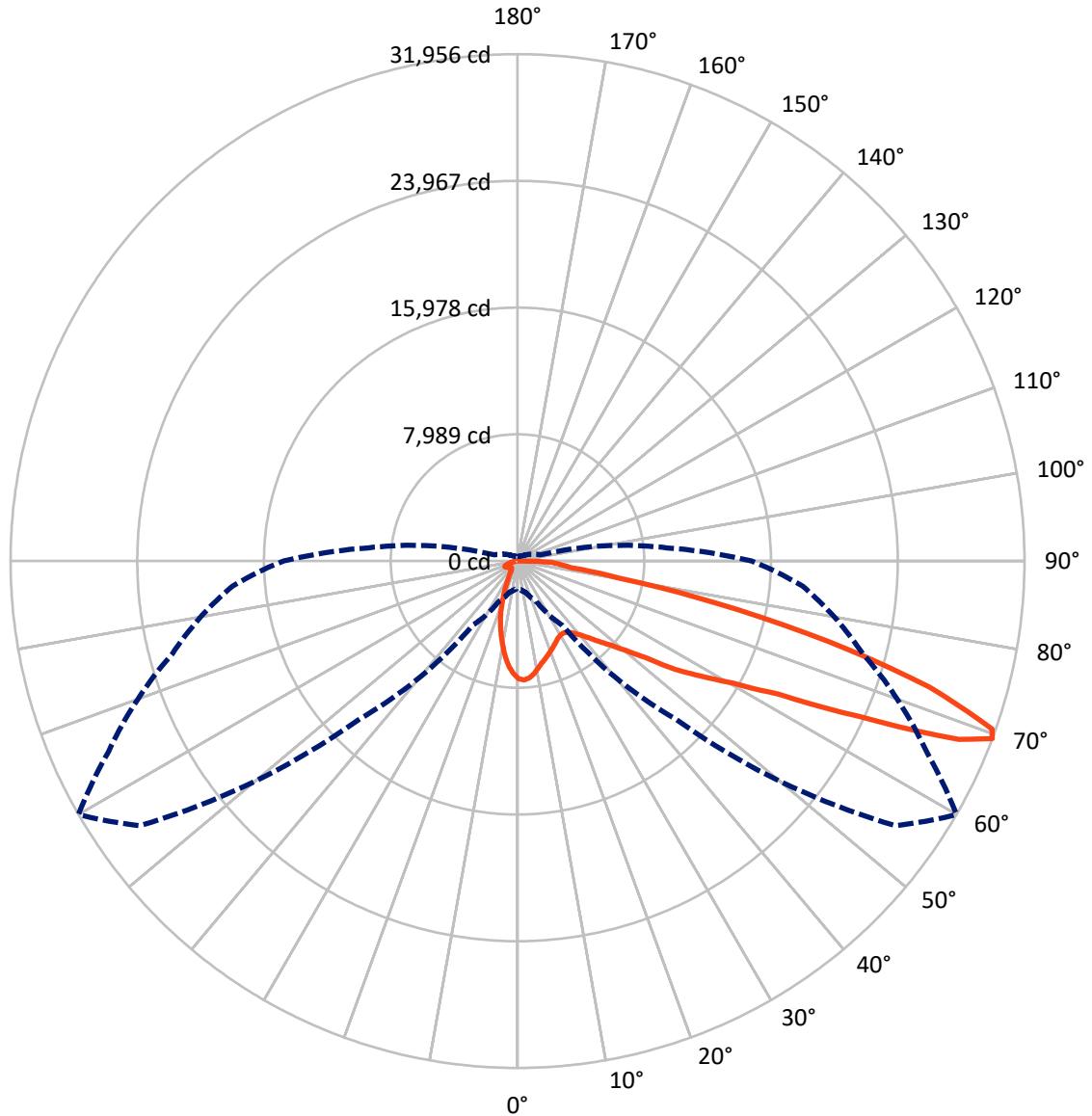
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 11.9 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4145.8	0.0	4145.8
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	24920.2	0.0	24920.2
	% Fixture	85.7	0.0	85.7
Total	Lumens	29066.0	0.0	29066.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	629.1	2.2
10°-20°	1347.1	4.6
20°-30°	1718.5	5.9
30°-40°	2364.8	8.1
40°-50°	3830.5	13.2
50°-60°	6011.8	20.7
60°-70°	8014.8	27.6
70°-80°	4458.1	15.3
80°-90°	691.4	2.4
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°	29066.0	100.0
0°-180°	29066.0	100.0

Coefficient of Utilization



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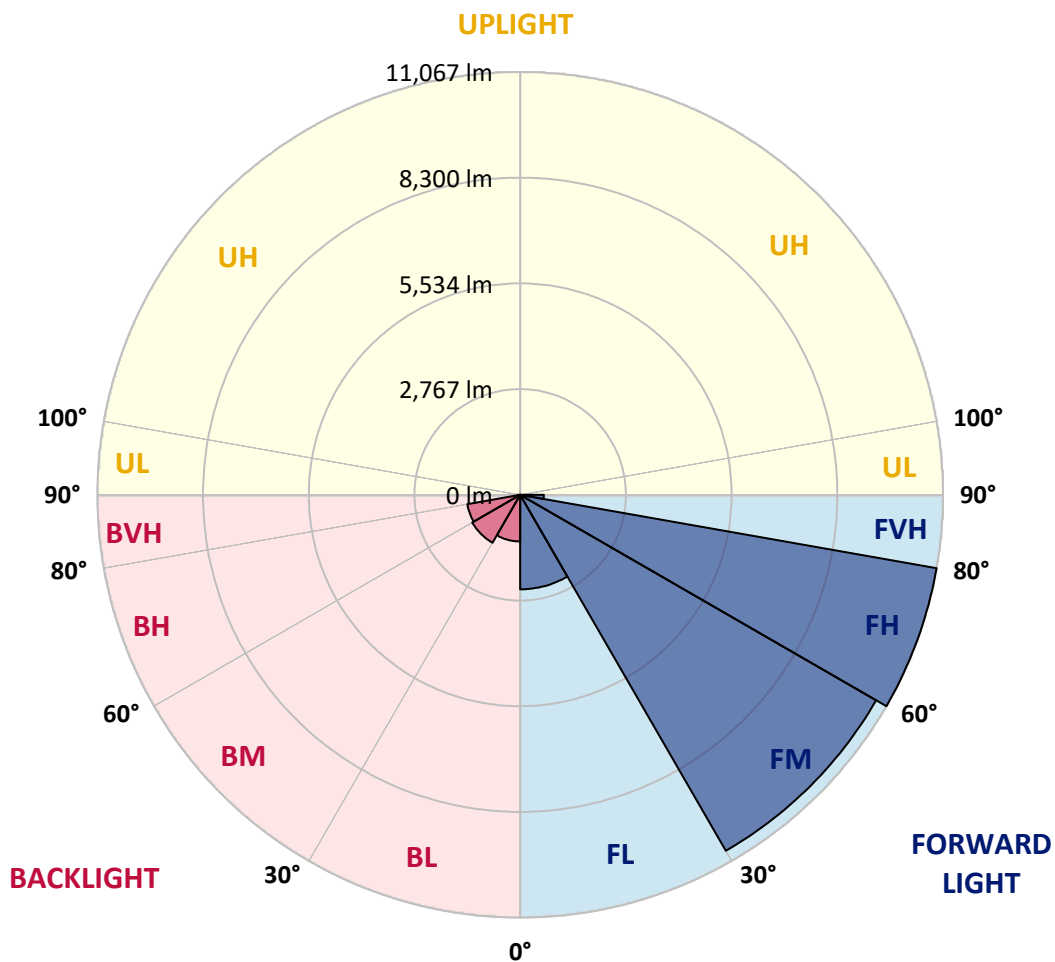
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2472.9	8.5			
FM	(30°-60°)	10758.7	37.0			
FH	(60°-80°)	11067.2	38.1			G4/12000
FVH	(80°-90°)	621.4	2.1			G4/750
BL	(0°-30°)	1221.8	4.2	B3/2500		
BM	(30°-60°)	1448.3	5.0	B2/2500		
BH	(60°-80°)	1405.6	4.8	B3/2500		G3/2500
BVH	(80°-90°)	70.1	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-G4

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3
2.5°	7613.9	7634.4	7634.4	7617.6	7608.3	7554.2	7522.5	7500.2	7461.0	7388.3	7323.1
5°	7341.7	7380.9	7397.6	7405.1	7453.6	7436.8	7438.6	7423.7	7390.2	7311.9	7205.7
7.5°	6842.2	6849.7	6879.5	6929.8	7047.2	7129.2	7196.3	7209.4	7201.9	7144.2	6995.1
10°	6350.2	6363.2	6398.6	6484.4	6596.2	6713.6	6859.0	6918.6	6963.4	6944.7	6756.5
12.5°	5942.0	5943.8	5983.0	6081.8	6206.6	6353.9	6551.5	6644.6	6750.9	6793.8	6583.1
15°	5548.7	5574.8	5612.1	5731.4	5886.1	6072.4	6299.8	6428.4	6568.2	6691.2	6448.9
17.5°	5250.5	5271.0	5293.4	5392.1	5571.1	5804.0	6085.5	6223.4	6407.9	6596.2	6311.0
20°	5086.5	5093.9	5077.1	5125.6	5276.6	5528.2	5854.4	6020.3	6240.2	6504.9	6169.4
22.5°	5052.9	5052.9	4991.4	4982.1	5049.2	5261.7	5615.8	5819.0	6087.4	6441.5	6042.6
25°	5209.5	5198.3	5082.7	4976.5	4952.3	5060.4	5388.4	5638.2	5956.9	6439.6	5947.6
27.5°	5505.8	5490.9	5347.4	5168.5	5013.8	4967.2	5213.2	5468.6	5854.4	6503.0	5899.1
30°	5874.9	5869.3	5723.9	5500.2	5244.9	5004.5	5144.2	5381.0	5785.4	6620.4	5897.2
32.5°	6279.3	6253.2	6163.8	5940.1	5608.3	5211.3	5185.2	5384.7	5766.8	6791.9	5940.1
35°	6709.9	6691.2	6668.9	6443.3	6070.6	5576.7	5366.0	5513.3	5858.1	7030.5	6061.3
37.5°	7257.9	7237.4	7274.6	7028.6	6620.4	6055.7	5671.7	5770.5	6044.5	7377.1	6286.8
40°	8232.7	8173.0	8068.6	7690.3	7261.6	6642.8	6113.4	6128.4	6363.2	7841.2	6648.4
42.5°	9833.7	9641.7	9125.4	8430.2	7938.2	7325.0	6689.4	6618.6	6803.1	8454.4	7174.0
45°	11438.5	11222.3	10350.0	9237.3	8639.0	8057.4	7401.4	7231.8	7351.0	9168.3	7850.6
47.5°	12474.8	12368.5	11384.4	10044.3	9373.3	8855.2	8215.9	7936.3	8022.0	9977.2	8685.6
50°	12778.6	12687.3	11913.8	10676.2	10066.7	9818.8	9224.2	8853.3	8868.2	10922.2	9686.5
52.5°	12551.2	12513.9	12001.4	11067.6	10704.1	10834.6	10620.3	10104.0	9980.9	11958.5	10771.2
55°	12247.4	12260.4	12062.9	11460.8	11352.7	11781.4	12446.8	12031.2	11509.3	13037.7	11900.7
57.5°	11291.2	11300.6	11818.7	12210.1	12590.3	13108.5	13869.0	13693.7	13086.1	14202.6	13166.3
60°	9091.9	9164.6	10318.3	12055.4	14005.0	15723.5	15909.9	15607.9	14763.6	15544.6	14812.1
62.5°	6495.5	6560.8	7897.2	10465.6	13839.1	18683.3	19678.6	18478.3	17039.4	17551.9	17127.0
65°	3412.7	3401.5	4436.0	7231.8	11656.6	19369.2	25616.8	23574.0	20873.3	20312.3	19363.6
67.5°	1906.7	1968.2	2369.0	3647.6	7597.1	17046.8	29409.8	30011.8	26203.9	22502.3	19266.7
69°	1763.2	1783.7	2052.1	2820.0	4952.3	14064.7	29083.6	31955.8	28451.8	22511.6	18025.3
70°	1712.9	1735.2	1979.4	2598.2	4160.1	11524.2	27896.3	31728.4	28997.9	22012.1	16895.9
72.5°	1535.8	1565.6	1802.3	2335.4	3505.9	5940.1	22470.6	27156.4	26267.3	19238.7	13101.0
75°	1310.3	1360.6	1718.5	2318.6	3321.4	3776.2	14985.4	20232.2	19550.0	13759.0	7433.1
77.5°	542.4	548.0	751.1	1698.0	3485.4	3614.0	8053.7	12815.9	11345.3	6033.3	2238.5
80°	378.4	370.9	374.6	495.8	2812.6	3638.2	4132.2	6517.9	5066.0	1591.7	1047.5
82.5°	318.7	315.0	329.9	311.3	952.4	4128.4	3455.6	3397.8	2385.7	857.4	499.5
85°	210.6	205.0	270.3	283.3	452.9	3278.5	3716.5	2670.9	1778.1	458.5	212.5
87.5°	102.5	104.4	154.7	192.0	240.4	1038.2	3560.0	2111.7	1373.7	199.4	85.7
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°	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3	7416.3
2.5°	7297.0	7241.1	7190.8	7127.4	7078.9	7037.9	6982.0	6980.1	6970.8	6983.9	6987.6
5°	7134.8	7041.6	6900.0	6741.6	6629.7	6482.5	6339.0	6290.5	6236.5	6230.9	6247.6
7.5°	6890.7	6745.3	6503.0	6260.7	6018.4	5770.5	5535.7	5416.4	5300.8	5265.4	5282.2
10°	6618.6	6434.0	6063.1	5668.0	5326.9	4957.9	4600.0	4368.9	4158.3	4068.8	4091.2
12.5°	6406.1	6171.2	5649.3	5136.8	4626.1	4096.8	3625.2	3168.6	2823.7	2669.0	2678.4
15°	6223.4	5923.3	5261.7	4579.5	3940.2	3215.2	2560.9	2031.6	1729.7	1617.8	1614.1
17.5°	6025.8	5662.4	4857.2	4061.3	3231.9	2335.4	1714.7	1401.6	1282.3	1245.1	1245.1
20°	5815.2	5394.0	4434.1	3496.6	2486.4	1630.9	1289.8	1168.6	1123.9	1112.7	1110.9
22.5°	5619.5	5131.2	4009.2	2894.6	1798.6	1237.6	1097.8	1051.2	1043.8	1053.1	1053.1
25°	5464.8	4900.1	3578.6	2260.9	1308.4	1036.3	976.7	971.1	999.0	1032.6	1038.2
27.5°	5349.3	4693.2	3153.6	1651.4	1028.8	902.1	881.6	905.8	971.1	1038.2	1051.2
30°	5269.1	4516.1	2644.8	1187.3	857.4	790.3	799.6	842.5	941.2	1043.8	1071.7
32.5°	5233.7	4372.6	2132.3	911.4	732.5	695.2	719.4	775.4	877.9	980.4	1013.9
35°	5267.3	4268.2	1658.8	756.7	641.2	613.2	641.2	698.9	766.0	816.4	836.9
37.5°	5388.4	4231.0	1248.8	671.0	581.5	553.6	575.9	615.1	644.9	663.5	672.9
40°	5643.8	4270.1	978.5	626.3	548.0	516.3	521.9	540.5	561.0	575.9	577.8
42.5°	6050.1	4398.7	870.4	609.5	527.5	486.5	477.1	490.2	512.6	533.1	536.8
45°	6590.6	4613.0	859.2	615.1	518.2	462.2	443.6	456.6	486.5	520.0	525.6
47.5°	7289.5	4952.3	911.4	644.9	523.7	449.2	421.2	434.3	473.4	518.2	525.6
50°	8117.1	5422.0	1008.3	689.6	549.8	449.2	411.9	423.1	464.1	514.4	521.9
52.5°	9091.9	6076.2	1109.0	734.4	587.1	466.0	415.6	413.8	451.1	497.6	507.0
55°	10167.3	6888.8	1205.9	773.5	607.6	488.3	425.0	402.6	432.4	469.7	477.1
57.5°	11432.9	8001.5	1375.5	810.8	618.8	505.1	436.1	391.4	408.2	434.3	439.9
60°	13149.5	9636.1	1705.4	874.1	639.3	512.6	438.0	380.2	378.4	397.0	398.9
62.5°	15388.0	11550.3	2020.4	948.7	680.3	514.4	430.6	372.8	354.1	359.7	359.7
65°	16979.7	12254.9	1929.1	1012.1	717.6	512.6	423.1	367.2	335.5	326.2	326.2
67.5°	16073.9	10825.3	1638.3	1028.8	721.3	492.1	406.3	354.1	318.7	296.4	296.4
69°	14743.1	9488.9	1504.1	999.0	691.5	467.8	387.7	341.1	307.5	281.4	281.4
70°	13658.3	8476.8	1422.1	963.6	656.1	447.3	370.9	328.0	296.4	274.0	272.1
72.5°	10197.2	5656.8	1215.2	831.3	538.7	378.4	324.3	292.6	266.5	251.6	251.6
75°	5381.0	2834.9	995.3	678.4	415.6	301.9	266.5	246.0	231.1	229.3	227.4
77.5°	1763.2	1282.3	715.7	510.7	305.7	234.8	212.5	199.4	197.6	205.0	205.0
80°	952.4	766.0	460.4	344.8	212.5	175.2	164.0	162.2	167.7	178.9	178.9
82.5°	462.2	378.4	274.0	212.5	145.4	128.6	128.6	130.5	137.9	151.0	151.0
85°	199.4	178.9	158.4	119.3	89.5	80.1	91.3	100.6	106.2	115.6	119.3
87.5°	95.1	83.9	72.7	46.6	39.1	41.0	48.5	59.6	70.8	78.3	80.1
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)