

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: P196582

Luminaire Tested: **NAV-AF-04-D-UNV-SL2-7030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196582  
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-04-D-UNV-SL2-7030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(4) 70 CRI, 3000K, 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: 25376.5 lumens  
Efficiency: N/A  
Efficacy: 98.4 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium - Semi-Cutoff  
BUG Rating: B3 - U0 - G4

Input Watts (W): 258  
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

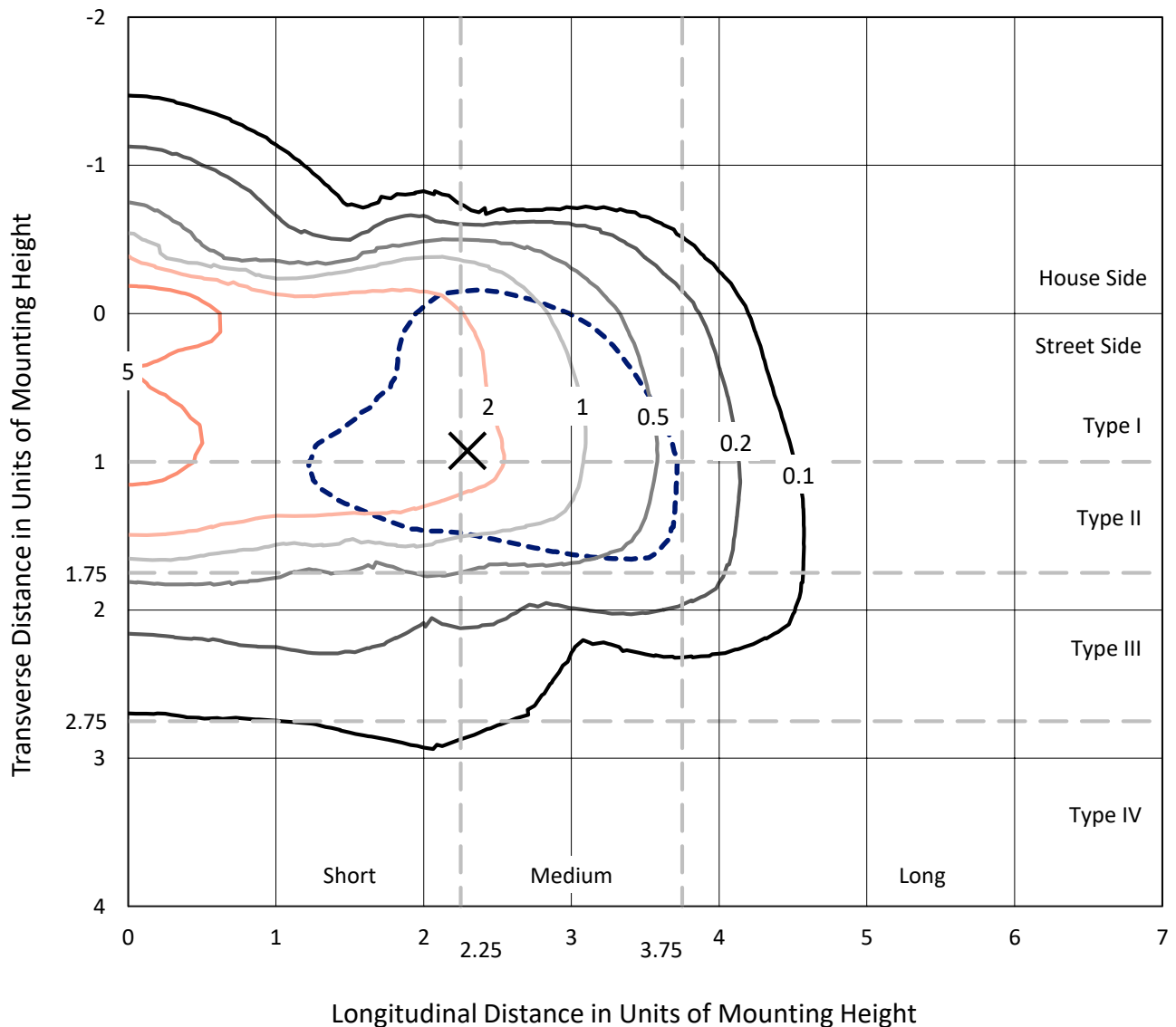


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### Iso-Footcandle Lines of Horizontal Illumination

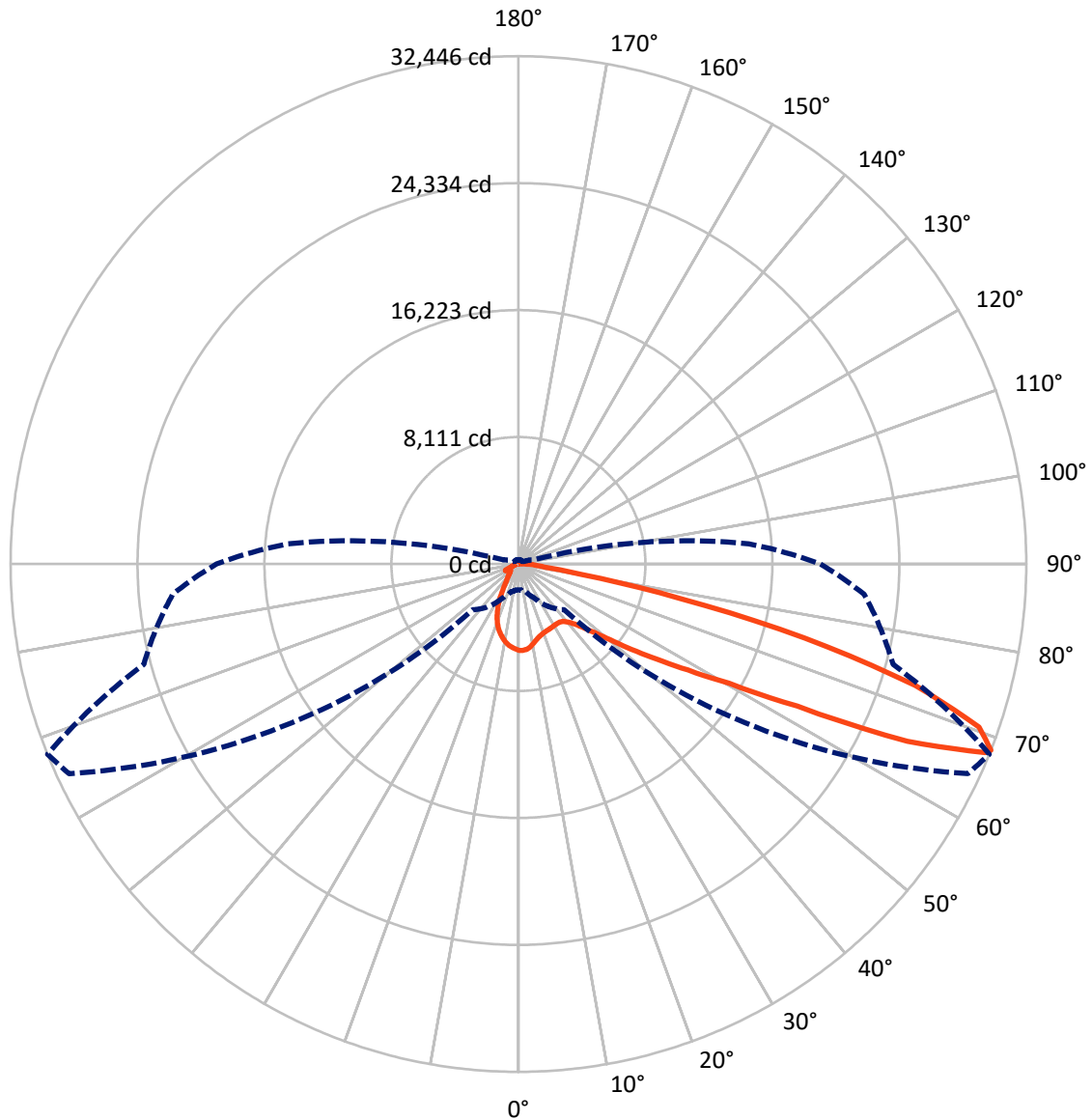
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 8.8 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
<b>House Side</b>	Lumens	4151.7	0.0	4151.7
	% Fixture	16.4	0.0	16.4
<b>Street Side</b>	Lumens	21224.9	0.0	21224.9
	% Fixture	83.6	0.0	83.6
<b>Total</b>	Lumens	25376.5	0.0	25376.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	473.1	1.9
10°-20°	1097.3	4.3
20°-30°	1484.1	5.8
30°-40°	2092.5	8.2
40°-50°	3440.9	13.6
50°-60°	5333.7	21.0
60°-70°	6915.5	27.3
70°-80°	3968.5	15.6
80°-90°	571.0	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°	25376.5	100.0
0°-180°	25376.5	100.0



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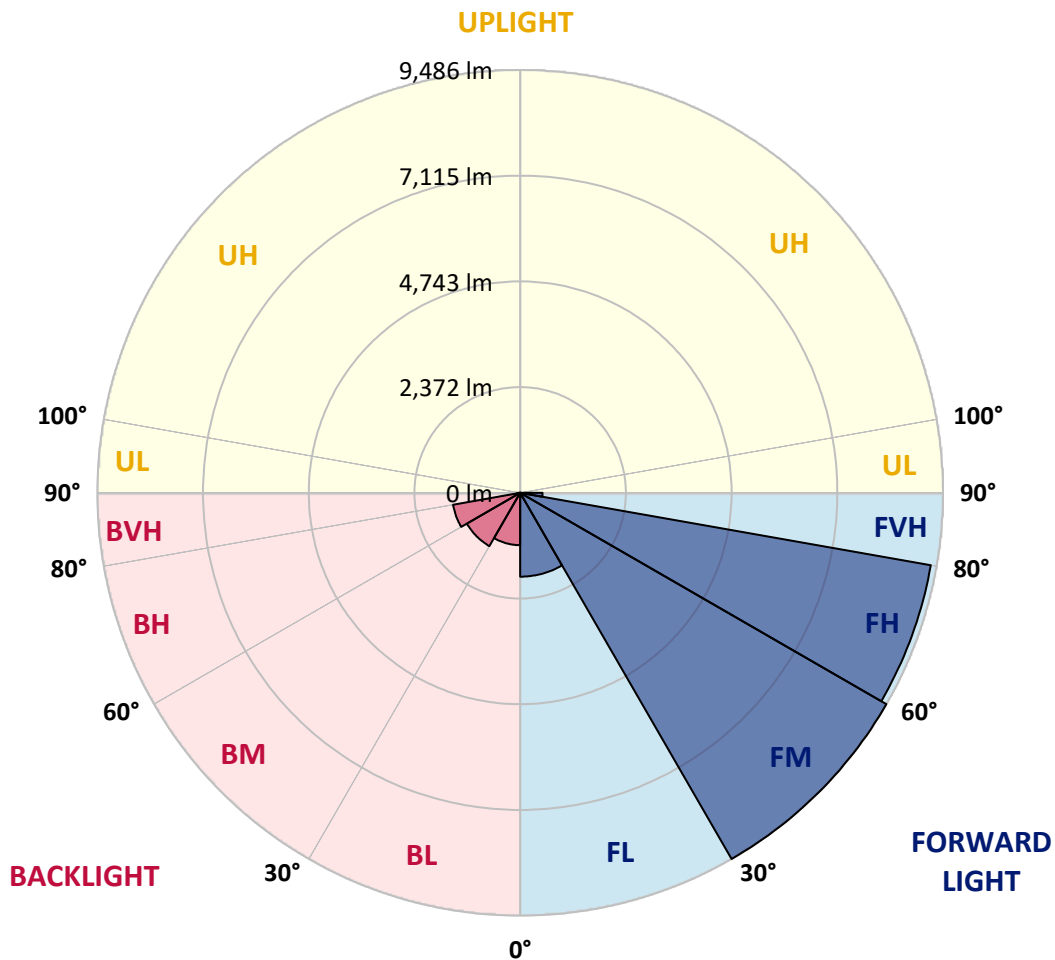
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1880.8	7.4			
FM	(30°-60°)	9486.2	37.4			
FH	(60°-80°)	9355.0	36.9			G4/12000
FVH	(80°-90°)	502.9	2.0			G4/750
BL	(0°-30°)	1173.7	4.6	B3/2500		
BM	(30°-60°)	1380.9	5.4	B2/2500		
BH	(60°-80°)	1529.0	6.0	B3/2500		G3/2500
BVH	(80°-90°)	68.1	0.3			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°	68°	75°	85°
0°	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8
2.5°	5374.1	5417.3	5417.3	5448.8	5476.9	5500.1	5520.1	5520.1	5520.1	5506.7	5495.2
5°	4808.9	4867.0	4875.2	4954.8	5059.2	5186.9	5329.4	5455.5	5480.2	5526.7	5544.9
7.5°	4416.0	4434.3	4465.8	4520.5	4626.6	4784.0	5007.8	5289.7	5357.6	5503.5	5579.8
10°	4137.5	4152.5	4178.9	4233.7	4329.8	4472.4	4692.9	5059.2	5171.9	5430.5	5581.4
12.5°	3933.7	3945.3	3970.2	4019.8	4117.7	4245.3	4470.8	4851.9	4991.3	5357.6	5604.6
15°	3774.5	3794.5	3814.3	3862.5	3961.8	4084.5	4313.2	4701.2	4851.9	5299.6	5647.7
17.5°	3711.5	3721.5	3724.7	3749.7	3839.2	3963.5	4192.3	4595.1	4750.9	5253.1	5680.8
20°	3751.3	3752.9	3719.8	3703.3	3754.5	3869.0	4091.1	4515.4	4674.6	5211.7	5694.1
22.5°	3925.3	3925.3	3839.2	3766.2	3731.4	3802.7	4023.2	4460.8	4633.2	5180.2	5694.1
25°	4257.0	4242.0	4107.7	3963.5	3809.4	3779.5	3980.1	4426.0	4601.7	5163.7	5672.5
27.5°	4692.9	4679.6	4508.9	4295.0	4016.6	3829.2	3965.1	4397.8	4570.2	5138.8	5626.2
30°	5223.3	5211.7	5017.7	4737.6	4326.5	3986.7	4000.0	4377.9	4545.3	5097.4	5548.1
32.5°	5752.2	5745.5	5591.4	5304.5	4754.2	4253.6	4091.1	4374.6	4532.1	5047.7	5453.7
35°	6284.3	6284.3	6189.7	5947.7	5329.4	4654.8	4281.8	4435.9	4556.9	5021.1	5372.5
37.5°	7069.9	7038.5	6862.8	6612.5	6053.8	5175.3	4590.1	4565.2	4653.2	5065.8	5345.9
40°	8286.7	8195.5	7756.2	7335.2	6844.5	5841.6	5041.0	4815.5	4868.6	5218.3	5409.0
42.5°	9559.8	9415.6	8833.7	8160.7	7661.8	6663.8	5632.8	5221.7	5220.0	5513.4	5609.6
45°	10652.2	10577.6	9947.7	9093.9	8595.0	7588.8	6380.4	5825.0	5765.4	5970.9	5995.8
47.5°	11287.1	11237.5	10857.7	10082.0	9702.3	8681.2	7328.6	6662.2	6549.4	6672.1	6634.0
50°	11111.3	11159.4	11050.1	10653.9	10892.6	10216.3	8537.0	7809.3	7595.4	7718.2	7625.3
52.5°	10186.5	10315.7	10413.5	10489.8	11577.2	12270.2	10055.4	9241.5	9064.1	9042.7	8953.1
55°	8520.5	8726.0	9034.3	9594.6	11393.2	13919.5	12707.7	10973.8	10715.2	10579.2	10614.1
57.5°	5798.5	6110.3	6774.9	7840.8	10436.7	14622.3	16629.8	13211.6	12774.0	12290.0	12402.7
60°	3194.3	3454.6	4245.3	5319.5	8253.6	14518.0	20105.9	16848.7	15471.1	14188.1	14420.1
62.5°	2067.0	2123.5	2712.0	3633.6	5065.8	12817.1	22037.1	22927.3	20008.1	16691.1	17017.6
65°	1661.0	1700.7	1989.2	2930.8	3529.2	8245.2	22123.4	29233.1	27308.5	20092.7	20102.6
67.5°	1622.8	1641.1	1808.6	2465.0	3310.3	4489.0	19122.9	31719.6	32165.5	24107.5	22166.4
68°	1646.1	1667.7	1836.7	2388.7	3308.7	4137.5	17674.1	31681.5	32445.6	24778.9	22166.4
70°	1452.2	1478.6	1873.1	2471.6	3167.9	3557.4	12102.6	29998.9	31228.9	26322.2	21032.5
72.5°	759.3	737.7	926.6	1951.1	3565.6	3706.5	6393.7	25062.3	26497.9	24377.7	18171.5
75°	591.7	538.7	518.9	770.9	3136.3	3844.2	3713.1	17813.4	18897.5	17573.0	12145.8
77.5°	557.0	492.3	454.2	455.8	1380.8	4000.0	3003.7	10483.1	10483.1	8382.8	3875.7
80°	447.5	387.9	363.1	414.4	666.4	3686.6	3134.6	4777.5	4074.6	2166.6	1067.6
82.5°	295.1	263.6	265.3	336.5	505.6	2461.6	3630.3	2358.9	1772.0	959.9	628.2
85°	187.3	160.8	179.0	235.4	377.9	1097.4	3593.9	1639.4	1173.7	538.7	313.2
87.5°	94.5	72.9	89.5	122.7	230.4	315.0	2959.0	1463.7	870.2	223.8	170.8
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°	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8	5521.8
2.5°	5495.2	5458.7	5440.4	5410.6	5374.1	5337.8	5312.8	5301.3	5294.6	5297.9	5296.3
5°	5535.0	5486.9	5409.0	5297.9	5183.6	5062.5	4969.6	4898.4	4853.7	4840.4	4837.1
7.5°	5564.8	5495.2	5349.4	5147.1	4951.5	4739.3	4558.7	4414.4	4316.7	4271.8	4270.2
10°	5559.8	5470.3	5239.8	4941.6	4654.8	4343.0	4059.6	3817.6	3641.9	3557.4	3554.1
12.5°	5564.8	5442.1	5105.6	4701.2	4290.1	3844.2	3423.1	3046.8	2784.9	2660.6	2655.5
15°	5584.7	5412.2	4968.0	4432.6	3864.1	3234.1	2632.4	2159.9	1921.3	1840.0	1840.0
17.5°	5583.0	5362.6	4808.9	4120.9	3358.4	2514.7	1796.9	1505.1	1482.0	1556.5	1568.2
20°	5550.0	5283.0	4603.3	3751.3	2765.1	1740.6	1218.4	1176.9	1362.6	1568.2	1591.4
22.5°	5498.5	5180.2	4366.3	3322.0	2073.7	1133.9	939.8	1002.9	1254.9	1510.2	1546.6
25°	5427.2	5055.9	4094.5	2823.0	1379.2	815.6	784.1	861.9	1039.4	1210.1	1236.6
27.5°	5322.8	4898.4	3797.8	2282.7	880.2	671.4	683.0	737.7	813.9	886.8	901.8
30°	5191.8	4714.4	3474.5	1684.2	668.0	600.1	619.9	653.2	686.2	732.7	742.6
32.5°	5059.2	4527.1	3137.9	1157.0	583.6	561.9	581.8	600.1	628.2	659.7	666.4
35°	4939.8	4353.0	2791.6	807.3	547.1	537.1	547.1	558.7	586.8	618.3	621.5
37.5°	4853.7	4210.6	2430.2	638.2	525.5	515.4	520.5	525.5	558.7	605.1	610.0
40°	4842.1	4116.1	2063.8	573.5	508.9	495.6	492.3	495.6	538.7	591.7	596.8
42.5°	4954.8	4120.9	1705.7	547.1	495.6	480.7	467.4	474.0	512.2	553.6	557.0
45°	5221.7	4237.0	1395.8	535.5	484.0	472.4	452.6	455.8	474.0	495.6	499.0
47.5°	5692.4	4490.7	1158.7	528.9	474.0	464.2	439.3	429.4	431.0	442.6	442.6
50°	6444.9	4915.0	1014.5	522.1	465.8	447.5	419.3	399.5	394.5	401.2	402.8
52.5°	7567.3	5642.7	944.9	508.9	450.9	426.0	394.5	374.6	366.3	373.0	373.0
55°	9084.1	6804.7	911.8	490.7	432.6	399.5	371.4	354.8	348.1	353.1	353.1
57.5°	10813.1	8314.8	968.0	465.8	409.4	371.4	351.4	339.8	334.9	339.8	341.4
60°	12866.9	10290.8	1356.0	434.3	384.6	346.5	334.9	328.3	324.9	329.9	329.9
62.5°	15597.1	12919.9	2098.7	409.4	358.1	323.3	319.9	316.7	313.2	318.3	318.3
65°	18544.3	15311.9	2159.9	394.5	334.9	303.3	305.1	305.1	301.7	306.7	306.7
67.5°	19482.7	15104.8	1206.8	376.3	306.7	283.4	290.1	290.1	288.5	293.4	291.7
68°	19283.7	14776.6	1051.0	371.4	301.7	278.5	285.1	286.8	285.1	290.1	288.5
70°	17801.7	12973.0	691.3	343.2	280.1	261.9	271.8	273.4	271.8	278.5	276.9
72.5°	14695.3	9730.5	510.6	300.0	253.6	240.4	250.3	252.0	253.6	260.2	258.6
75°	9332.7	5374.1	402.8	255.2	227.2	215.5	225.4	230.4	233.7	243.6	238.7
77.5°	2556.1	1631.1	326.5	217.2	195.6	190.6	197.2	203.9	207.1	218.8	210.6
80°	895.2	721.1	271.8	184.0	162.5	160.8	167.3	174.0	177.3	187.3	177.3
82.5°	543.7	470.8	217.2	144.2	127.7	125.9	134.3	141.0	144.2	144.2	137.5
85°	283.4	248.7	159.2	101.1	87.9	82.9	97.8	106.1	107.7	106.1	101.1
87.5°	159.2	141.0	84.5	48.1	39.8	41.4	51.4	63.1	68.0	66.3	63.1
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)