

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: P196631

Luminaire Tested: **NAV-AF-05-D-UNV-SL3-7030-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196631
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-05-D-UNV-SL3-7030-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 3000K, 1200mA 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: 31861.1 lumens
Efficiency: N/A
Efficacy: 99.6 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 - G5

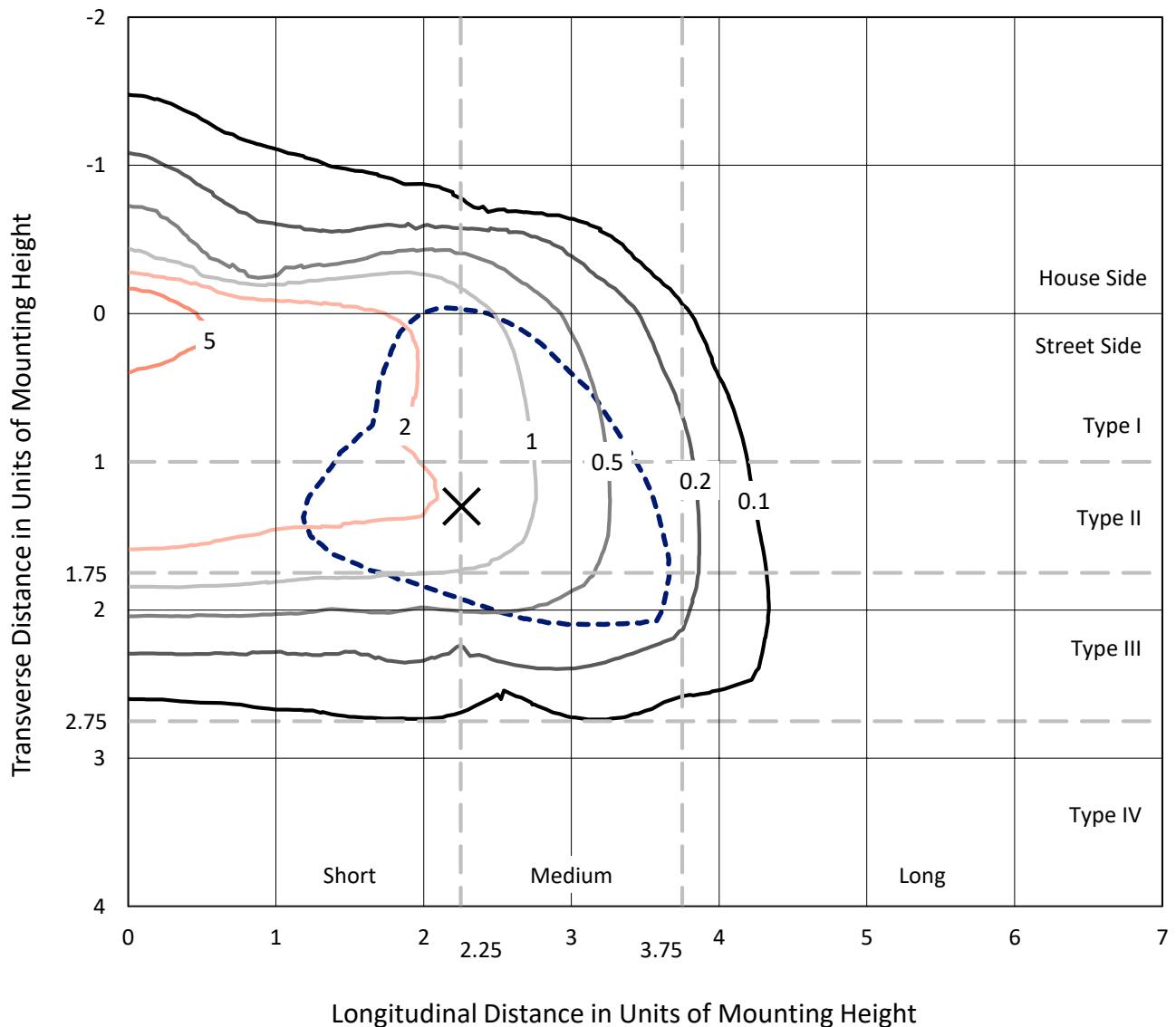
Input Watts (W): 320
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P196631
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-7030-1200

Iso-Footcandle Lines of Horizontal Illumination

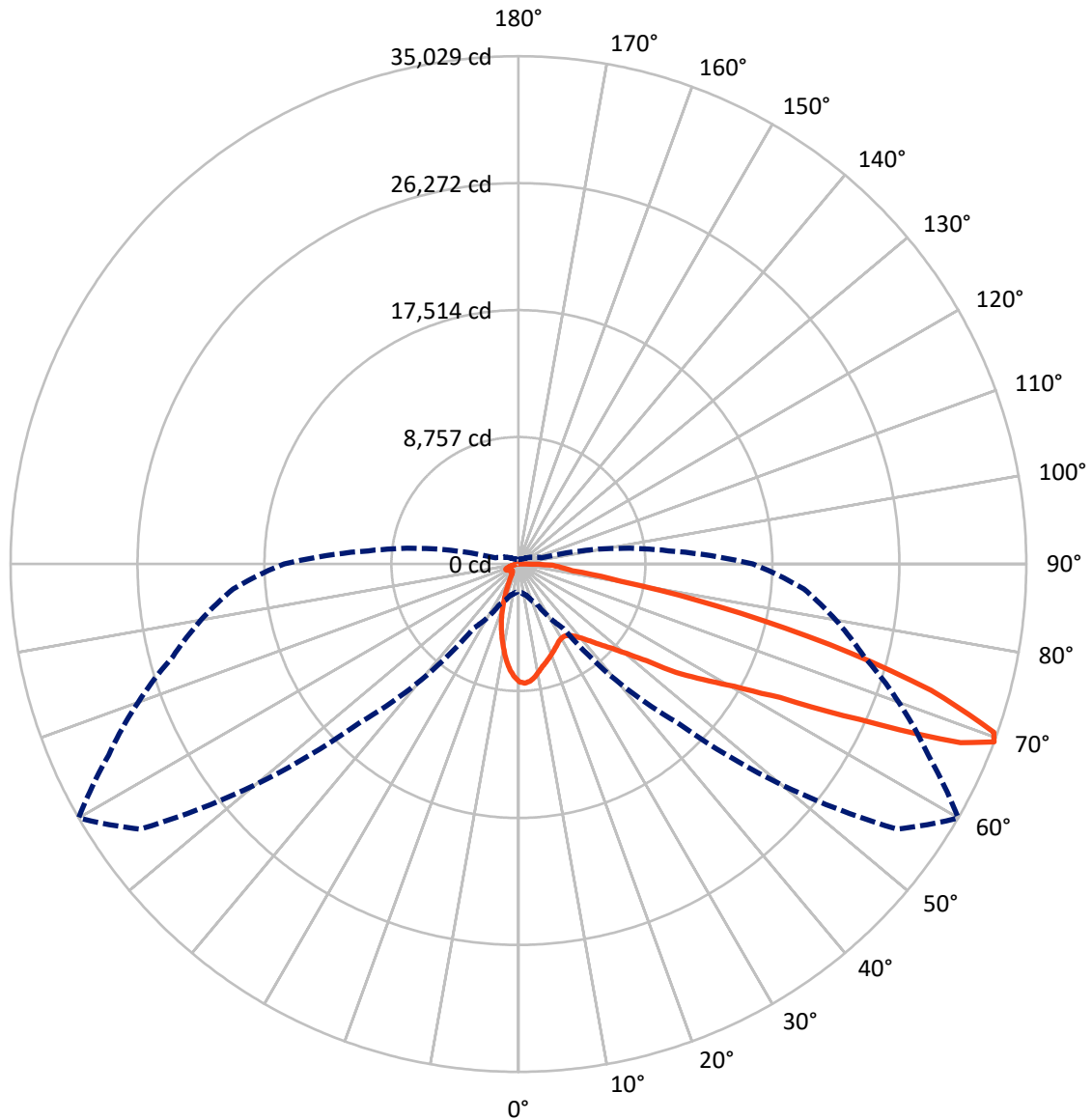
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 9 fc
 Type III - Medium - Non-Cutoff

REPORT NUMBER: P196631
CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-7030-1200

Luminous Intensity Polar Plot



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

REPORT NUMBER: P196631

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-7030-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4544.4	0.0	4544.4
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	27316.7	0.0	27316.7
	% Fixture	85.7	0.0	85.7
Total	Lumens	31861.1	0.0	31861.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	689.7	2.2
10°-20°	1476.6	4.6
20°-30°	1883.7	5.9
30°-40°	2592.2	8.1
40°-50°	4198.8	13.2
50°-60°	6589.9	20.7
60°-70°	8785.5	27.6
70°-80°	4886.8	15.3
80°-90°	757.9	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°	31861.1	100.0
0°-180°	31861.1	100.0

Coefficient of Utilization



REPORT NUMBER: P196631

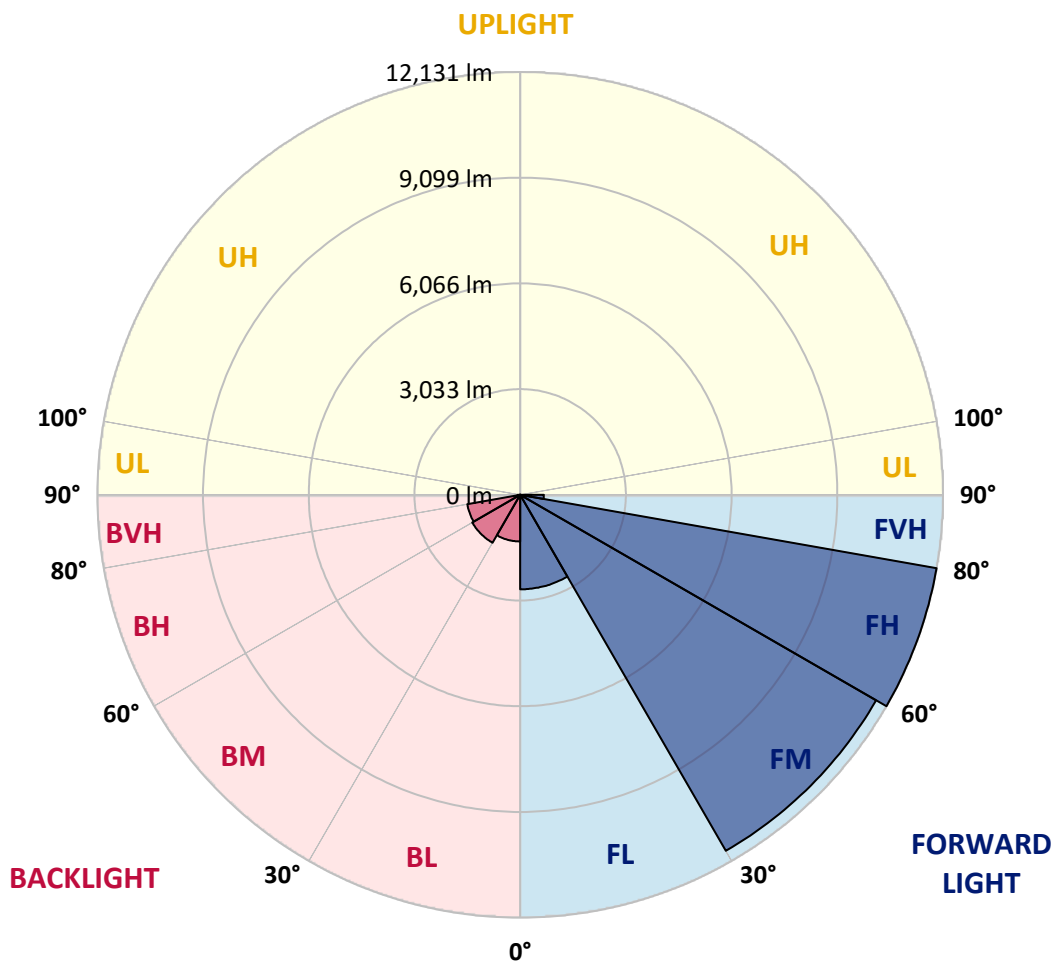
CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-7030-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2710.8	8.5			
FM	(30°-60°)	11793.3	37.0			
FH	(60°-80°)	12131.5	38.1			G5
FVH	(80°-90°)	681.1	2.1			G4/750
BL	(0°-30°)	1339.3	4.2	B3/2500		
BM	(30°-60°)	1587.6	5.0	B2/2500		
BH	(60°-80°)	1540.8	4.8	B3/2500		G3/2500
BVH	(80°-90°)	76.8	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-G5

Type III Medium





REPORT NUMBER: P196631

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-7030-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4
2.5°	8346.0	8368.5	8368.5	8350.1	8339.9	8280.6	8245.9	8221.4	8178.5	8098.9	8027.3
5°	8047.7	8090.6	8109.0	8117.2	8170.3	8152.0	8154.0	8137.6	8100.8	8015.0	7898.6
7.5°	7500.2	7508.4	7541.1	7596.2	7724.9	7814.8	7888.4	7902.7	7894.5	7831.1	7667.7
10°	6960.8	6975.1	7013.9	7107.9	7230.4	7359.2	7518.5	7583.9	7633.0	7612.5	7406.2
12.5°	6513.4	6515.4	6558.3	6666.6	6803.5	6964.9	7181.5	7283.7	7400.1	7447.1	7216.2
15°	6082.3	6110.9	6151.8	6282.5	6452.1	6656.4	6905.6	7046.5	7199.8	7334.7	7069.1
17.5°	5755.3	5777.8	5802.4	5910.7	6106.8	6362.1	6670.8	6821.9	7024.2	7230.4	6917.9
20°	5575.6	5583.8	5565.3	5618.5	5783.9	6059.8	6417.4	6599.2	6840.2	7130.4	6762.6
22.5°	5538.8	5538.8	5471.3	5461.3	5534.7	5767.7	6155.8	6378.5	6672.7	7060.9	6623.8
25°	5710.4	5698.2	5571.4	5455.1	5428.5	5547.0	5906.5	6180.4	6529.8	7058.9	6519.5
27.5°	6035.3	6019.0	5861.6	5665.5	5496.0	5444.8	5714.5	5994.4	6417.4	7128.3	6466.4
30°	6439.8	6433.7	6274.3	6029.2	5749.2	5485.7	5639.0	5898.4	6341.7	7257.1	6464.4
32.5°	6883.3	6854.6	6756.5	6511.3	6147.7	5712.5	5683.8	5902.5	6321.3	7445.0	6511.3
35°	7355.2	7334.7	7310.2	7062.9	6654.3	6112.9	5882.1	6043.4	6421.3	7706.5	6644.2
37.5°	7955.8	7933.4	7974.2	7704.5	7257.1	6638.0	6217.2	6325.4	6625.7	8086.6	6891.3
40°	9024.4	8958.9	8844.5	8429.8	7959.9	7281.6	6701.3	6717.7	6975.1	8595.3	7287.7
42.5°	10779.3	10568.8	10003.0	9240.9	8701.5	8029.4	7332.6	7255.1	7457.3	9267.5	7863.8
45°	12538.5	12301.5	11345.3	10125.6	9469.7	8832.3	8113.1	7927.2	8058.0	10050.0	8605.5
47.5°	13674.5	13558.0	12479.1	11010.2	10274.7	9706.7	9005.9	8699.4	8793.5	10936.7	9520.9
50°	14007.5	13907.3	13059.4	11702.9	11034.7	10763.0	10111.3	9704.7	9721.1	11972.5	10618.0
52.5°	13758.2	13717.3	13155.5	12131.8	11733.5	11876.5	11641.6	11075.6	10940.7	13108.5	11807.0
55°	13425.1	13439.4	13222.9	12562.9	12444.5	12914.3	13643.7	13188.1	12616.0	14291.4	13045.1
57.5°	12377.0	12387.3	12955.2	13384.3	13801.1	14369.0	15202.7	15010.6	14344.5	15568.4	14432.4
60°	9966.2	10045.9	11310.5	13214.7	15351.8	17235.5	17439.9	17108.8	16183.4	17039.4	16236.5
62.5°	7120.2	7191.7	8656.6	11472.0	15170.0	20480.0	21570.9	20255.2	18678.0	19239.8	18773.9
65°	3740.9	3728.7	4862.6	7927.2	12777.6	21231.8	28080.2	25841.0	22880.5	22265.6	21225.7
67.5°	2090.1	2157.6	2596.8	3998.4	8327.6	18686.1	32237.9	32897.9	28723.8	24666.3	21119.4
69°	1932.8	1955.2	2249.4	3091.2	5428.5	15417.1	31880.4	35028.8	31187.8	24676.4	19758.8
70°	1877.6	1902.1	2169.8	2848.1	4560.2	12632.4	30578.9	34779.5	31786.4	24129.0	18520.6
72.5°	1683.4	1716.3	1975.6	2560.0	3843.0	6511.3	24631.5	29767.8	28793.3	21088.7	14360.9
75°	1436.3	1491.5	1883.7	2541.6	3640.7	4139.3	16426.5	22177.8	21430.0	15082.1	8147.9
77.5°	594.6	600.7	823.4	1861.2	3820.6	3961.5	8828.1	14048.3	12436.3	6613.5	2453.8
80°	414.7	406.6	410.7	543.4	3083.1	3988.1	4529.6	7144.7	5553.1	1744.8	1148.2
82.5°	349.4	345.3	361.6	341.2	1044.0	4525.4	3787.9	3724.5	2615.1	939.8	547.5
85°	230.9	224.7	296.2	310.6	496.5	3593.7	4074.0	2927.7	1949.0	502.6	232.9
87.5°	112.3	114.4	169.6	210.5	263.6	1138.1	3902.3	2314.8	1505.8	218.6	94.0
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: P196631

CATALOG NUMBER: NAV-AF-05-D-UNV-SL3-7030-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4	8129.4
2.5°	7998.7	7937.3	7882.3	7812.8	7759.7	7714.7	7653.4	7651.4	7641.1	7655.5	7659.5
5°	7821.0	7718.8	7563.5	7389.9	7267.3	7105.9	6948.6	6895.5	6836.2	6830.1	6848.5
7.5°	7553.3	7393.9	7128.3	6862.8	6597.2	6325.4	6067.9	5937.2	5810.5	5771.7	5790.0
10°	7255.1	7052.8	6646.1	6213.0	5839.2	5434.7	5042.4	4789.1	4558.2	4460.1	4484.5
12.5°	7022.1	6764.7	6192.6	5630.7	5070.9	4490.7	3973.8	3473.3	3095.4	2925.8	2935.9
15°	6821.9	6492.9	5767.7	5019.9	4319.1	3524.3	2807.2	2226.9	1895.9	1773.4	1769.4
17.5°	6605.3	6206.9	5324.3	4451.9	3542.7	2560.0	1879.7	1536.4	1405.6	1364.7	1364.7
20°	6374.4	5912.7	4860.5	3832.9	2725.5	1787.7	1413.9	1281.1	1232.0	1219.8	1217.7
22.5°	6159.9	5624.6	4394.7	3172.9	1971.6	1356.6	1203.4	1152.3	1144.2	1154.4	1154.4
25°	5990.3	5371.3	3922.7	2478.2	1434.2	1136.0	1070.6	1064.4	1095.1	1131.9	1138.1
27.5°	5863.6	5144.5	3457.0	1810.2	1127.8	988.9	966.4	992.9	1064.4	1138.1	1152.3
30°	5775.8	4950.4	2899.2	1301.5	939.8	866.3	876.5	923.5	1031.7	1144.2	1174.7
32.5°	5736.9	4793.1	2337.3	999.0	802.9	762.1	788.7	849.9	962.2	1074.7	1111.5
35°	5773.8	4678.7	1818.4	829.5	702.9	672.2	702.9	766.1	839.6	894.9	917.3
37.5°	5906.5	4637.8	1368.9	735.6	637.4	606.8	631.3	674.2	706.9	727.3	737.6
40°	6186.5	4680.6	1072.6	686.4	600.7	566.0	572.1	592.5	615.0	631.3	633.3
42.5°	6631.8	4821.7	954.2	668.1	578.2	533.3	523.1	537.3	561.8	584.3	588.4
45°	7224.3	5056.6	941.9	674.2	567.9	506.6	486.2	500.5	533.3	570.0	576.2
47.5°	7990.5	5428.5	999.0	706.9	574.1	492.4	461.7	476.1	519.0	567.9	576.2
50°	8897.6	5943.3	1105.2	756.0	602.7	492.4	451.6	463.8	508.7	563.9	572.1
52.5°	9966.2	6660.5	1215.6	805.0	643.5	510.8	455.6	453.5	494.4	545.5	555.7
55°	11145.1	7551.2	1321.9	847.9	666.1	535.3	465.8	441.3	473.9	514.8	523.1
57.5°	12532.4	8771.0	1507.8	888.8	678.3	553.7	478.1	429.1	447.4	476.1	482.2
60°	14414.0	10562.7	1869.4	958.2	700.8	561.8	480.0	416.9	414.7	435.2	437.2
62.5°	16867.8	12661.1	2214.6	1039.9	745.7	563.9	472.0	408.6	388.2	394.3	394.3
65°	18612.6	13433.3	2114.6	1109.4	786.5	561.8	463.8	402.5	367.7	357.5	357.5
67.5°	17619.5	11866.3	1795.9	1127.8	790.7	539.4	445.3	388.2	349.4	324.8	324.8
69°	16160.9	10401.4	1648.7	1095.1	758.0	512.9	424.9	373.8	337.1	308.5	308.5
70°	14971.8	9292.0	1558.9	1056.3	719.2	490.3	406.6	359.6	324.8	300.4	298.3
72.5°	11177.8	6200.8	1332.1	911.2	590.4	414.7	355.5	320.7	292.2	275.8	275.8
75°	5898.4	3107.6	1091.1	743.7	455.6	330.9	292.2	269.7	253.4	251.3	249.2
77.5°	1932.8	1405.6	784.6	559.9	335.1	257.5	232.9	218.6	216.6	224.7	224.7
80°	1044.0	839.6	504.7	377.9	232.9	192.1	179.8	177.8	183.9	196.1	196.1
82.5°	506.6	414.7	300.4	232.9	159.4	141.0	141.0	143.0	151.3	165.5	165.5
85°	218.6	196.1	173.6	130.8	98.2	87.9	100.1	110.4	116.5	126.6	130.8
87.5°	104.3	91.9	79.6	51.1	42.9	44.9	53.1	65.3	77.7	85.8	87.9
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)