

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: P195720

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195720
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 37698 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

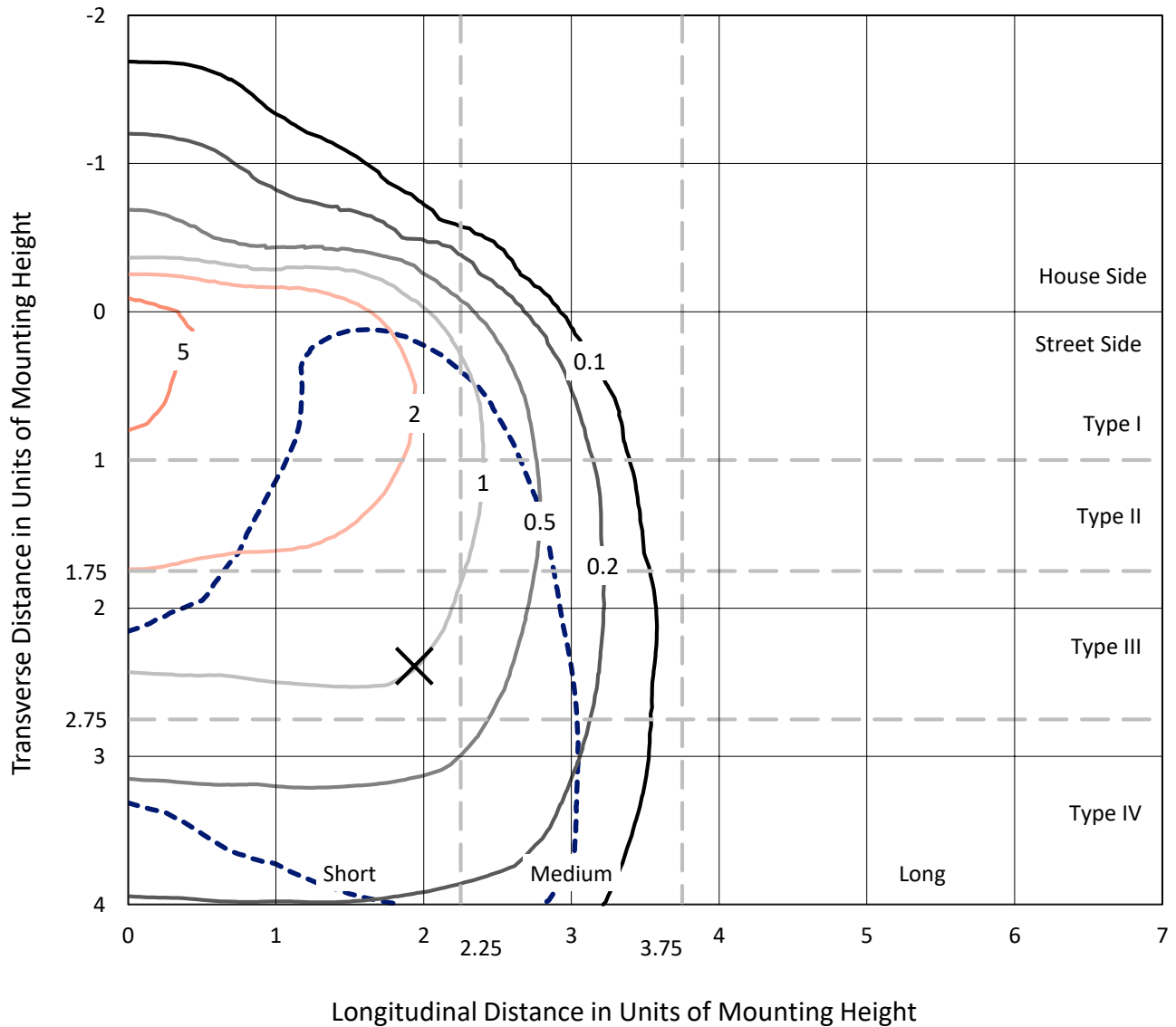
Input Watts (W): 382
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P195720
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7050-1200

Iso-Footcandle Lines of Horizontal Illumination

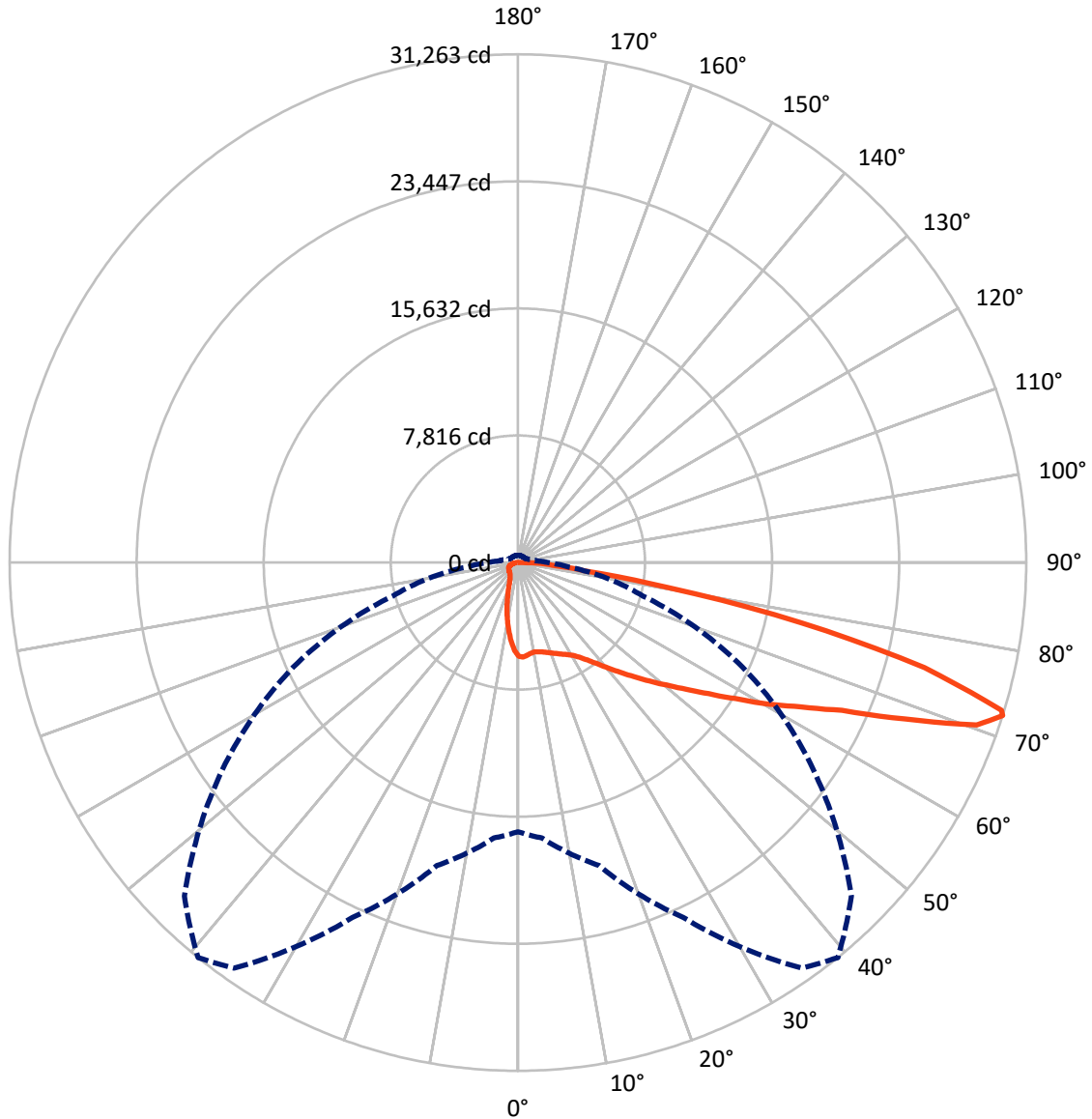
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 6.4 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P195720
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7050-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P195720

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7050-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4322.6	0.0	4322.6
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	33375.4	0.0	33375.4
	% Fixture	88.5	0.0	88.5
Total	Lumens	37698.0	0.0	37698.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	494.7	1.3
10°-20°	1243.2	3.3
20°-30°	1937.4	5.1
30°-40°	2983.0	7.9
40°-50°	4862.9	12.9
50°-60°	7556.4	20.0
60°-70°	10114.0	26.8
70°-80°	7273.4	19.3
80°-90°	1233.0	3.3
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°	37698.0	100.0
0°-180°	37698.0	100.0

Coefficient of Utilization



REPORT NUMBER: P195720

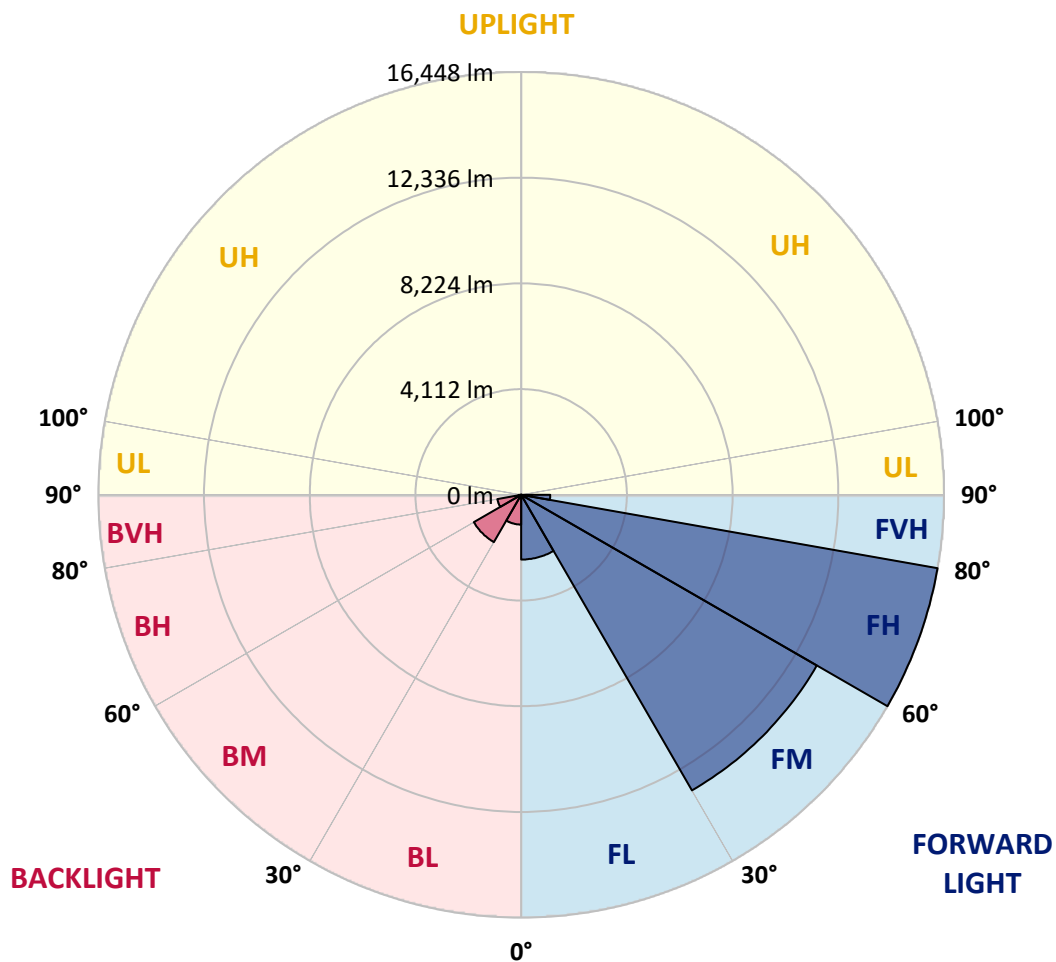
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7050-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	2518.2	6.7			
FM	(30°-60°)	13278.0	35.2			
FH	(60°-80°)	16448.2	43.6			G5
FVH	(80°-90°)	1131.1	3.0			G5
BL	(0°-30°)	1157.2	3.1	B3/2500		
BM	(30°-60°)	2124.3	5.6	B2/2500		
BH	(60°-80°)	939.2	2.5	B2/1000		G2/1000
BVH	(80°-90°)	101.9	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 IV Short





REPORT NUMBER: P195720

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7050-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2
2.5°	5881.2	5883.7	5876.1	5853.3	5833.1	5823.0	5805.2	5774.9	5734.4	5706.5	5683.8
5°	5825.5	5833.1	5828.0	5790.1	5754.6	5734.4	5706.5	5663.5	5610.4	5587.6	5534.5
7.5°	5782.5	5787.5	5772.3	5729.3	5661.0	5635.7	5585.1	5529.4	5481.3	5448.4	5385.2
10°	5752.1	5757.2	5744.5	5701.5	5625.6	5595.2	5534.5	5473.7	5410.5	5370.0	5299.1
12.5°	5709.1	5719.2	5719.2	5699.0	5648.3	5628.1	5567.4	5501.6	5443.4	5400.3	5311.8
15°	5701.5	5714.1	5736.9	5734.4	5719.2	5704.0	5655.9	5590.1	5539.5	5488.9	5380.1
17.5°	5764.8	5792.6	5838.1	5853.3	5843.2	5810.3	5754.6	5693.9	5638.2	5590.1	5456.0
20°	5924.2	5939.4	6007.7	6038.1	5987.4	5939.4	5866.0	5787.5	5736.9	5699.0	5526.9
22.5°	6164.6	6184.8	6240.5	6243.0	6136.8	6078.6	5984.9	5888.8	5840.7	5825.5	5623.0
25°	6549.2	6544.2	6559.4	6496.1	6303.8	6235.4	6121.6	6010.2	5977.3	6007.7	5764.8
27.5°	7009.8	6997.2	6949.1	6784.6	6493.6	6405.0	6268.3	6169.7	6169.7	6240.5	5957.1
30°	7541.2	7528.6	7371.7	7095.9	6718.8	6617.6	6473.3	6369.6	6422.7	6559.4	6217.7
32.5°	8103.0	8057.5	7837.3	7467.9	7040.2	6928.8	6789.7	6683.4	6784.6	7017.4	6592.3
35°	8631.9	8606.6	8335.9	7898.1	7455.2	7361.6	7265.4	7133.8	7295.8	7657.7	7121.2
37.5°	9178.6	9158.3	8826.8	8361.2	7961.3	7898.1	7817.1	7726.0	7986.6	8462.4	7837.3
40°	9788.4	9747.9	9330.4	8864.8	8551.0	8520.6	8477.6	8452.3	8872.4	9580.9	8743.3
42.5°	10479.3	10400.8	9861.8	9419.0	9193.7	9219.1	9196.3	9297.5	9940.3	10871.5	9821.3
45°	11268.9	11112.0	10390.7	10008.6	9904.8	10006.1	10054.2	10312.3	11203.1	12362.1	11025.9
47.5°	12007.8	11805.3	10970.2	10648.9	10707.1	10881.7	11018.3	11473.8	12587.3	13834.9	12255.8
50°	12688.5	12460.8	11590.2	11311.9	11595.3	11843.3	12126.7	12769.5	14060.1	15350.7	13384.5
52.5°	13192.1	13027.6	12210.2	12035.6	12615.1	12944.1	13397.1	14209.4	15548.1	16795.7	14391.6
55°	13581.8	13493.3	12815.1	12865.7	13769.1	14239.8	14788.9	15722.7	17122.2	18091.4	15201.4
57.5°	14032.3	13966.5	13505.9	13867.8	15201.4	15793.6	16441.4	17479.0	18620.3	19232.7	15836.6
60°	14508.0	14508.0	14275.2	15074.9	16993.1	17671.3	18316.6	19123.9	20113.4	20260.1	16094.7
62.5°	14867.4	14961.0	15044.5	16360.5	18693.7	19536.4	20245.0	21019.3	21659.6	20766.3	15487.4
65°	15388.7	15588.6	16059.3	17845.9	20799.2	21902.5	22859.1	23509.5	22912.2	20363.9	13505.9
67.5°	16284.5	16580.6	17582.8	20057.7	24023.2	25675.7	26604.4	25480.8	22666.8	17830.8	10345.2
70°	17091.8	17509.4	19222.6	22864.2	28213.9	29929.6	29502.0	25022.8	19741.4	13070.7	6364.5
72°	16555.3	17010.8	19298.5	24086.4	30453.5	31263.3	29008.5	22175.8	15254.6	7976.5	3138.0
72.5°	16203.6	16676.8	19053.0	24056.1	30514.2	31093.7	28322.7	21044.6	13847.6	6979.5	2538.2
75°	13536.3	13941.2	16383.2	21320.5	26890.4	25827.5	22102.4	13619.8	6364.5	2254.8	1305.8
77.5°	8839.5	9148.2	11296.7	14771.2	18835.4	17813.0	13452.8	6377.2	2386.4	1369.1	981.9
80°	4441.2	4661.4	6045.7	7766.5	10165.5	9353.2	6210.1	3084.8	1596.8	989.5	771.8
82.5°	3089.9	3292.3	4162.9	3965.5	4248.9	4112.3	2920.3	2573.6	1194.5	625.1	404.9
85°	2591.4	2801.4	3444.2	2826.7	2313.0	2108.0	2092.8	2431.9	789.6	308.7	341.6
87.5°	2259.8	2578.7	2841.9	2065.0	1586.7	1399.4	1541.1	2229.5	250.5	169.6	103.8
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: P195720

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-7050-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2	5757.2
2.5°	5645.8	5638.2	5600.3	5542.1	5499.0	5471.2	5418.1	5415.5	5420.6	5375.0	5392.8
5°	5486.4	5456.0	5357.3	5223.2	5114.4	5010.6	4896.8	4858.8	4825.9	4757.6	4765.2
7.5°	5319.4	5266.2	5094.1	4874.0	4663.9	4471.6	4281.8	4188.2	4117.3	4028.7	4028.7
10°	5220.7	5137.2	4874.0	4552.6	4218.5	3937.6	3654.2	3484.7	3360.7	3246.8	3239.2
12.5°	5215.6	5089.1	4722.1	4279.3	3821.2	3426.5	3039.3	2778.6	2593.9	2459.8	2447.1
15°	5256.1	5079.0	4595.6	4023.7	3446.7	2933.0	2454.7	2123.2	1887.8	1738.5	1723.4
17.5°	5291.5	5066.3	4459.0	3755.4	3082.3	2457.2	1925.8	1581.6	1358.9	1237.5	1224.8
20°	5324.4	5038.5	4284.3	3472.0	2679.9	2011.8	1505.7	1227.4	1080.6	1012.2	1004.7
22.5°	5372.5	5013.2	4102.1	3153.2	2285.2	1637.3	1242.5	1042.6	964.2	931.3	926.2
25°	5451.0	5015.7	3925.0	2826.7	1923.3	1364.0	1075.5	951.5	908.5	885.7	885.7
27.5°	5564.8	5046.1	3750.4	2495.2	1617.1	1176.7	976.8	903.4	875.6	857.9	852.8
30°	5731.9	5101.7	3565.6	2181.4	1374.1	1047.7	918.6	873.1	850.3	835.1	832.6
32.5°	5974.8	5200.4	3370.8	1895.4	1189.4	956.6	875.6	847.8	830.0	817.4	814.9
35°	6336.7	5375.0	3181.0	1652.5	1057.8	890.8	840.2	817.4	807.3	802.2	799.7
37.5°	6868.1	5655.9	3001.3	1462.7	971.8	847.8	804.7	792.1	787.0	787.0	787.0
40°	7536.2	6025.4	2839.4	1328.6	923.7	814.9	779.4	769.3	769.3	771.8	771.8
42.5°	8348.5	6488.5	2700.2	1237.5	895.8	792.1	761.7	756.7	754.1	754.1	756.7
45°	9292.4	7035.1	2614.1	1166.6	875.6	779.4	749.1	746.5	736.4	731.3	731.3
47.5°	10241.4	7619.7	2609.1	1126.1	850.3	764.2	736.4	736.4	716.2	706.0	708.6
50°	11127.1	8143.5	2664.7	1116.0	835.1	741.5	723.8	726.3	698.5	685.8	683.3
52.5°	11840.8	8543.4	2733.1	1128.7	835.1	721.2	701.0	713.6	683.3	668.1	665.6
55°	12392.4	8821.7	2758.4	1156.5	845.2	703.5	680.7	701.0	678.2	658.0	658.0
57.5°	12787.2	8910.3	2649.6	1169.1	860.4	701.0	660.5	698.5	685.8	660.5	660.5
60°	12643.0	8396.6	2244.7	1121.1	857.9	695.9	645.3	703.5	711.1	683.3	683.3
62.5°	11516.9	7025.0	1801.8	1012.2	814.9	678.2	627.6	698.5	728.8	718.7	713.6
65°	9375.9	5152.3	1396.9	883.2	741.5	640.2	589.6	652.9	688.3	698.5	701.0
67.5°	6607.4	3262.0	1085.6	751.6	650.4	584.6	546.6	577.0	589.6	594.7	604.8
70°	3613.7	1766.4	862.9	632.7	556.7	528.9	501.1	503.6	498.5	493.5	498.5
72°	1814.5	1154.0	728.8	549.1	493.5	475.8	463.1	455.5	455.5	447.9	450.5
72.5°	1561.4	1073.0	703.5	528.9	478.3	463.1	453.0	445.4	442.9	437.8	440.3
75°	1040.1	850.3	587.1	442.9	407.4	397.3	402.4	394.8	397.3	392.2	394.8
77.5°	840.2	731.3	498.5	374.5	349.2	334.0	344.2	346.7	351.8	346.7	344.2
80°	703.5	622.5	417.6	308.7	291.0	278.4	283.4	301.1	303.7	288.5	286.0
82.5°	455.5	501.1	329.0	240.4	222.7	217.6	230.3	248.0	253.1	232.8	227.8
85°	382.1	402.4	237.9	164.5	146.8	141.7	167.0	184.7	197.4	177.1	172.1
87.5°	106.3	197.4	116.4	78.4	65.8	65.8	81.0	96.2	113.9	116.4	116.4
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)