

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: P197051

Luminaire Tested: **NAV-AF-05-D-UNV-SL2-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197051
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-05-D-UNV-SL2-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 80 CRI, 3000K, 800mA 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: 19435 lumens
Efficiency: N/A
Efficacy: 92.5 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 - G3

Input Watts (W): 210
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

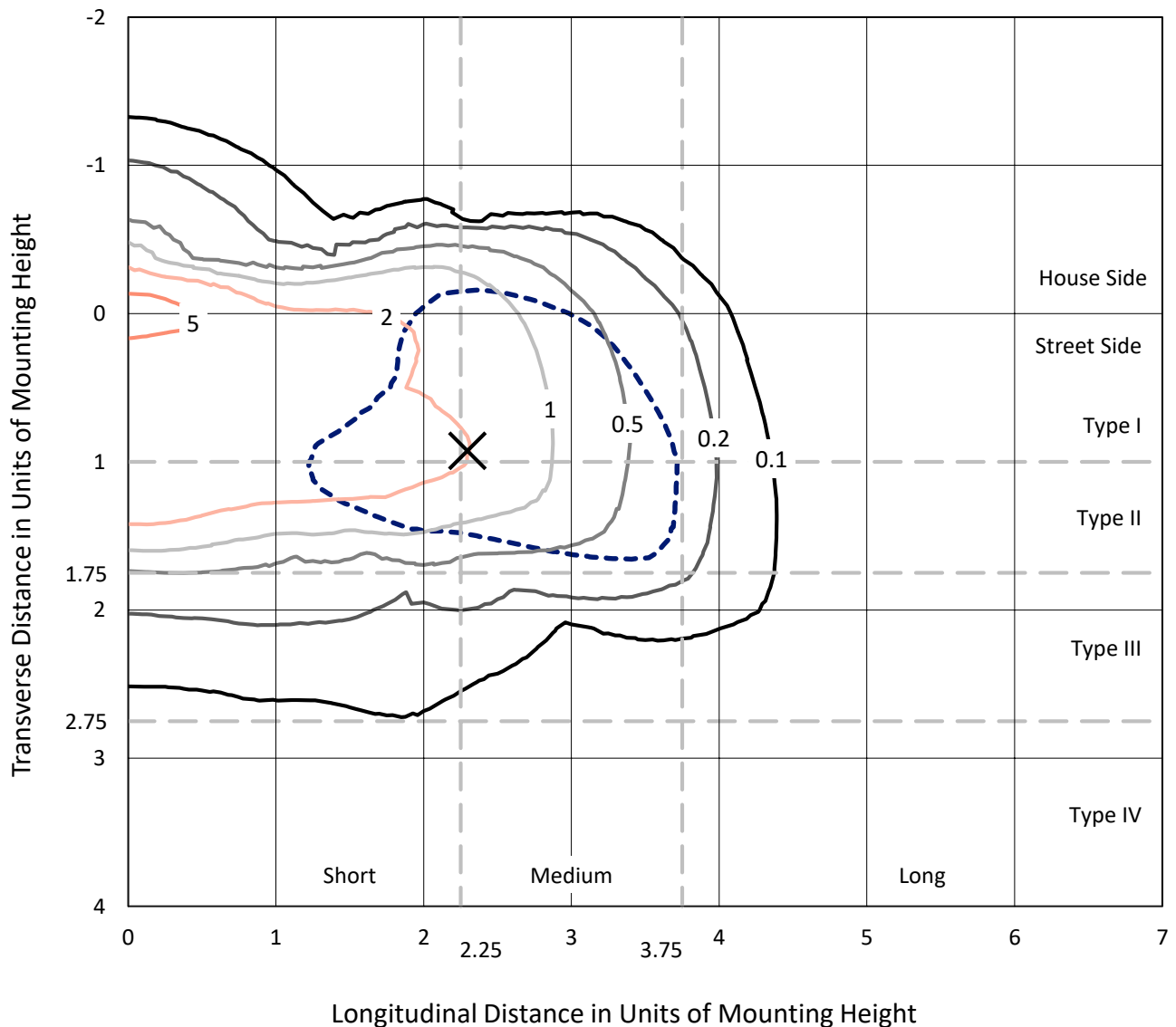


REPORT NUMBER: P197051

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-800

Iso-Footcandle Lines of Horizontal Illumination

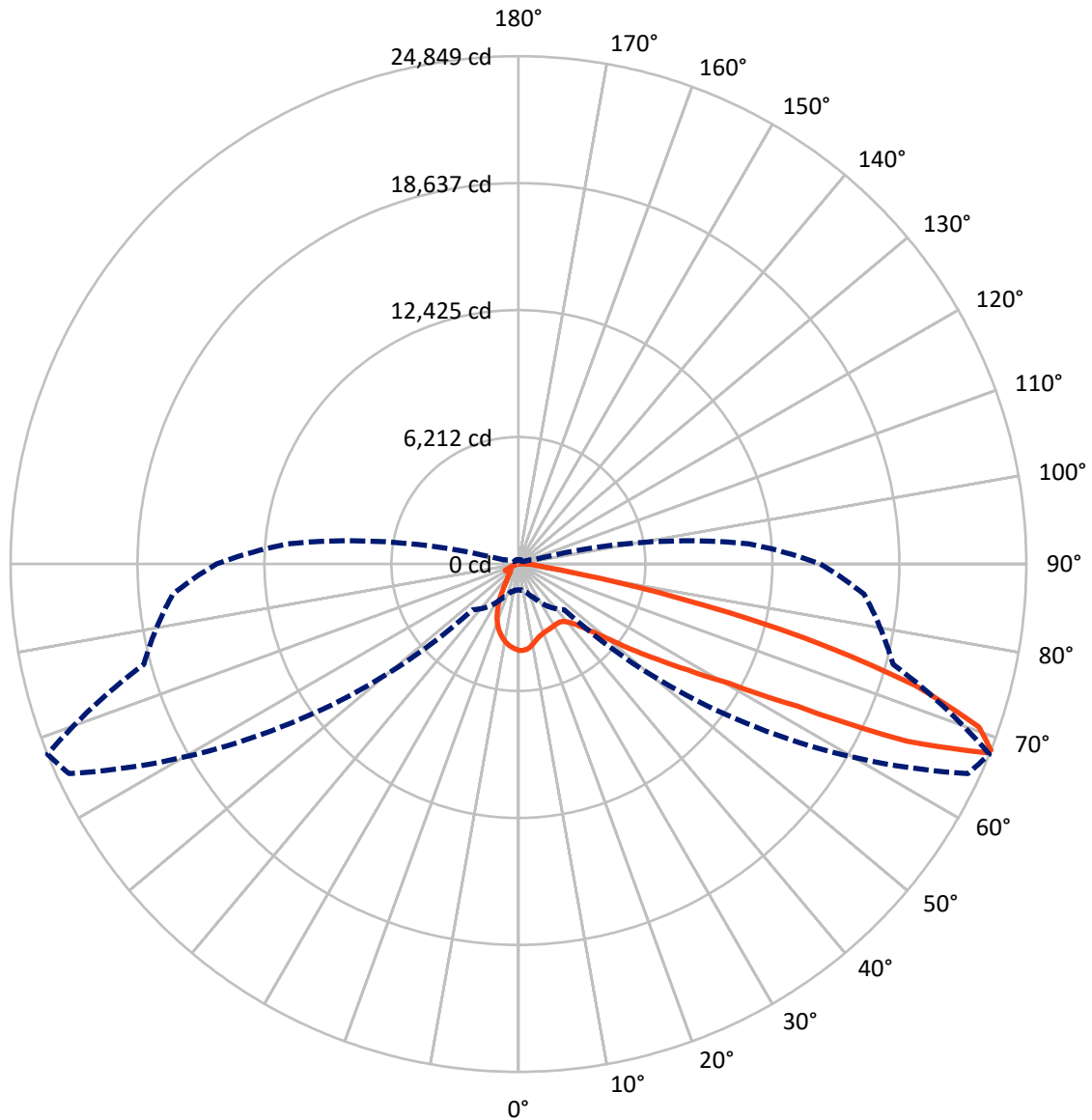
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.8 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P197051
CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-800

Luminous Intensity Polar Plot



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

REPORT NUMBER: P197051

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-800

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3179.6	0.0	3179.6
	% Fixture	16.4	0.0	16.4
Street Side	Lumens	16255.4	0.0	16255.4
	% Fixture	83.6	0.0	83.6
Total	Lumens	19435.0	0.0	19435.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	362.3	1.9
10°-20°	840.4	4.3
20°-30°	1136.6	5.8
30°-40°	1602.6	8.2
40°-50°	2635.3	13.6
50°-60°	4084.9	21.0
60°-70°	5296.3	27.3
70°-80°	3039.3	15.6
80°-90°	437.3	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°	19435.0	100.0
0°-180°	19435.0	100.0

Coefficient of Utilization



REPORT NUMBER: P197051

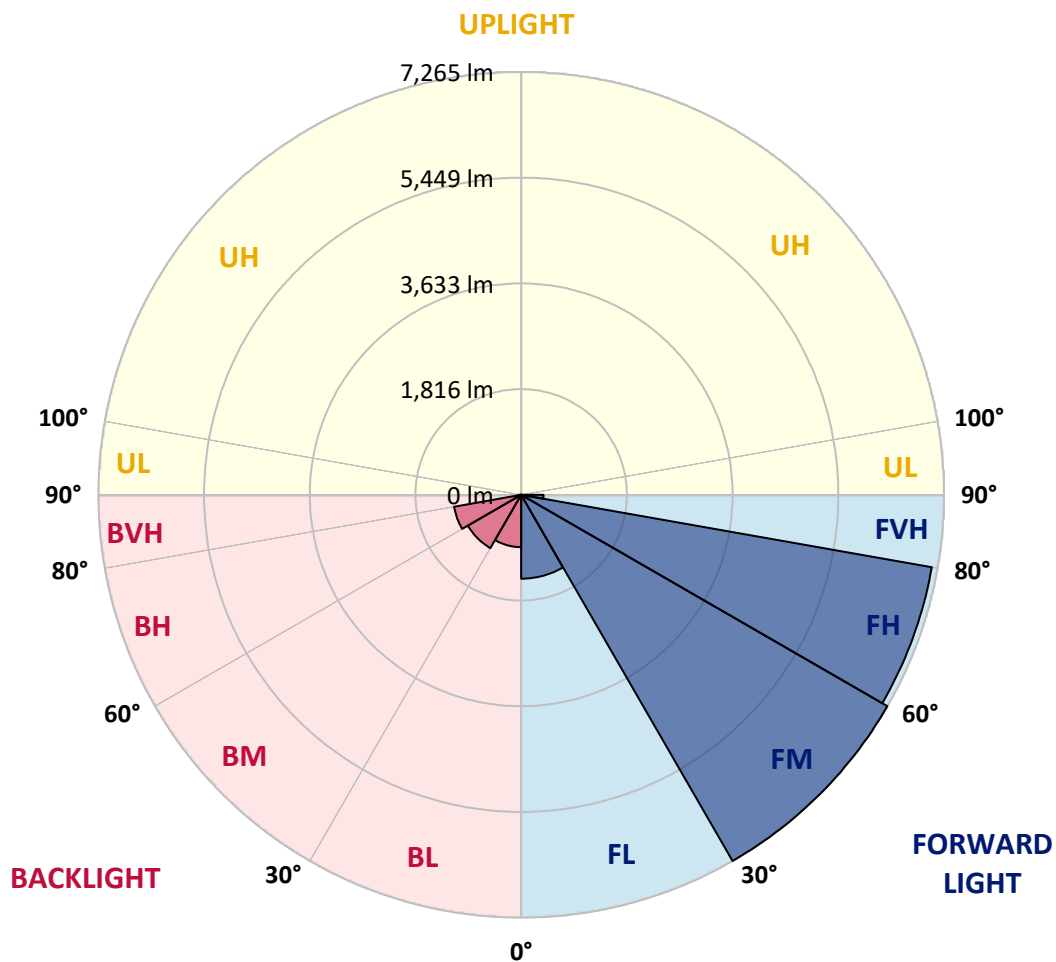
CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-800

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1440.5	7.4			
FM	(30°-60°)	7265.1	37.4			
FH	(60°-80°)	7164.6	36.9			G3/7500
FVH	(80°-90°)	385.2	2.0			G3/500
BL	(0°-30°)	898.9	4.6	B2/1000		
BM	(30°-60°)	1057.6	5.4	B2/2500		
BH	(60°-80°)	1171.0	6.0	B3/2500		G3/2500
BVH	(80°-90°)	52.1	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-G3

Type II Medium





REPORT NUMBER: P197051

CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-800

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9
2.5°	4115.9	4148.9	4148.9	4173.0	4194.6	4212.4	4227.6	4227.6	4227.6	4217.5	4208.6
5°	3683.0	3727.4	3733.8	3794.7	3874.7	3972.4	4081.6	4178.1	4197.1	4232.7	4246.7
7.5°	3382.1	3396.1	3420.2	3462.1	3543.3	3663.9	3835.3	4051.1	4103.2	4214.9	4273.3
10°	3168.8	3180.2	3200.5	3242.4	3316.1	3425.3	3594.1	3874.7	3961.0	4159.1	4274.6
12.5°	3012.7	3021.5	3040.6	3078.7	3153.6	3251.3	3424.0	3716.0	3822.6	4103.2	4292.4
15°	2890.8	2906.0	2921.2	2958.1	3034.2	3128.2	3303.4	3600.5	3716.0	4058.8	4325.4
17.5°	2842.5	2850.1	2852.7	2871.7	2940.3	3035.5	3210.7	3519.2	3638.5	4023.2	4350.8
20°	2873.0	2874.3	2848.9	2836.2	2875.5	2963.1	3133.3	3458.3	3580.1	3991.5	4360.9
22.5°	3006.3	3006.3	2940.3	2884.4	2857.8	2912.4	3081.2	3416.4	3548.4	3967.4	4360.9
25°	3260.2	3248.8	3146.0	3035.5	2917.4	2894.6	3048.2	3389.7	3524.3	3954.7	4344.4
27.5°	3594.1	3583.9	3453.2	3289.4	3076.1	2932.7	3036.8	3368.1	3500.2	3935.6	4308.9
30°	4000.4	3991.5	3842.9	3628.4	3313.5	3053.3	3063.4	3352.9	3481.1	3903.9	4249.2
32.5°	4405.4	4400.3	4282.2	4062.6	3641.1	3257.7	3133.3	3350.4	3471.0	3865.8	4176.8
35°	4812.9	4812.9	4740.5	4555.2	4081.6	3564.9	3279.3	3397.3	3490.0	3845.5	4114.6
37.5°	5414.6	5390.5	5256.0	5064.2	4636.4	3963.5	3515.4	3496.4	3563.6	3879.8	4094.3
40°	6346.5	6276.7	5940.2	5617.8	5242.0	4473.9	3860.7	3688.1	3728.7	3996.6	4142.6
42.5°	7321.5	7211.1	6765.5	6250.0	5867.9	5103.6	4313.9	3999.1	3997.8	4222.5	4296.2
45°	8158.2	8101.0	7618.6	6964.8	6582.6	5812.0	4886.5	4461.2	4415.5	4572.9	4592.0
47.5°	8644.4	8606.3	8315.6	7721.4	7430.7	6648.7	5612.7	5102.3	5016.0	5110.0	5080.8
50°	8509.8	8546.6	8462.8	8159.4	8342.2	7824.3	6538.2	5980.9	5817.1	5911.0	5839.9
52.5°	7801.4	7900.4	7975.3	8033.7	8866.6	9397.2	7701.1	7077.8	6941.9	6925.4	6856.9
55°	6525.5	6682.9	6919.1	7348.2	8725.6	10660.4	9732.4	8404.4	8206.4	8102.3	8129.0
57.5°	4440.9	4679.6	5188.7	6005.0	7993.1	11198.7	12736.2	10118.3	9783.2	9412.5	9498.8
60°	2446.4	2645.7	3251.3	4074.0	6321.1	11118.7	15398.4	12903.7	11848.7	10866.1	11043.8
62.5°	1583.1	1626.3	2077.0	2782.9	3879.8	9816.2	16877.4	17559.2	15323.5	12783.1	13033.2
65°	1272.1	1302.6	1523.5	2244.6	2702.9	6314.8	16943.5	22388.6	20914.6	15388.3	15395.9
67.5°	1242.9	1256.9	1385.1	1887.8	2535.3	3438.0	14645.6	24292.9	24634.4	18463.1	16976.5
68°	1260.7	1277.2	1406.7	1829.4	2534.0	3168.8	13536.0	24263.7	24849.0	18977.3	16976.5
70°	1112.1	1132.4	1434.6	1892.9	2426.1	2724.5	9269.0	22975.1	23917.1	20159.2	16108.1
72.5°	581.5	565.0	709.7	1494.3	2730.8	2838.7	4896.7	19194.4	20293.8	18670.1	13916.8
75°	453.2	412.6	397.4	590.3	2402.0	2944.1	2843.8	13642.6	14472.9	13458.5	9302.0
77.5°	426.6	377.1	347.9	349.1	1057.5	3063.4	2300.4	8028.7	8028.7	6420.1	2968.2
80°	342.8	297.1	278.0	317.4	510.4	2823.5	2400.7	3658.9	3120.6	1659.3	817.6
82.5°	226.0	201.9	203.1	257.7	387.2	1885.3	2780.3	1806.6	1357.2	735.1	481.2
85°	143.5	123.1	137.1	180.3	289.5	840.4	2752.4	1255.6	898.8	412.6	239.9
87.5°	72.4	55.9	68.6	93.9	176.5	241.2	2266.2	1121.0	666.5	171.4	130.8
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: P197051
 CATALOG NUMBER: NAV-AF-05-D-UNV-SL2-8030-800

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9	4228.9
2.5°	4208.6	4180.6	4166.7	4143.8	4115.9	4088.0	4068.9	4060.0	4055.0	4057.5	4056.2
5°	4239.0	4202.2	4142.6	4057.5	3969.9	3877.2	3806.1	3751.5	3717.3	3707.1	3704.6
7.5°	4261.9	4208.6	4096.8	3942.0	3792.2	3629.7	3491.3	3380.8	3305.9	3271.6	3270.4
10°	4258.1	4189.5	4013.1	3784.5	3564.9	3326.2	3109.1	2923.8	2789.2	2724.5	2721.9
12.5°	4261.9	4167.9	3910.2	3600.5	3285.6	2944.1	2621.6	2333.4	2132.8	2037.6	2033.8
15°	4277.1	4145.1	3804.9	3394.8	2959.3	2476.9	2016.1	1654.2	1471.4	1409.2	1409.2
17.5°	4275.9	4107.0	3683.0	3156.1	2572.1	1925.9	1376.2	1152.8	1135.0	1192.1	1201.0
20°	4250.5	4046.1	3525.5	2873.0	2117.6	1333.0	933.1	901.4	1043.6	1201.0	1218.8
22.5°	4211.1	3967.4	3344.0	2544.2	1588.2	868.4	719.8	768.1	961.1	1156.6	1184.5
25°	4156.5	3872.1	3135.8	2162.0	1056.3	624.6	600.5	660.2	796.0	926.8	947.1
27.5°	4076.5	3751.5	2908.5	1748.2	674.1	514.2	523.1	565.0	623.4	679.2	690.6
30°	3976.2	3610.6	2661.0	1289.9	511.6	459.6	474.8	500.2	525.6	561.1	568.8
32.5°	3874.7	3467.2	2403.3	886.1	446.9	430.4	445.6	459.6	481.2	505.3	510.4
35°	3783.3	3333.8	2137.9	618.3	419.0	411.3	419.0	427.8	449.4	473.5	476.1
37.5°	3717.3	3224.7	1861.2	488.8	402.4	394.8	398.6	402.4	427.8	463.4	467.2
40°	3708.4	3152.3	1580.6	439.3	389.8	379.6	377.1	379.6	412.6	453.2	457.0
42.5°	3794.7	3156.1	1306.4	419.0	379.6	368.2	358.0	363.1	392.3	424.0	426.6
45°	3999.1	3245.0	1069.0	410.1	370.7	361.8	346.6	349.1	363.1	379.6	382.1
47.5°	4359.6	3439.2	887.4	405.0	363.1	355.5	336.4	328.8	330.1	339.0	339.0
50°	4936.0	3764.2	777.0	399.9	356.7	342.8	321.2	306.0	302.2	307.2	308.5
52.5°	5795.5	4321.6	723.6	389.8	345.3	326.3	302.2	286.9	280.6	285.6	285.6
55°	6957.2	5211.5	698.3	375.8	331.4	306.0	284.4	271.7	266.6	270.4	270.4
57.5°	8281.3	6368.1	741.4	356.7	313.6	284.4	269.1	260.3	256.4	260.3	261.5
60°	9854.3	7881.4	1038.5	332.6	294.5	265.3	256.4	251.4	248.8	252.6	252.6
62.5°	11945.2	9894.9	1607.3	313.6	274.2	247.6	245.0	242.5	239.9	243.8	243.8
65°	14202.5	11726.9	1654.2	302.2	256.4	232.3	233.6	233.6	231.1	234.9	234.9
67.5°	14921.1	11568.2	924.2	288.2	234.9	217.1	222.2	222.2	220.9	224.7	223.4
68°	14768.7	11316.8	804.9	284.4	231.1	213.3	218.4	219.6	218.4	222.2	220.9
70°	13633.7	9935.5	529.4	262.8	214.6	200.6	208.2	209.5	208.2	213.3	212.0
72.5°	11254.6	7452.3	391.0	229.8	194.2	184.1	191.7	193.0	194.2	199.3	198.1
75°	7147.6	4115.9	308.5	195.5	173.9	165.0	172.7	176.5	179.0	186.6	182.8
77.5°	1957.7	1249.2	250.1	166.3	149.8	146.0	151.1	156.2	158.7	167.6	161.2
80°	685.6	552.3	208.2	140.9	124.4	123.1	128.2	133.3	135.8	143.5	135.8
82.5°	416.4	360.6	166.3	110.5	97.8	96.5	102.8	107.9	110.5	110.5	105.4
85°	217.1	190.4	121.9	77.4	67.3	63.5	74.9	81.3	82.5	81.3	77.4
87.5°	121.9	107.9	64.7	36.8	30.5	31.7	39.4	48.2	52.1	50.8	48.2
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)