

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: P195177

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195177
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-03-D-UNV-SL3-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 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: 14616 lumens
Efficiency: N/A
Efficacy: 117.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

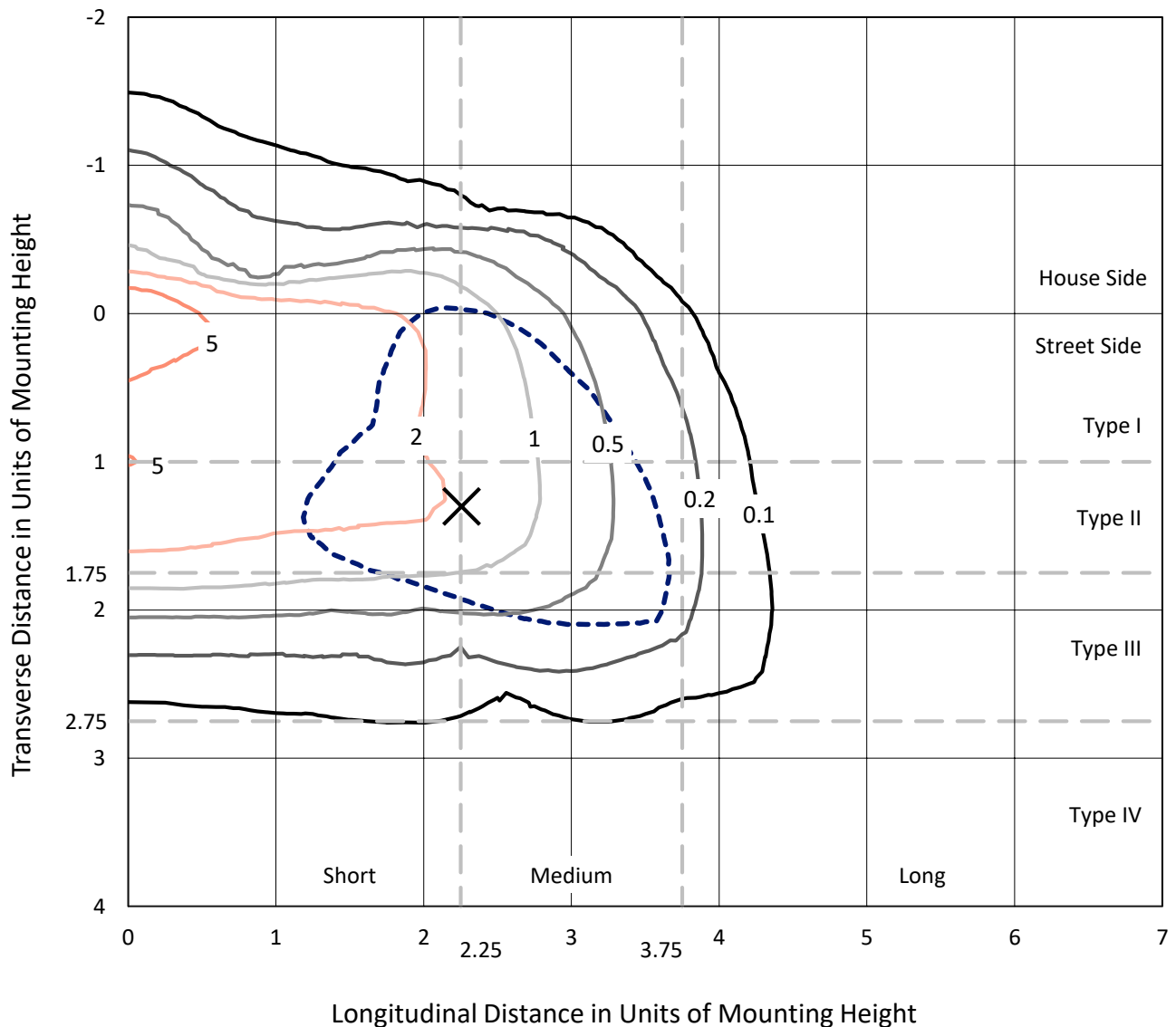
Input Watts (W): 124
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

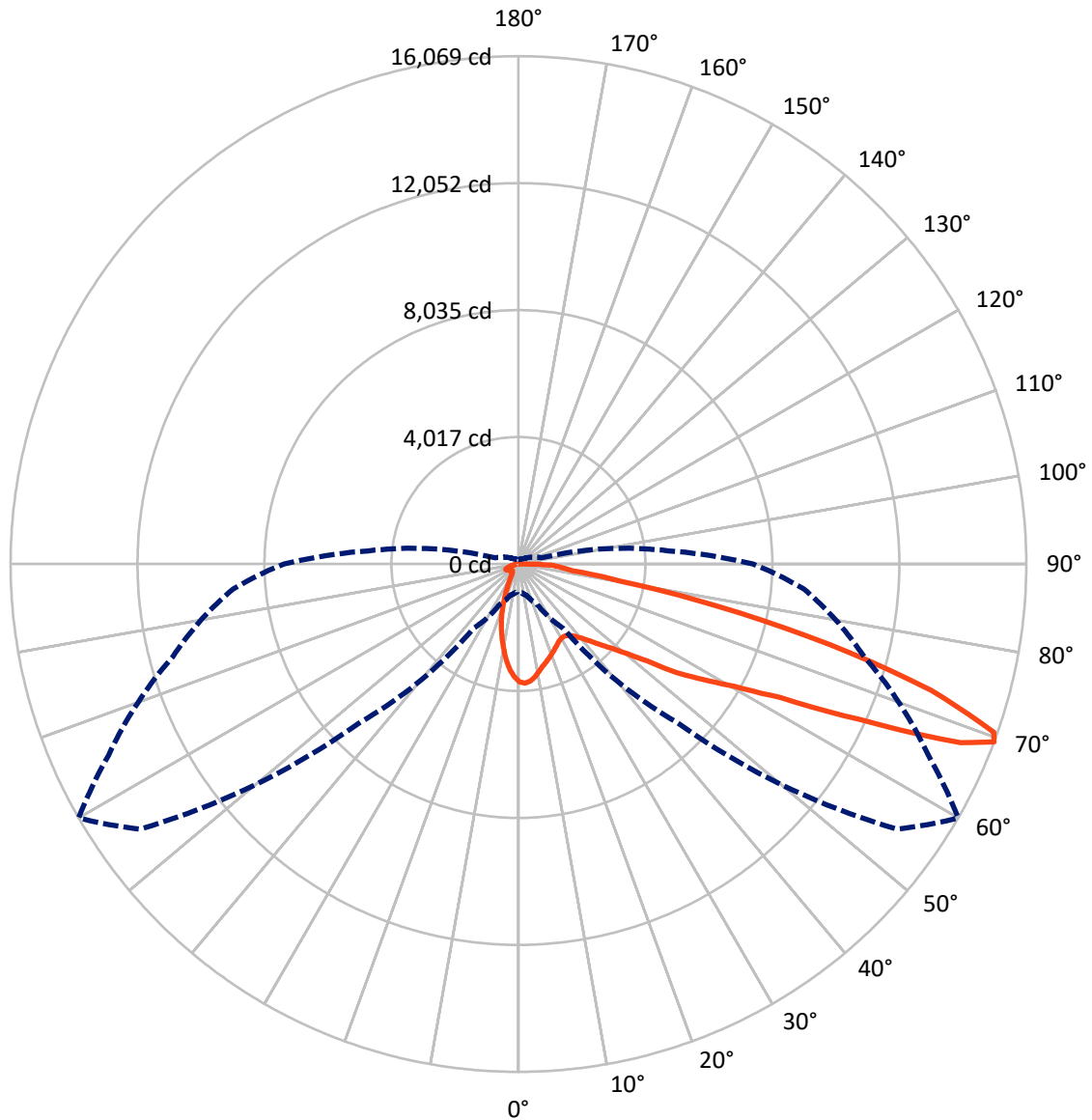
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 9.3 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	2084.7	0.0	2084.7
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	12531.3	0.0	12531.3
	% Fixture	85.7	0.0	85.7
Total	Lumens	14616.0	0.0	14616.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	316.4	2.2
10°-20°	677.4	4.6
20°-30°	864.1	5.9
30°-40°	1189.1	8.1
40°-50°	1926.2	13.2
50°-60°	3023.1	20.7
60°-70°	4030.3	27.6
70°-80°	2241.8	15.3
80°-90°	347.7	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°	14616.0	100.0
0°-180°	14616.0	100.0

Coefficient of Utilization



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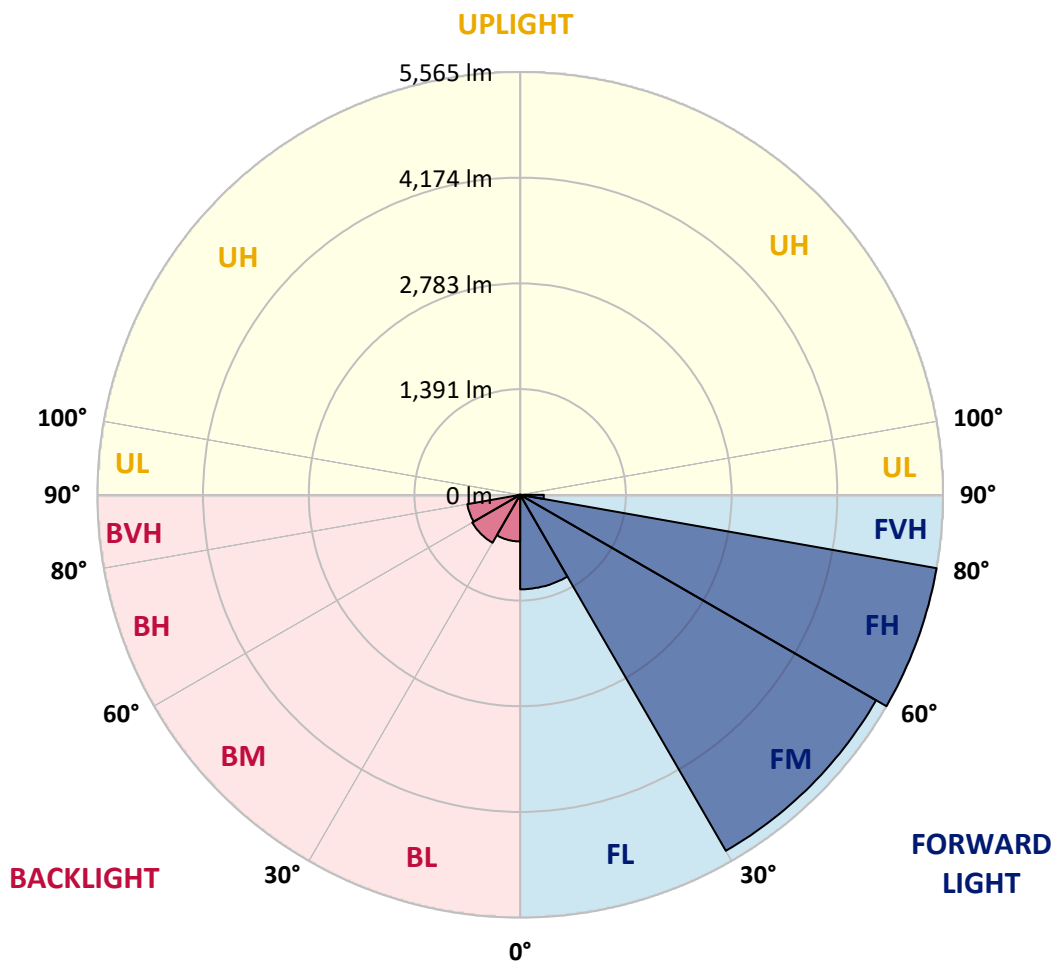
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1243.5	8.5			
FM	(30°-60°)	5410.1	37.0			
FH	(60°-80°)	5565.2	38.1			G3/7500
FVH	(80°-90°)	312.4	2.1			G3/500
BL	(0°-30°)	614.4	4.2	B2/1000		
BM	(30°-60°)	728.3	5.0	B1/1000		
BH	(60°-80°)	706.8	4.8	B2/1000		G2/1000
BVH	(80°-90°)	35.2	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3
2.5°	3828.7	3839.0	3839.0	3830.5	3825.9	3798.7	3782.7	3771.5	3751.8	3715.3	3682.5
5°	3691.8	3711.5	3719.9	3723.7	3748.1	3739.6	3740.6	3733.1	3716.2	3676.8	3623.4
7.5°	3440.6	3444.4	3459.4	3484.7	3543.7	3585.0	3618.7	3625.3	3621.5	3592.5	3517.5
10°	3193.2	3199.8	3217.6	3260.7	3316.9	3376.0	3449.1	3479.1	3501.6	3492.2	3397.5
12.5°	2988.0	2988.9	3008.6	3058.2	3121.0	3195.1	3294.4	3341.3	3394.7	3416.3	3310.4
15°	2790.2	2803.3	2822.1	2882.0	2959.8	3053.6	3167.9	3232.6	3302.9	3364.7	3242.9
17.5°	2640.2	2650.5	2661.8	2711.5	2801.4	2918.6	3060.1	3129.5	3222.3	3316.9	3173.5
20°	2557.8	2561.5	2553.1	2577.4	2653.4	2779.9	2943.9	3027.3	3137.9	3271.0	3102.3
22.5°	2540.9	2540.9	2510.0	2505.3	2539.0	2645.9	2823.9	2926.1	3061.1	3239.1	3038.6
25°	2619.6	2614.0	2555.9	2502.5	2490.3	2544.6	2709.6	2835.2	2995.5	3238.2	2990.8
27.5°	2768.6	2761.1	2689.0	2599.0	2521.2	2497.8	2621.5	2749.9	2943.9	3270.1	2966.4
30°	2954.2	2951.4	2878.3	2765.8	2637.4	2516.5	2586.8	2705.8	2909.2	3329.1	2965.5
32.5°	3157.6	3144.5	3099.5	2987.0	2820.2	2620.6	2607.4	2707.7	2899.9	3415.3	2987.0
35°	3374.1	3364.7	3353.5	3240.1	3052.6	2804.3	2698.3	2772.4	2945.8	3535.3	3047.9
37.5°	3649.7	3639.3	3658.1	3534.4	3329.1	3045.1	2852.1	2901.7	3039.5	3709.6	3161.3
40°	4139.8	4109.8	4057.4	3867.1	3651.5	3340.4	3074.2	3081.7	3199.8	3943.0	3343.2
42.5°	4944.9	4848.4	4588.8	4239.2	3991.7	3683.4	3363.8	3328.2	3421.0	4251.4	3607.5
45°	5751.9	5643.2	5204.6	4645.0	4344.2	4051.7	3721.8	3636.5	3696.5	4610.3	3947.7
47.5°	6273.0	6219.6	5724.7	5050.8	4713.4	4452.9	4131.4	3990.8	4033.9	5017.1	4367.6
50°	6425.8	6379.9	5990.9	5368.6	5062.1	4937.4	4638.5	4451.9	4459.4	5492.3	4870.9
52.5°	6311.4	6292.7	6035.0	5565.4	5382.6	5448.2	5340.5	5080.8	5019.0	6013.4	5416.4
55°	6158.7	6165.2	6065.9	5763.2	5708.8	5924.4	6259.0	6050.0	5787.5	6556.1	5984.3
57.5°	5677.9	5682.5	5943.1	6139.9	6331.1	6591.7	6974.1	6886.0	6580.4	7141.8	6620.7
60°	4571.9	4608.5	5188.6	6062.1	7042.5	7906.6	8000.4	7848.5	7424.0	7816.7	7448.3
62.5°	3266.3	3299.1	3971.1	5262.7	6959.1	9395.0	9895.5	9291.9	8568.3	8826.1	8612.4
65°	1716.1	1710.5	2230.7	3636.5	5861.6	9739.9	12881.6	11854.3	10496.3	10214.2	9737.1
67.5°	958.8	989.7	1191.2	1834.2	3820.2	8572.1	14788.9	15091.6	13176.8	11315.4	9688.4
69°	886.6	896.9	1031.9	1418.1	2490.3	7072.5	14624.9	16069.2	14307.1	11320.1	9064.1
70°	861.3	872.6	995.4	1306.5	2091.9	5795.0	14027.8	15954.8	14581.7	11068.9	8496.2
72.5°	772.3	787.3	906.3	1174.4	1763.0	2987.0	11299.5	13655.7	13208.7	9674.3	6587.9
75°	658.9	684.2	864.1	1165.9	1670.2	1898.9	7535.5	10173.9	9830.8	6918.8	3737.8
77.5°	272.7	275.6	377.7	853.8	1752.7	1817.3	4049.9	6444.5	5705.0	3033.9	1125.6
80°	190.3	186.5	188.4	249.3	1414.3	1829.5	2077.9	3277.6	2547.4	800.4	526.7
82.5°	160.3	158.4	165.9	156.5	478.9	2076.0	1737.7	1708.6	1199.7	431.1	251.2
85°	105.9	103.1	135.9	142.5	227.8	1648.6	1868.9	1343.1	894.1	230.6	106.8
87.5°	51.5	52.5	77.8	96.5	120.9	522.0	1790.1	1061.9	690.8	100.3	43.1
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°	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3	3729.3
2.5°	3669.3	3641.2	3615.9	3584.0	3559.7	3539.1	3510.9	3510.0	3505.3	3511.9	3513.8
5°	3587.8	3540.9	3469.7	3390.0	3333.8	3259.8	3187.6	3163.2	3136.0	3133.2	3141.7
7.5°	3465.0	3391.9	3270.1	3148.2	3026.4	2901.7	2783.6	2723.6	2665.5	2647.7	2656.2
10°	3328.2	3235.4	3048.9	2850.2	2678.7	2493.1	2313.1	2196.9	2091.0	2046.0	2057.3
12.5°	3221.3	3103.2	2840.8	2583.1	2326.3	2060.1	1823.0	1593.3	1419.9	1342.1	1346.8
15°	3129.5	2978.6	2645.9	2302.8	1981.3	1616.8	1287.8	1021.6	869.8	813.5	811.7
17.5°	3030.1	2847.4	2442.5	2042.3	1625.2	1174.4	862.3	704.8	644.8	626.1	626.1
20°	2924.2	2712.4	2229.7	1758.3	1250.3	820.1	648.6	587.7	565.2	559.5	558.6
22.5°	2825.8	2580.2	2016.0	1455.5	904.4	622.3	552.0	528.6	524.9	529.5	529.5
25°	2748.0	2464.0	1799.5	1136.9	657.9	521.1	491.1	488.3	502.4	519.2	522.0
27.5°	2689.9	2360.0	1585.8	830.4	517.4	453.6	443.3	455.5	488.3	522.0	528.6
30°	2649.6	2271.0	1330.0	597.0	431.1	397.4	402.1	423.6	473.3	524.9	538.9
32.5°	2631.8	2198.8	1072.2	458.3	368.3	349.6	361.8	389.9	441.4	493.0	509.9
35°	2648.7	2146.3	834.2	380.5	322.4	308.4	322.4	351.5	385.2	410.5	420.8
37.5°	2709.6	2127.6	628.0	337.4	292.4	278.4	289.6	309.3	324.3	333.7	338.3
40°	2838.0	2147.2	492.1	314.9	275.6	259.6	262.4	271.8	282.1	289.6	290.5
42.5°	3042.3	2211.9	437.7	306.5	265.2	244.6	239.9	246.5	257.7	268.1	269.9
45°	3314.1	2319.7	432.1	309.3	260.6	232.4	223.1	229.6	244.6	261.5	264.3
47.5°	3665.6	2490.3	458.3	324.3	263.4	225.9	211.8	218.4	238.1	260.6	264.3
50°	4081.7	2726.5	507.1	346.8	276.5	225.9	207.1	212.8	233.4	258.7	262.4
52.5°	4571.9	3055.4	557.7	369.3	295.2	234.3	209.0	208.1	226.8	250.2	254.9
55°	5112.7	3464.1	606.4	389.0	305.5	245.6	213.7	202.4	217.4	236.2	239.9
57.5°	5749.1	4023.6	691.7	407.7	311.2	254.0	219.3	196.8	205.3	218.4	221.2
60°	6612.3	4845.6	857.6	439.6	321.5	257.7	220.3	191.2	190.3	199.6	200.6
62.5°	7737.9	5808.1	1016.0	477.1	342.1	258.7	216.5	187.5	178.1	180.9	180.9
65°	8538.3	6162.4	970.1	508.9	360.8	257.7	212.8	184.6	168.7	164.0	164.0
67.5°	8082.8	5443.5	823.8	517.4	362.7	247.4	204.3	178.1	160.3	149.0	149.0
69°	7413.6	4771.5	756.4	502.4	347.7	235.2	194.9	171.5	154.6	141.5	141.5
70°	6868.2	4262.6	715.1	484.6	329.9	224.9	186.5	165.0	149.0	137.8	136.8
72.5°	5127.7	2844.6	611.1	418.0	270.9	190.3	163.1	147.1	134.0	126.5	126.5
75°	2705.8	1425.6	500.5	341.2	209.0	151.8	134.0	123.7	116.2	115.3	114.3
77.5°	886.6	644.8	359.9	256.8	153.7	118.1	106.8	100.3	99.3	103.1	103.1
80°	478.9	385.2	231.5	173.4	106.8	88.1	82.5	81.5	84.4	90.0	90.0
82.5°	232.4	190.3	137.8	106.8	73.1	64.7	64.7	65.6	69.4	75.9	75.9
85°	100.3	90.0	79.7	60.0	45.0	40.3	45.9	50.6	53.4	58.1	60.0
87.5°	47.8	42.2	36.6	23.4	19.7	20.6	24.4	30.0	35.6	39.4	40.3
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)