

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: P270416

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-7027-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P270416  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24160)  
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-AFL-7027-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 70 CRI, 2700K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 13028.2 lumens  
Efficiency: N/A  
Efficacy: 105.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type II - Short - Full Cutoff  
BUG Rating: B2 - U0 - G2

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

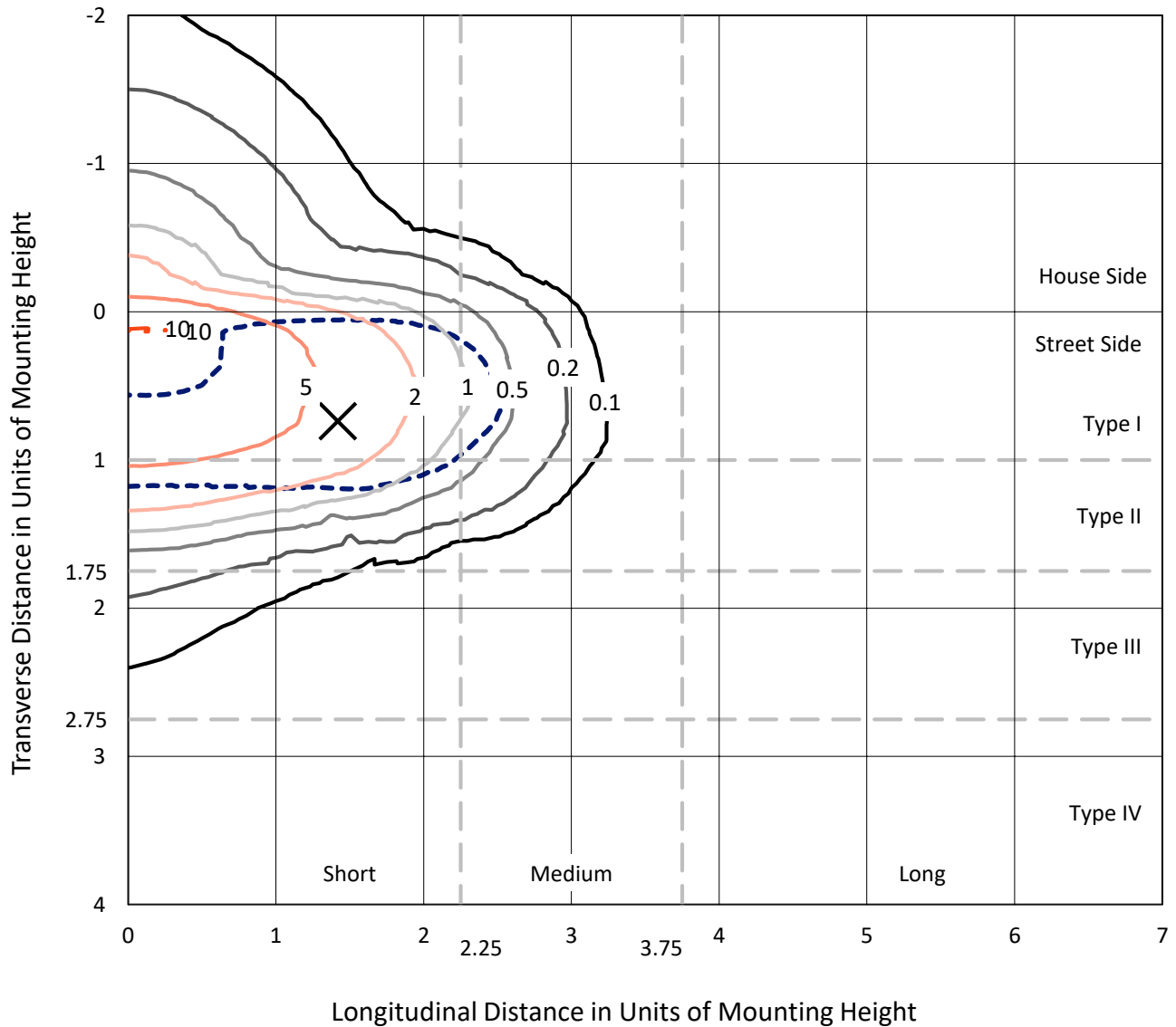


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### Iso-Footcandle Lines of Horizontal Illumination

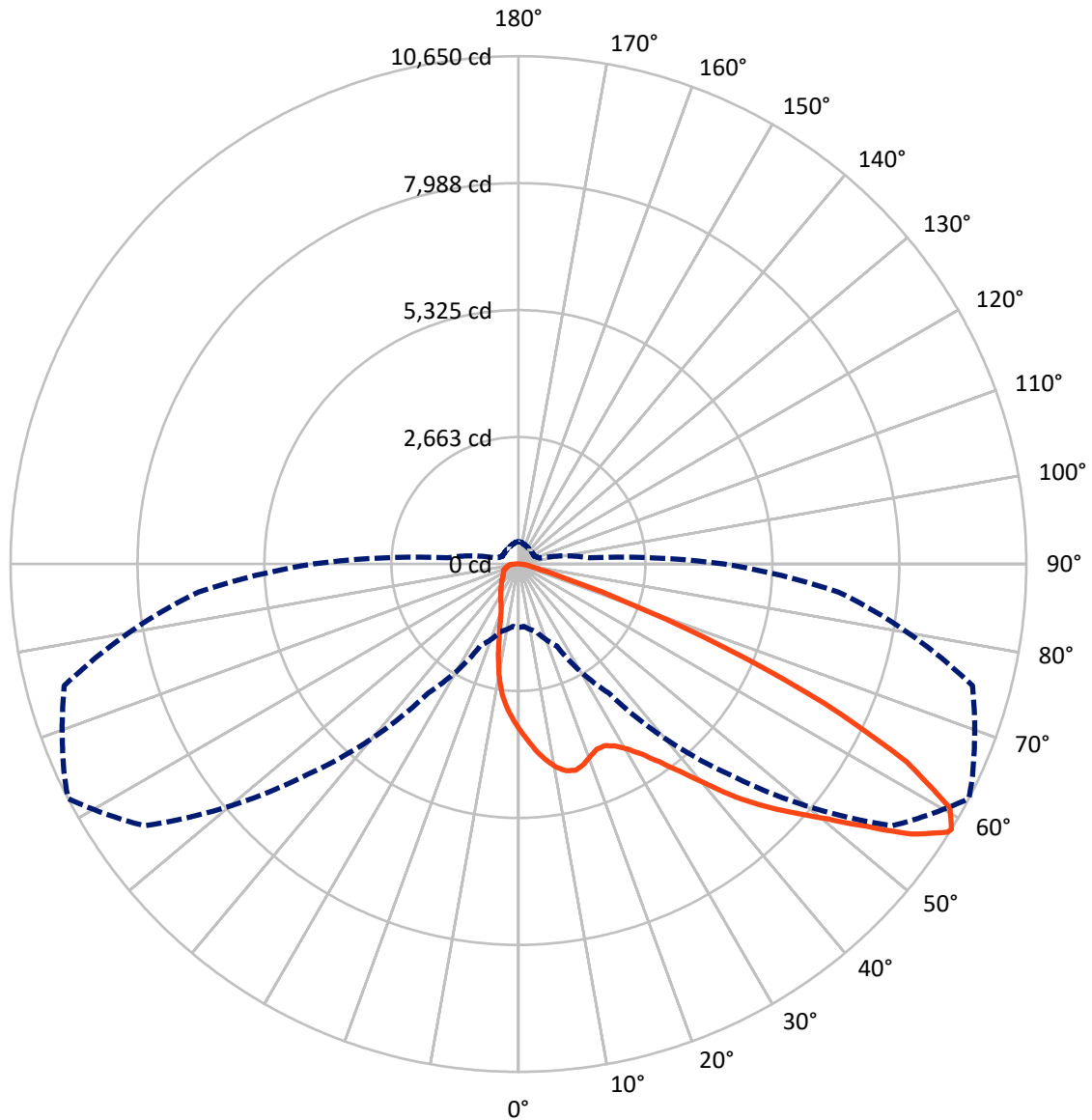
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 10.2 fc  
 Type II - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 62.5-Deg Lateral    - - - Horizontal Cone Through 58-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2000.3	0.0	2000.3
	% Fixture	15.4	0.0	15.4
<b>Street Side</b>	Lumens	11027.9	0.0	11027.9
	% Fixture	84.6	0.0	84.6
<b>Total</b>	Lumens	13028.2	0.0	13028.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	310.9	2.4
10°-20°	784.7	6.0
20°-30°	1271.7	9.8
30°-40°	2030.3	15.6
40°-50°	2953.1	22.7
50°-60°	3090.2	23.7
60°-70°	1883.9	14.5
70°-80°	526.8	4.0
80°-90°	176.6	1.4
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°	13028.2	100.0
0°-180°	13028.2	100.0

**Coefficient of Utilization**



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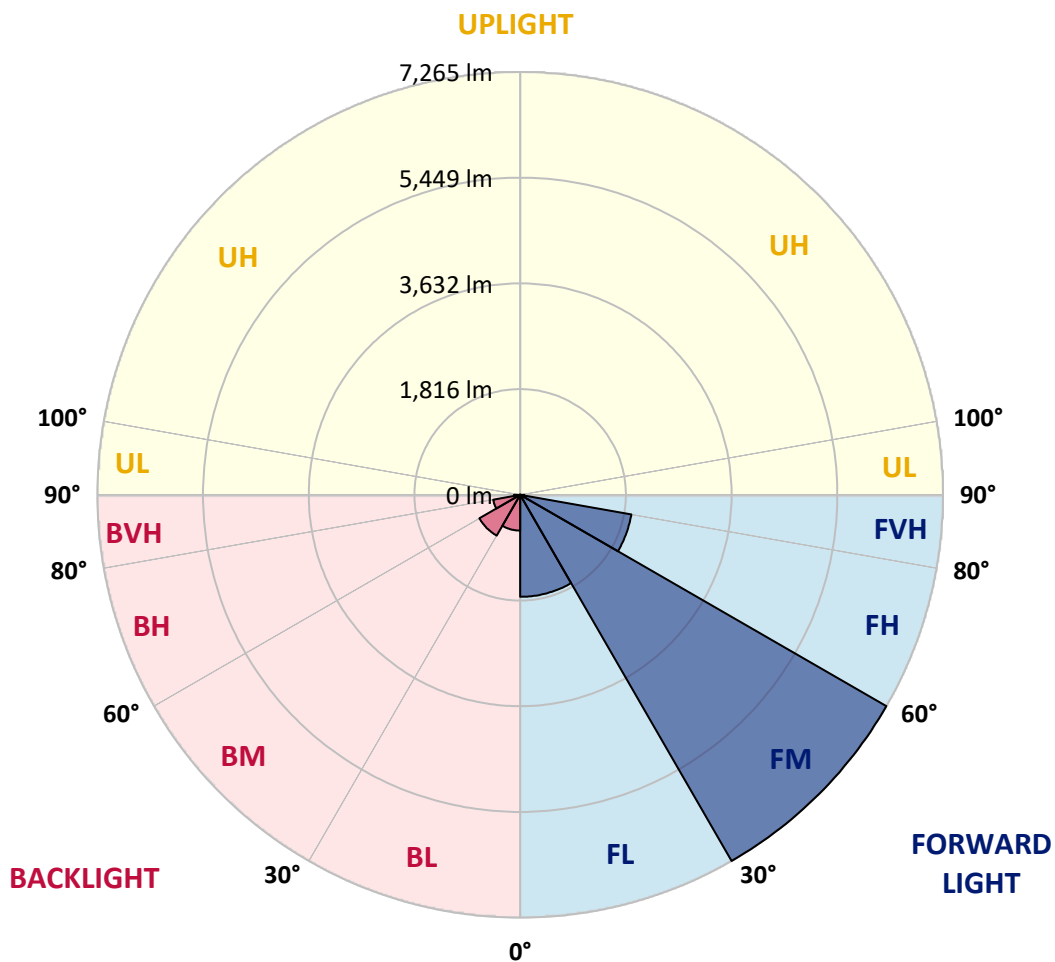
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1752.3	13.5			
FM	(30°-60°)	7264.7	55.8			
FH	(60°-80°)	1939.8	14.9			G2/5000
FVH	(80°-90°)	71.0	0.5			G1/100
BL	(0°-30°)	614.9	4.7	B2/1000		
BM	(30°-60°)	808.9	6.2	B1/1000		
BH	(60°-80°)	470.9	3.6	B1/500		G1/500
BVH	(80°-90°)	105.6	0.8			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	62.5°	65°	75°	85°
0°	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4
2.5°	3948.3	3945.9	3912.5	3890.5	3864.4	3804.1	3743.9	3699.1	3676.4	3589.2	3504.5
5°	4274.8	4265.1	4246.3	4222.7	4188.4	4112.7	4017.5	3935.3	3902.6	3748.0	3592.4
7.5°	4102.1	4117.7	4175.4	4240.5	4309.0	4313.8	4246.3	4148.6	4112.7	3905.9	3677.9
10°	3624.2	3617.7	3690.1	3817.2	4042.7	4265.8	4377.4	4329.3	4291.8	4055.8	3763.4
12.5°	3479.2	3477.6	3489.8	3522.4	3664.0	3970.2	4343.9	4448.1	4435.2	4214.5	3854.5
15°	3523.2	3524.9	3524.1	3528.2	3567.2	3713.0	4157.5	4488.1	4528.9	4371.6	3947.4
17.5°	3664.0	3658.3	3640.6	3621.0	3626.6	3678.7	3956.3	4419.8	4541.8	4511.6	4025.7
20°	3881.4	3881.4	3833.4	3778.9	3743.1	3754.5	3872.6	4302.4	4481.6	4630.7	4084.2
22.5°	4154.2	4158.3	4087.5	3988.1	3906.6	3875.7	3920.6	4215.3	4408.3	4740.5	4136.3
25°	4493.1	4492.2	4388.8	4246.3	4117.7	4043.5	4042.7	4219.3	4385.5	4869.2	4191.0
27.5°	4912.3	4874.1	4753.6	4550.9	4369.3	4256.0	4204.7	4321.9	4433.6	5027.2	4264.2
30°	5385.3	5346.4	5188.3	4927.8	4681.8	4516.6	4431.9	4499.5	4580.1	5228.2	4374.9
32.5°	5853.5	5862.6	5676.8	5383.0	5067.0	4834.1	4708.7	4750.2	4806.6	5474.1	4524.8
35°	6539.2	6538.4	6295.7	5928.5	5553.1	5230.7	5071.9	5093.8	5145.2	5820.9	4734.8
37.5°	7050.4	7042.4	6886.0	6561.2	6138.6	5751.8	5522.2	5525.5	5569.4	6256.6	5011.6
40°	7102.5	7101.0	7100.3	7053.9	6764.7	6400.0	6112.4	6053.0	6070.9	6719.1	5305.6
42.5°	6704.5	6763.9	6934.8	7197.1	7277.7	7086.3	6814.5	6681.7	6642.5	7250.0	5616.7
45°	6137.0	6167.0	6466.7	7056.2	7535.8	7731.3	7526.9	7246.7	7180.1	7766.2	5869.9
47.5°	5873.1	5860.2	6033.6	6675.9	7510.5	8244.1	8258.8	7799.7	7686.4	8211.6	6085.7
50°	5307.2	5290.1	5509.1	6116.6	7235.4	8499.0	9010.4	8402.1	8192.9	8635.0	6281.0
52.5°	4179.5	4163.3	4457.2	5239.6	6619.8	8403.7	9643.8	9141.5	8784.9	9043.0	6463.5
55°	2719.6	2721.1	3001.2	3808.3	5357.0	7848.5	9941.1	9995.6	9595.9	9450.9	6610.8
57.5°	1497.4	1483.6	1683.1	2178.8	3685.2	6587.2	9693.5	10611.1	10402.7	9801.0	6717.4
58°	1331.3	1314.9	1468.9	1896.3	3304.1	6231.5	9568.9	10650.2	10506.1	9858.9	6732.9
60°	948.6	920.9	897.2	1069.2	1903.7	4493.1	8738.4	10397.1	10536.3	9974.5	6718.3
62.5°	799.6	767.8	683.2	676.7	896.5	2197.7	6910.5	9130.9	9521.0	9708.3	6482.2
65°	742.5	710.7	599.3	559.4	608.2	948.6	4273.1	7050.4	7571.6	8782.4	5887.9
67.5°	701.8	664.4	544.7	492.6	502.4	567.5	1813.3	4611.1	5215.2	6848.6	4723.4
70°	665.3	623.8	501.6	441.2	433.2	431.5	708.5	2407.6	2989.9	4481.6	3164.1
72.5°	623.8	583.0	463.3	398.9	381.2	350.1	425.8	995.1	1363.8	2196.8	1450.1
75°	563.4	530.1	420.9	364.0	333.0	284.1	314.2	477.1	587.9	841.2	673.4
77.5°	495.9	469.0	377.7	334.7	293.1	232.0	240.1	323.3	363.2	473.9	390.0
80°	351.0	360.7	329.8	294.7	258.2	187.2	184.8	237.0	260.6	318.4	262.1
82.5°	241.9	249.2	268.8	232.9	208.4	145.7	136.0	164.5	176.6	192.1	127.0
85°	172.7	167.8	186.5	166.9	153.2	92.9	87.1	104.3	111.6	117.3	61.1
87.5°	105.0	104.3	107.4	86.2	79.8	47.3	43.2	49.6	52.9	51.4	29.4
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°	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4	3478.4
2.5°	3472.8	3432.9	3345.6	3275.7	3199.9	3142.1	3084.3	3051.8	3016.0	2995.6	2993.2
5°	3511.0	3429.5	3243.9	3071.3	2893.8	2734.3	2577.9	2462.3	2367.8	2314.0	2310.8
7.5°	3553.3	3425.4	3138.9	2840.1	2524.1	2209.8	1932.3	1736.0	1609.8	1551.2	1547.1
10°	3585.9	3408.3	3011.1	2546.2	2045.4	1630.2	1377.7	1262.1	1223.9	1214.0	1212.4
12.5°	3625.0	3396.2	2849.9	2169.1	1563.3	1240.9	1164.4	1157.0	1165.2	1170.0	1170.9
15°	3661.6	3372.5	2632.5	1751.4	1223.9	1109.0	1110.7	1126.0	1142.4	1149.7	1150.5
17.5°	3678.7	3314.7	2346.6	1380.2	1070.7	1049.6	1068.3	1088.7	1103.3	1109.0	1109.0
20°	3678.7	3222.0	2015.3	1117.9	990.9	995.1	1017.8	1033.3	1036.6	1031.7	1029.2
22.5°	3663.3	3107.1	1692.8	975.5	925.9	941.2	959.2	948.6	910.3	881.0	875.3
25°	3649.5	2971.1	1382.6	888.3	868.8	889.1	881.9	809.4	750.8	720.6	715.7
27.5°	3626.6	2806.7	1123.7	816.6	813.4	829.8	757.2	687.3	657.9	641.6	638.3
30°	3621.0	2628.4	940.4	753.1	758.9	736.2	653.0	630.3	623.8	614.8	610.7
32.5°	3639.7	2450.0	825.6	701.0	706.7	631.9	600.1	603.3	602.6	591.2	587.0
35°	3691.0	2276.7	752.4	653.8	637.5	565.9	570.0	579.8	579.8	565.9	561.0
37.5°	3780.5	2115.4	706.0	613.9	557.8	531.6	542.2	555.3	555.3	545.5	541.5
40°	3875.7	1958.2	670.9	582.2	507.3	508.1	518.7	528.5	532.5	534.1	530.9
42.5°	3962.2	1795.4	633.5	548.0	484.5	490.1	495.1	502.4	519.5	530.9	529.2
45°	4012.5	1631.7	592.8	505.7	469.0	471.4	469.9	482.8	503.2	520.3	520.3
47.5°	4059.0	1497.4	559.4	463.3	453.6	453.6	448.7	461.6	480.5	500.7	502.4
50°	4103.0	1410.2	535.7	430.7	434.1	431.5	429.8	442.1	467.4	491.8	495.9
52.5°	4147.7	1381.0	514.5	407.1	413.6	410.3	412.1	429.1	457.5	482.8	486.9
55°	4210.4	1399.6	492.6	390.9	394.0	393.3	399.7	419.2	444.7	469.9	471.4
57.5°	4287.8	1468.1	473.9	378.6	375.3	380.3	390.9	409.5	434.1	464.2	466.6
58°	4303.3	1484.4	470.6	375.3	371.3	378.6	389.2	407.1	432.4	464.2	466.6
60°	4326.9	1542.2	462.4	368.8	357.4	370.6	383.4	401.5	429.1	468.1	473.0
62.5°	4213.0	1553.6	460.0	361.5	342.9	359.1	374.6	395.0	425.8	482.0	492.6
65°	3817.9	1436.3	443.0	349.4	330.5	350.1	366.4	390.0	435.6	523.5	528.5
67.5°	3064.7	1192.9	401.5	330.5	316.7	339.5	360.0	390.0	439.7	530.1	533.4
70°	2107.2	896.5	349.4	310.3	300.5	326.5	357.4	398.9	425.8	501.6	491.8
72.5°	1100.9	623.8	306.1	286.6	280.9	315.1	381.2	390.0	409.5	468.1	458.5
75°	554.6	424.2	269.5	259.7	258.9	311.1	426.6	375.3	392.5	440.4	461.6
77.5°	327.3	332.3	240.1	234.5	238.6	303.6	427.5	360.7	372.9	405.5	428.3
80°	223.9	274.4	217.4	215.8	219.0	279.4	394.0	342.9	350.1	383.4	407.9
82.5°	126.2	151.5	190.5	201.1	199.6	228.8	340.4	311.8	320.9	453.6	479.5
85°	61.1	91.2	159.5	188.0	170.1	152.3	276.9	276.9	279.4	324.8	329.0
87.5°	22.7	40.8	107.4	148.9	118.8	91.2	188.0	196.2	218.2	224.8	229.5
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)