

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: P197034

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-8030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197034
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
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-SL2-8030-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 23977 lumens
Efficiency: N/A
Efficacy: 72.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G4

Input Watts (W): 333
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

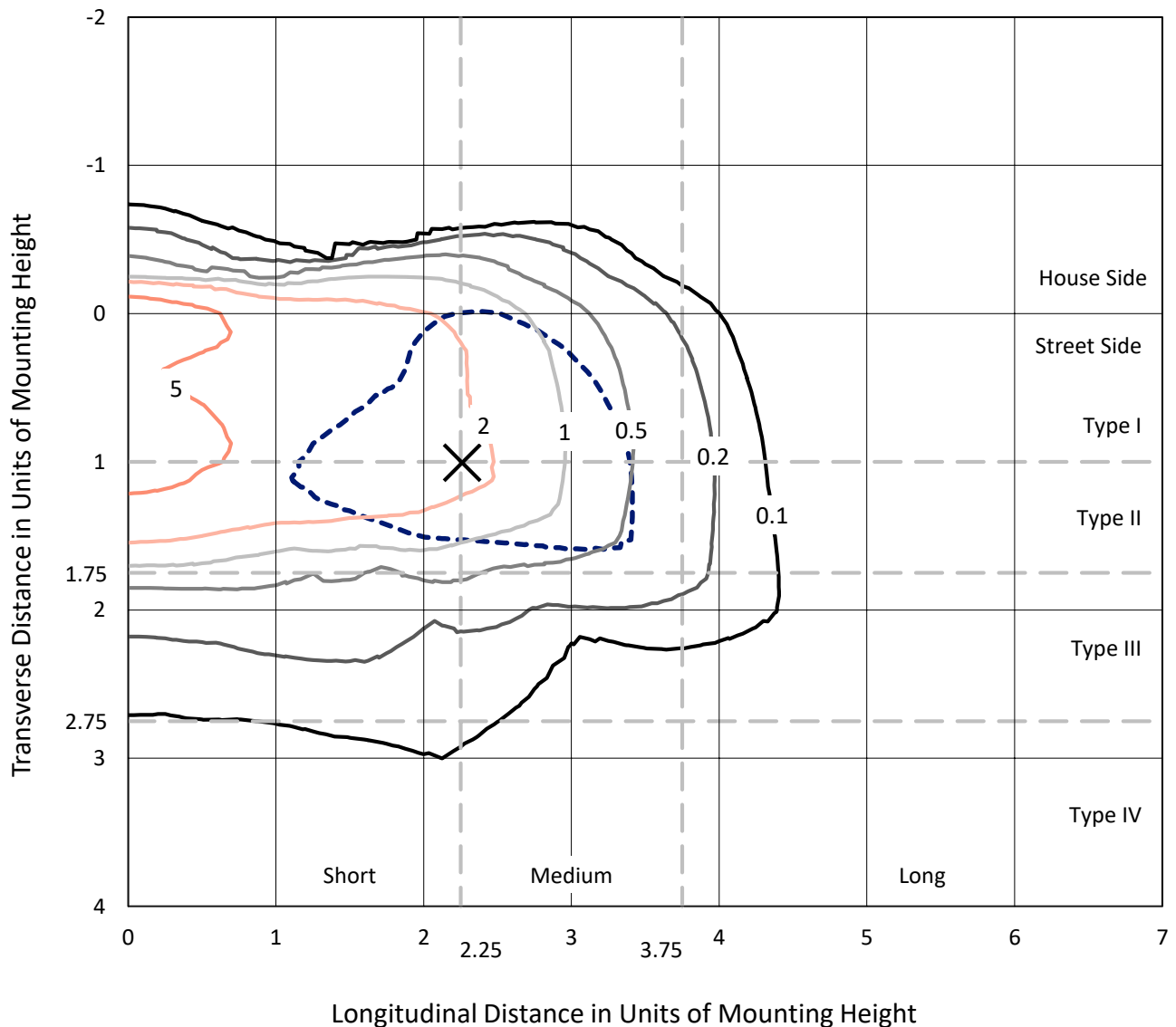


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

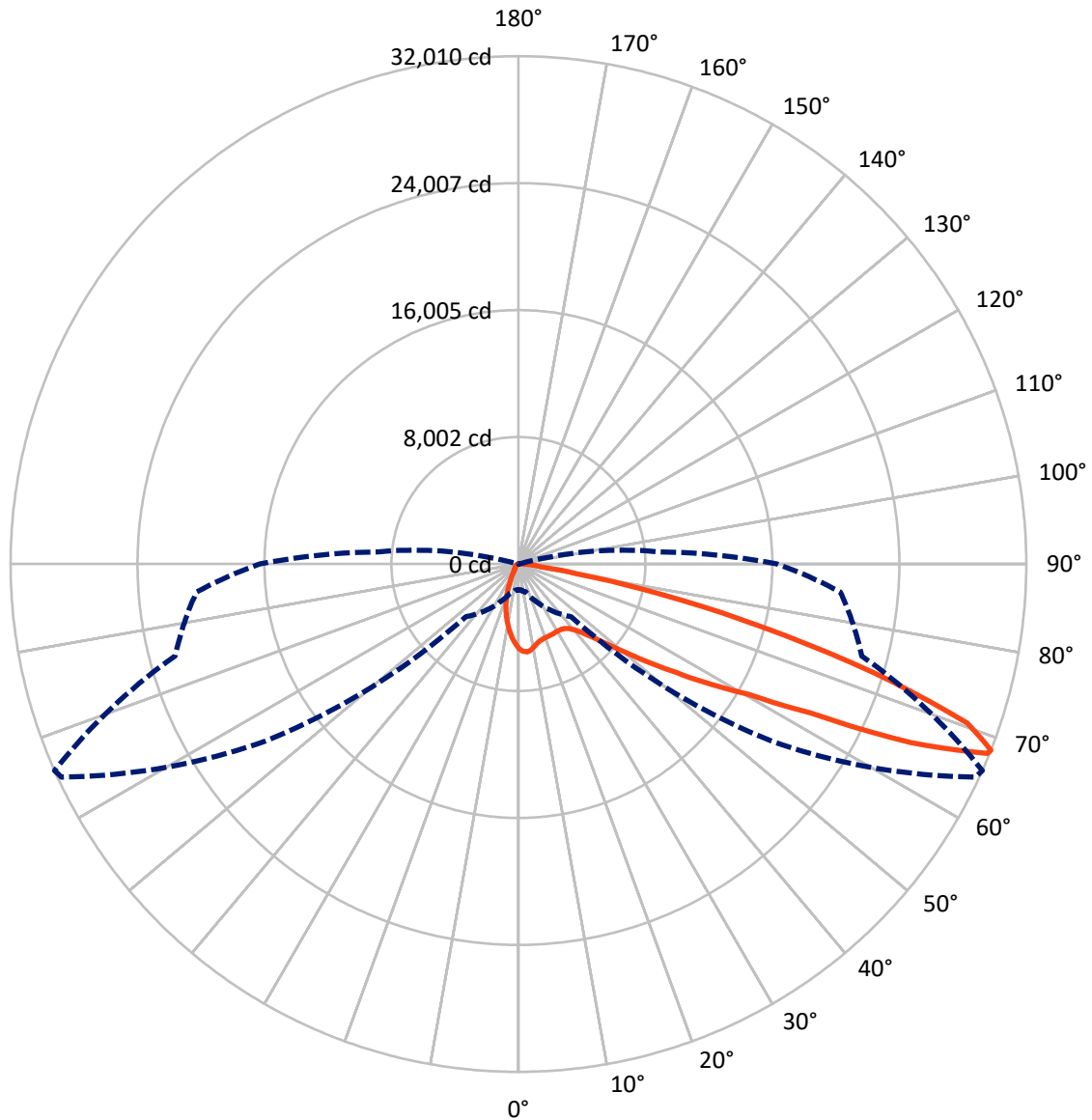


Based on 25 foot mounting height. Maximum calculated value = 8.5 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2428.6	0.0	2428.6
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	21548.4	0.0	21548.4
	% Fixture	89.9	0.0	89.9
Total	Lumens	23977.0	0.0	23977.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	437.9	1.8
10°-20°	942.2	3.9
20°-30°	1365.4	5.7
30°-40°	2090.1	8.7
40°-50°	3575.0	14.9
50°-60°	5592.4	23.3
60°-70°	6439.4	26.9
70°-80°	3222.4	13.4
80°-90°	312.1	1.3
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°	23977.0	100.0
0°-180°	23977.0	100.0



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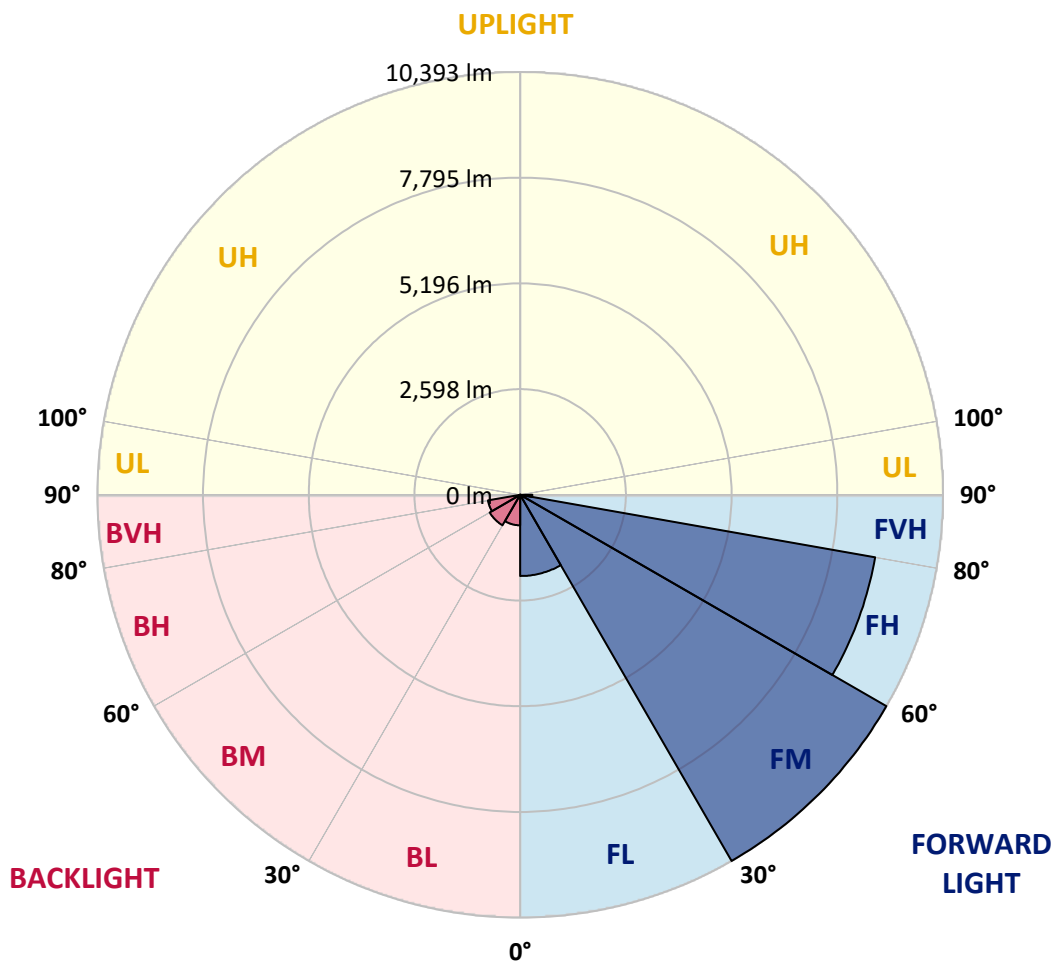
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1996.0	8.3			
FM (30°-60°)	10392.7	43.3			
FH (60°-80°)	8859.4	36.9			G4/12000
FVH (80°-90°)	300.3	1.3			G3/500
BL (0°-30°)	749.6	3.1	B2/1000		
BM (30°-60°)	864.8	3.6	B1/1000		
BH (60°-80°)	802.4	3.3	B2/1000		G2/1000
BVH (80°-90°)	11.8	0.0			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8
2.5°	5618.5	5622.3	5620.4	5626.1	5622.3	5594.1	5564.0	5500.0	5505.6	5422.8	5330.6
5°	5223.3	5255.3	5287.3	5319.3	5396.4	5464.2	5545.1	5564.0	5564.0	5492.4	5356.9
7.5°	4820.5	4822.3	4858.1	4901.4	5004.9	5129.2	5317.4	5486.8	5490.5	5509.4	5360.7
10°	4517.4	4526.8	4551.3	4598.4	4701.9	4824.2	5035.0	5300.4	5321.1	5460.4	5323.0
12.5°	4282.1	4293.4	4319.8	4374.4	4468.5	4594.6	4816.7	5119.7	5148.0	5413.4	5311.7
15°	4101.4	4116.5	4137.2	4191.8	4293.4	4427.1	4669.9	4999.3	5033.2	5394.6	5347.5
17.5°	4026.2	4026.2	4024.3	4061.9	4163.6	4299.1	4553.2	4935.3	4978.6	5409.6	5407.7
20°	4058.1	4052.5	4013.0	4003.6	4065.7	4201.2	4461.0	4893.9	4942.8	5437.8	5481.1
22.5°	4227.6	4216.3	4127.8	4054.4	4035.6	4125.9	4398.8	4865.6	4924.0	5496.2	5579.0
25°	4587.1	4553.2	4430.8	4265.2	4116.5	4107.1	4355.5	4850.6	4912.7	5564.0	5686.3
27.5°	5053.9	5044.5	4848.7	4626.6	4340.5	4169.2	4342.4	4839.3	4901.4	5612.9	5772.9
30°	5633.6	5637.4	5411.5	5121.6	4688.7	4344.3	4383.8	4833.6	4897.6	5616.7	5810.5
32.5°	6232.2	6235.9	6047.7	5737.1	5164.9	4645.4	4500.5	4860.0	4918.3	5601.6	5808.6
35°	6808.1	6813.8	6700.8	6450.5	5801.1	5063.3	4720.7	4950.3	4991.7	5611.0	5804.9
37.5°	7536.6	7559.1	7419.9	7186.5	6599.2	5676.9	5080.2	5132.9	5166.8	5688.2	5833.1
40°	8778.9	8748.7	8349.7	7954.4	7465.0	6424.1	5599.7	5447.3	5458.5	5887.7	5940.4
42.5°	10226.3	10188.7	9505.4	8824.0	8355.3	7325.7	6264.2	5929.1	5927.2	6222.7	6173.8
45°	11472.4	11449.8	10730.8	9821.6	9341.6	8321.5	7082.9	6623.7	6601.1	6802.5	6599.2
47.5°	12357.0	12338.2	11794.2	10883.2	10482.3	9416.9	8105.0	7570.4	7523.4	7561.0	7290.0
50°	12443.6	12422.9	12232.8	11647.4	11814.9	11024.4	9368.0	8810.9	8750.6	8692.3	8334.6
52.5°	11634.2	11632.4	11732.1	11694.5	12748.5	13093.0	10917.1	10344.9	10273.4	10124.7	9768.9
55°	9979.7	9970.3	10348.7	10898.3	12727.8	15227.5	13279.3	12170.7	12076.6	11779.2	11312.4
57.5°	7291.9	7242.9	8033.5	9198.6	11833.8	16161.1	17030.7	14438.8	14282.6	13339.6	12620.5
60°	4026.2	4045.0	5061.4	6441.1	9716.2	15976.6	20482.7	17083.4	16673.0	14685.4	13960.7
62.5°	2256.8	2303.9	3060.6	4186.1	6194.5	14480.2	22334.9	21634.7	20646.5	16255.2	15654.7
65°	1707.2	1735.4	2115.7	3230.0	3905.7	10119.0	22630.4	27998.6	27145.9	18634.4	18352.0
67.5°	1607.4	1630.0	1816.4	2678.5	3557.5	5247.7	20405.6	31763.1	31870.4	21879.4	20441.3
68°	1618.7	1647.0	1833.3	2576.8	3551.8	4694.4	19456.9	31781.9	32009.7	22402.6	20369.8
70°	1487.0	1494.5	1938.7	2527.9	3442.7	3698.6	14075.5	29604.2	30012.6	23025.7	18491.3
72.5°	568.4	570.3	869.6	2189.1	3606.4	3719.3	7090.5	23398.4	23419.1	20038.5	14416.2
75°	295.5	248.5	272.9	685.1	3444.5	3625.2	3557.5	15976.6	15876.8	13552.3	8833.4
77.5°	203.3	173.2	182.6	237.2	1432.4	3623.3	2569.3	9187.3	9166.6	5765.4	2520.3
80°	114.8	99.8	109.2	199.5	502.6	3401.2	2394.2	3949.0	3721.2	1012.7	408.5
82.5°	58.4	48.9	58.4	167.5	312.5	2140.1	2328.4	1549.1	1379.7	240.9	265.4
85°	15.1	15.1	28.2	116.7	193.9	702.1	2087.4	1118.1	1005.1	105.4	188.2
87.5°	3.8	1.9	11.3	43.3	69.6	152.5	1157.6	623.0	536.4	54.6	109.2
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°	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8	5341.8
2.5°	5292.9	5240.2	5136.7	5020.0	4937.2	4846.8	4794.1	4730.1	4681.2	4637.9	4669.9
5°	5274.1	5172.4	4942.8	4684.9	4468.5	4261.4	4107.1	3960.3	3849.2	3779.6	3807.8
7.5°	5225.1	5074.6	4701.9	4299.1	3945.2	3612.1	3341.0	3098.2	2910.0	2808.3	2840.3
10°	5142.3	4929.6	4429.0	3869.9	3374.9	2904.3	2501.5	2140.1	1867.2	1739.2	1769.3
12.5°	5082.1	4801.6	4146.6	3455.8	2804.6	2136.4	1601.8	1187.7	975.0	847.0	858.3
15°	5055.7	4701.9	3883.1	3019.1	2181.5	1372.2	865.8	626.8	553.4	527.0	528.9
17.5°	5059.5	4622.8	3632.8	2565.5	1552.9	788.7	530.8	478.1	466.8	461.2	461.2
20°	5068.9	4543.8	3373.0	2093.1	993.8	508.2	442.3	425.4	419.7	412.2	414.1
22.5°	5097.2	4483.5	3111.4	1618.7	611.7	414.1	391.5	376.5	367.0	355.7	357.6
25°	5140.4	4438.4	2853.5	1165.1	431.0	361.4	340.7	320.0	303.0	289.9	291.8
27.5°	5166.8	4374.4	2578.7	794.3	357.6	316.2	288.0	259.8	240.9	229.6	227.8
30°	5148.0	4270.8	2266.2	521.4	316.2	272.9	239.0	207.0	188.2	178.8	178.8
32.5°	5097.2	4137.2	1921.8	380.2	280.5	235.3	193.9	165.6	152.5	146.8	148.7
35°	5038.8	3997.9	1554.7	321.9	252.2	199.5	158.1	135.5	129.9	128.0	128.0
37.5°	5006.8	3877.5	1202.8	291.8	225.9	165.6	129.9	116.7	111.1	111.1	111.1
40°	5042.6	3785.2	890.3	269.2	199.5	137.4	109.2	99.8	97.9	97.9	97.9
42.5°	5195.0	3753.2	651.3	250.3	173.2	114.8	94.1	86.6	84.7	86.6	86.6
45°	5492.4	3822.9	493.2	231.5	148.7	94.1	80.9	75.3	75.3	77.2	77.2
47.5°	5996.9	4001.7	404.7	212.7	124.2	79.1	69.6	65.9	65.9	67.8	67.8
50°	6779.9	4333.0	363.3	192.0	103.5	67.8	58.4	56.5	56.5	58.4	60.2
52.5°	7969.5	4963.5	342.6	171.3	84.7	56.5	48.9	47.1	48.9	50.8	50.8
55°	9292.7	5771.0	318.1	150.6	71.5	47.1	39.5	39.5	41.4	45.2	45.2
57.5°	10525.6	6550.3	295.5	124.2	62.1	37.6	32.0	32.0	35.8	39.5	39.5
60°	11828.1	7314.5	265.4	99.8	52.7	30.1	26.4	26.4	32.0	35.8	37.6
62.5°	13437.4	8202.9	225.9	79.1	41.4	22.6	18.8	24.5	30.1	35.8	35.8
65°	15763.9	9307.8	176.9	62.1	32.0	16.9	15.1	22.6	28.2	33.9	35.8
67.5°	16609.0	9166.6	133.6	50.8	24.5	13.2	13.2	20.7	28.2	33.9	33.9
68°	16300.4	8857.9	128.0	48.9	22.6	13.2	13.2	20.7	28.2	33.9	33.9
70°	14203.5	7241.0	105.4	37.6	18.8	11.3	11.3	18.8	28.2	32.0	33.9
72.5°	10634.8	4811.1	90.3	24.5	16.9	11.3	9.4	18.8	26.4	32.0	32.0
75°	6100.4	1997.1	77.2	18.8	15.1	9.4	9.4	16.9	26.4	32.0	32.0
77.5°	1724.1	466.8	62.1	15.1	13.2	9.4	7.5	16.9	24.5	30.1	30.1
80°	316.2	139.3	48.9	13.2	11.3	9.4	7.5	16.9	24.5	30.1	30.1
82.5°	208.9	65.9	35.8	13.2	11.3	9.4	7.5	15.1	22.6	28.2	28.2
85°	156.2	47.1	22.6	13.2	11.3	9.4	7.5	15.1	22.6	28.2	28.2
87.5°	86.6	20.7	16.9	15.1	13.2	9.4	7.5	13.2	20.7	26.4	26.4
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)