

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: P196965

Luminaire Tested: **NAV-AF-03-D-UNV-AFL-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196965
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13610 lumens
Efficiency: N/A
Efficacy: 71.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 191
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

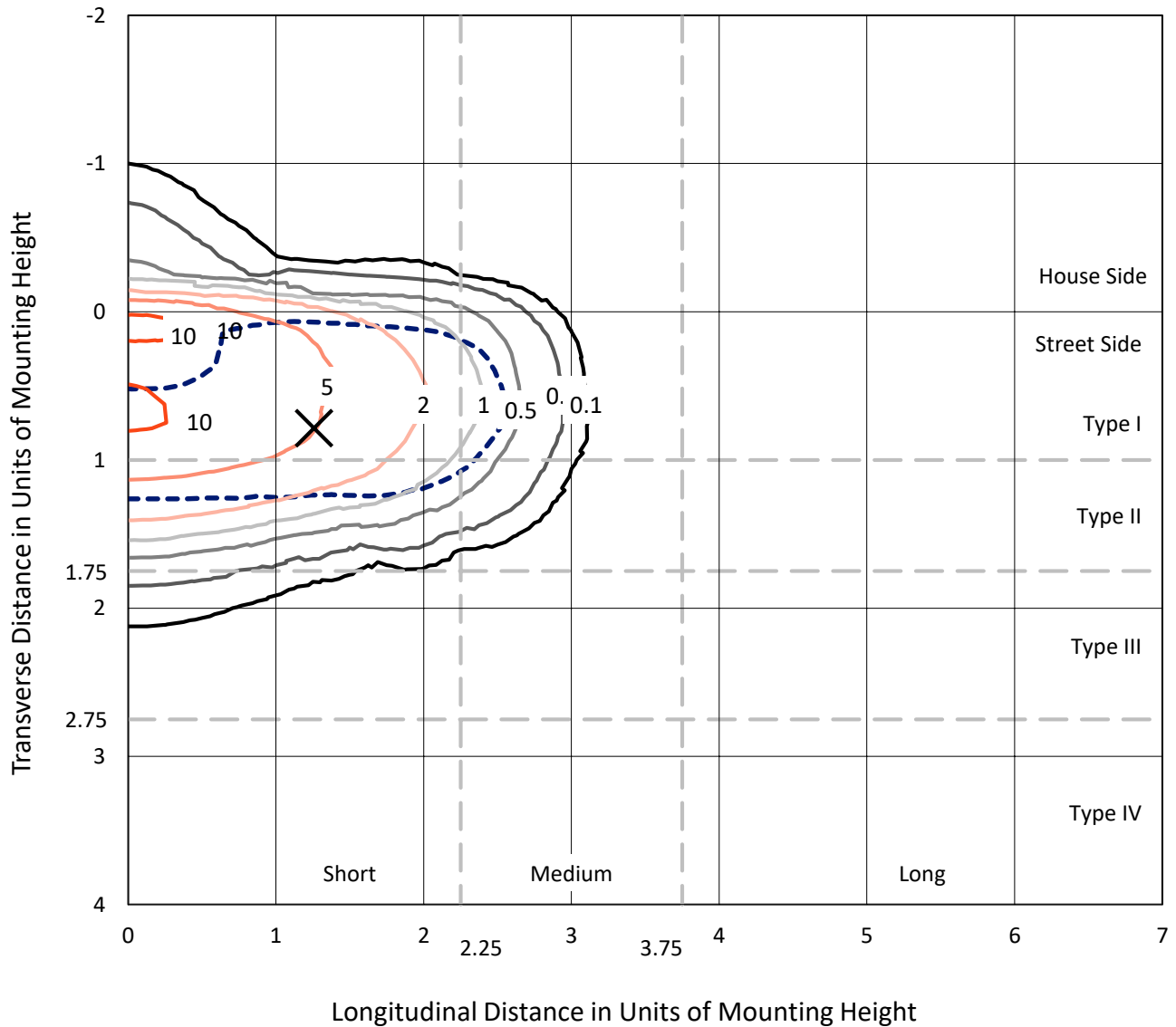


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Iso-Footcandle Lines of Horizontal Illumination

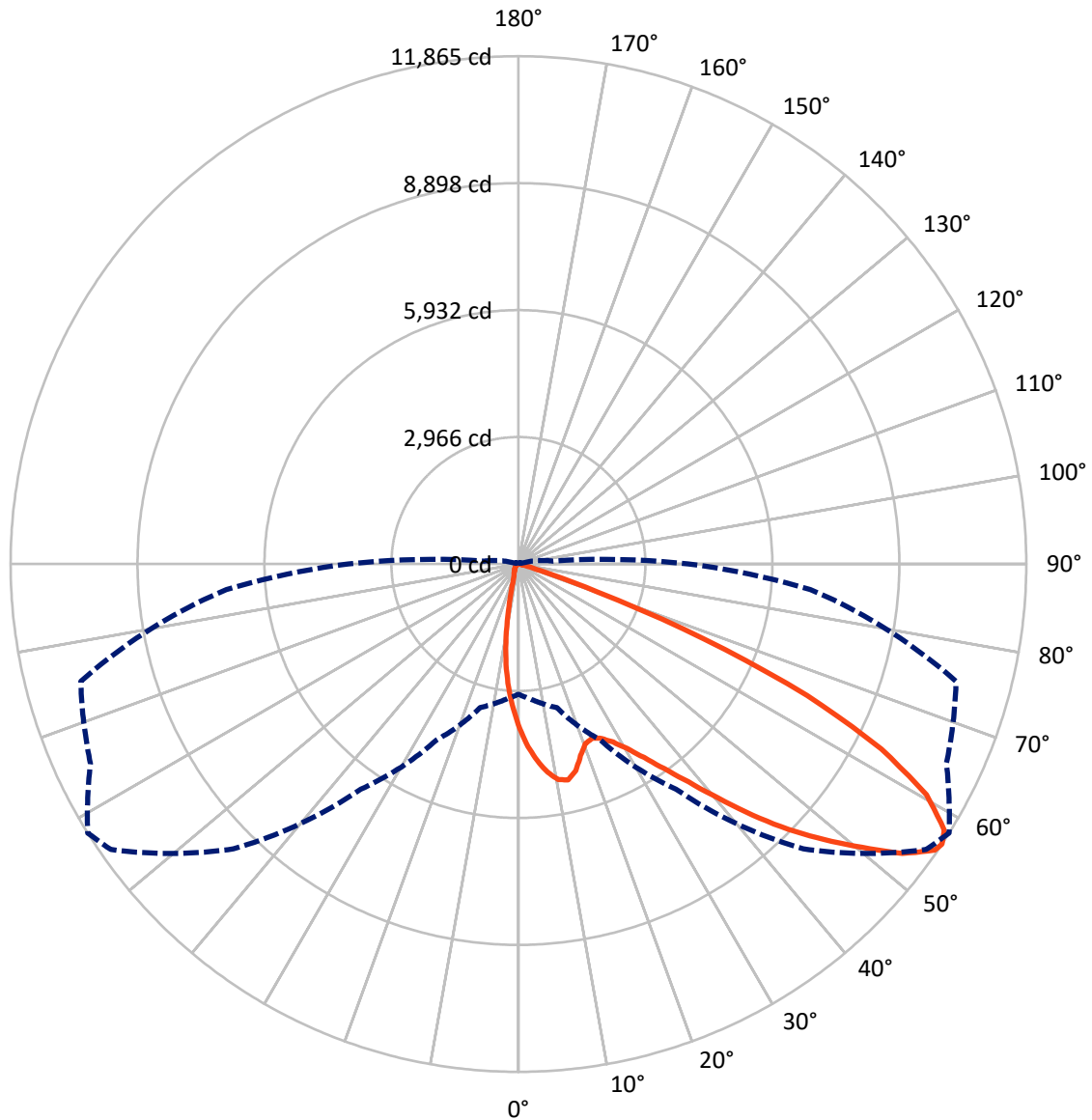
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 12 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	849.5	0.0	849.5
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	12760.5	0.0	12760.5
	% Fixture	93.8	0.0	93.8
Total	Lumens	13610.0	0.0	13610.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.7	2.4
10°-20°	764.9	5.6
20°-30°	1287.0	9.5
30°-40°	2203.9	16.2
40°-50°	3325.7	24.4
50°-60°	3457.0	25.4
60°-70°	1940.7	14.3
70°-80°	266.0	2.0
80°-90°	36.0	0.3
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°	13610.0	100.0
0°-180°	13610.0	100.0



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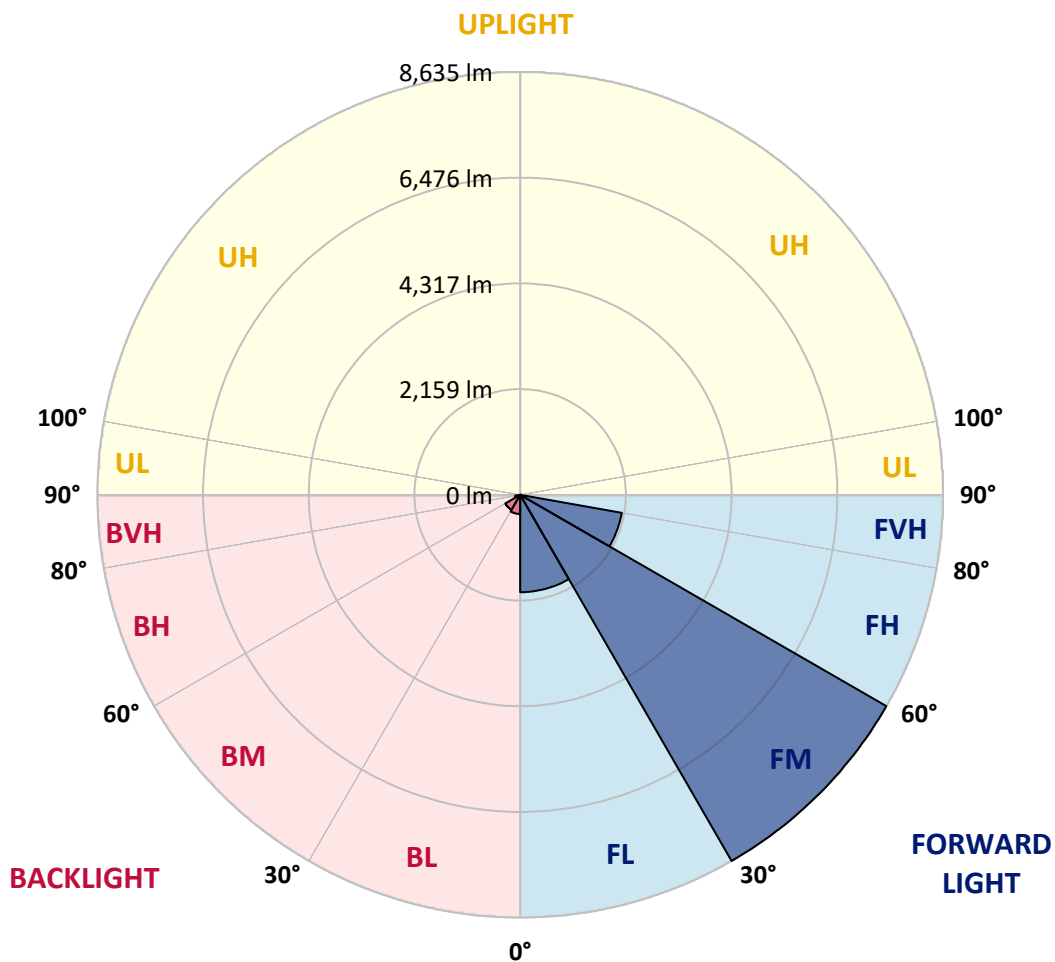
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1988.7	14.6			
FM (30°-60°)	8634.7	63.4			
FH (60°-80°)	2105.9	15.5			G2/5000
FVH (80°-90°)	31.1	0.2			G1/100
BL (0°-30°)	391.9	2.9	B1/500		
BM (30°-60°)	351.9	2.6	B1/1000		
BH (60°-80°)	100.8	0.7	B0/110		G0/110
BVH (80°-90°)	5.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4
2.5°	4636.3	4608.3	4579.2	4525.2	4475.4	4398.5	4292.6	4266.7	4183.6	4046.5	3918.8
5°	5036.1	5030.9	5011.2	4967.6	4913.6	4820.1	4700.7	4620.8	4492.0	4276.0	4029.9
7.5°	4799.4	4843.0	4914.6	5016.4	5084.9	5075.6	4984.2	4914.6	4786.9	4492.0	4139.0
10°	4045.5	4053.8	4152.5	4366.4	4704.9	5020.5	5139.9	5121.3	5003.9	4681.0	4234.5
12.5°	3779.7	3784.9	3807.7	3876.2	4096.4	4536.7	5077.6	5175.3	5165.9	4861.7	4336.2
15°	3800.4	3803.6	3809.8	3831.6	3893.9	4115.1	4762.0	5010.2	5269.7	5033.0	4435.9
17.5°	3964.5	3962.4	3942.7	3921.9	3941.7	4014.4	4440.1	4701.8	5247.9	5177.3	4518.0
20°	4284.3	4294.7	4228.3	4135.8	4088.1	4091.2	4281.2	4477.5	5125.4	5289.5	4579.2
22.5°	4733.9	4741.2	4632.2	4472.3	4332.1	4261.5	4314.4	4418.3	4984.2	5393.3	4629.1
25°	5270.8	5270.8	5118.1	4890.7	4673.7	4519.0	4473.3	4512.8	4930.2	5510.6	4678.9
27.5°	5850.2	5871.0	5671.6	5373.6	5087.0	4860.6	4717.3	4710.1	4971.7	5658.1	4735.0
30°	6480.5	6499.2	6262.4	5898.0	5558.4	5268.7	5048.6	5000.8	5130.6	5856.4	4817.0
32.5°	7107.7	7123.2	6861.6	6489.8	6094.2	5753.6	5463.9	5388.1	5416.2	6146.1	4937.5
35°	7905.1	7908.2	7577.0	7134.7	6712.0	6312.3	5945.7	5871.0	5839.8	6511.6	5110.9
37.5°	8539.6	8514.7	8304.9	7886.4	7401.5	6984.1	6553.2	6455.6	6380.8	7025.6	5379.8
40°	8689.1	8689.1	8658.0	8532.3	8147.1	7745.2	7327.8	7182.4	7017.3	7631.0	5741.2
42.5°	8299.7	8324.6	8530.2	8803.3	8806.4	8548.9	8140.8	8018.3	7727.6	8320.5	6135.7
45°	7428.5	7435.8	7929.0	8666.3	9166.8	9314.2	9013.1	8843.8	8440.9	9037.0	6497.1
47.5°	7114.9	7137.8	7347.5	8248.8	9193.8	9934.1	9850.0	9617.4	9101.3	9691.1	6834.6
50°	6633.1	6661.2	6917.6	7634.1	8950.8	10331.8	10650.6	10401.4	9702.6	10236.3	7001.7
52.5°	5480.5	5524.1	5886.5	6821.1	8343.3	10348.4	11383.7	11234.2	10318.3	10528.1	6982.0
55°	3771.4	3803.6	4226.2	5324.8	7118.0	9840.7	11699.3	11802.1	10867.6	10593.5	6886.5
56°	3042.4	3162.9	3472.3	4536.7	6420.3	9408.7	11626.7	11864.5	11030.6	10583.1	6845.0
57.5°	2011.3	2034.2	2371.6	3287.5	5155.5	8471.0	11298.5	11731.5	11240.4	10530.1	6814.8
60°	946.0	956.3	1077.8	1517.1	2790.1	6173.1	10232.1	10950.7	11317.2	10419.0	6813.8
62.5°	616.8	618.9	633.4	723.7	1141.2	3362.3	8482.5	9516.7	10680.7	10406.6	6794.1
65°	507.8	513.0	495.3	506.7	597.1	1267.9	5983.1	7419.2	9186.5	10113.8	6571.9
67.5°	447.5	448.6	424.7	411.2	437.2	556.6	3014.4	4679.9	6870.9	8593.6	5413.0
70°	408.1	407.0	380.0	348.9	349.9	369.7	982.3	1943.8	3801.5	5102.6	3107.9
72.5°	362.4	364.5	348.9	305.3	290.7	261.7	369.7	524.4	1293.8	1638.6	819.3
75°	317.7	313.6	298.0	270.0	243.0	175.5	185.9	223.3	337.5	334.4	176.5
77.5°	240.9	236.7	244.0	230.5	190.0	122.5	101.8	116.3	152.6	142.3	71.6
80°	183.8	181.7	166.1	197.3	173.4	92.4	69.6	71.6	83.1	75.8	35.3
82.5°	132.9	131.9	125.6	121.5	110.1	67.5	53.0	56.1	62.3	53.0	26.0
85°	50.9	50.9	98.6	83.1	75.8	45.7	37.4	40.5	47.8	38.4	17.7
87.5°	8.3	8.3	66.5	55.0	34.3	22.8	23.9	26.0	28.0	22.8	13.5
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°	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4	3853.4
2.5°	3843.0	3773.4	3620.8	3473.4	3344.6	3203.4	3131.7	3048.7	3017.5	2955.2	2961.4
5°	3882.5	3737.1	3430.8	3107.9	2811.9	2510.8	2296.9	2095.4	1983.3	1872.2	1872.2
7.5°	3923.0	3700.8	3227.3	2711.2	2212.8	1696.7	1331.2	1038.4	875.3	766.3	763.2
10°	3951.0	3654.0	2995.7	2251.2	1516.0	874.3	527.5	415.3	374.9	357.2	356.2
12.5°	3987.4	3607.3	2732.0	1709.2	842.1	415.3	329.2	311.5	304.2	300.1	300.1
15°	4018.5	3540.9	2412.1	1149.5	442.3	311.5	283.5	277.2	276.2	275.2	276.2
17.5°	4025.8	3446.4	2029.0	672.9	320.9	272.1	259.6	254.4	254.4	253.4	253.4
20°	4009.2	3321.8	1605.3	415.3	277.2	250.2	236.7	230.5	229.5	229.5	229.5
22.5°	3974.9	3162.9	1186.9	314.6	252.3	230.5	212.9	206.6	206.6	207.7	208.7
25°	3932.3	2974.9	815.1	271.0	233.6	209.8	192.1	185.9	187.9	190.0	191.1
27.5°	3878.3	2750.7	533.7	234.7	208.7	189.0	173.4	169.3	173.4	177.6	179.6
30°	3824.3	2504.6	361.4	203.5	180.7	166.1	156.8	155.8	162.0	171.3	172.4
32.5°	3789.0	2252.2	273.1	182.8	158.9	146.4	142.3	144.3	153.7	164.1	166.1
35°	3785.9	2006.1	232.6	166.1	144.3	132.9	130.8	137.1	147.4	155.8	157.8
37.5°	3834.7	1775.6	210.8	153.7	132.9	121.5	118.4	129.8	139.1	147.4	149.5
40°	3933.4	1569.0	196.3	142.3	123.6	110.1	108.0	117.3	126.7	136.0	139.1
42.5°	4056.9	1375.8	179.6	130.8	113.2	97.6	95.5	102.8	112.1	125.6	127.7
45°	4163.9	1196.2	162.0	118.4	101.8	84.1	83.1	91.4	98.6	111.1	113.2
47.5°	4254.2	1046.7	145.4	104.9	87.2	74.8	73.7	77.9	82.0	93.5	95.5
50°	4206.4	920.0	128.8	86.2	70.6	64.4	63.3	63.3	68.5	80.0	82.0
52.5°	4089.1	841.1	113.2	71.6	58.1	55.0	51.9	53.0	58.1	63.3	64.4
55°	3994.6	803.7	99.7	63.3	48.8	45.7	42.6	41.5	42.6	40.5	38.4
56°	3971.8	799.5	96.6	61.3	46.7	42.6	38.4	36.3	35.3	31.2	30.1
57.5°	3961.4	799.5	91.4	57.1	43.6	38.4	33.2	29.1	24.9	21.8	21.8
60°	3953.1	804.7	85.1	49.8	37.4	31.2	23.9	17.7	14.5	14.5	14.5
62.5°	3935.4	802.7	77.9	41.5	32.2	23.9	14.5	11.4	10.4	11.4	12.5
65°	3737.1	745.6	68.5	33.2	24.9	16.6	8.3	8.3	9.3	11.4	12.5
67.5°	3011.3	564.9	56.1	26.0	17.7	12.5	7.3	7.3	9.3	11.4	12.5
70°	1654.1	298.0	47.8	18.7	13.5	10.4	7.3	6.2	9.3	11.4	12.5
72.5°	403.9	124.6	43.6	14.5	12.5	9.3	6.2	6.2	9.3	11.4	12.5
75°	99.7	93.5	35.3	11.4	10.4	8.3	6.2	6.2	9.3	11.4	12.5
77.5°	46.7	123.6	23.9	10.4	9.3	7.3	6.2	6.2	9.3	11.4	11.4
80°	28.0	93.5	14.5	9.3	8.3	7.3	6.2	6.2	9.3	11.4	12.5
82.5°	16.6	27.0	10.4	9.3	8.3	6.2	6.2	6.2	9.3	11.4	12.5
85°	14.5	13.5	10.4	9.3	8.3	7.3	6.2	6.2	10.4	12.5	12.5
87.5°	11.4	10.4	9.3	8.3	8.3	7.3	6.2	6.2	9.3	11.4	12.5
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)