

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: P195479

Luminaire Tested: **NAV-AF-05-D-UNV-5NQ-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195479
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24130)
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-5NQ-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(5) 70 CRI, 5000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V
NARROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 33910 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B5 - U0 - G3

Input Watts (W): 320
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

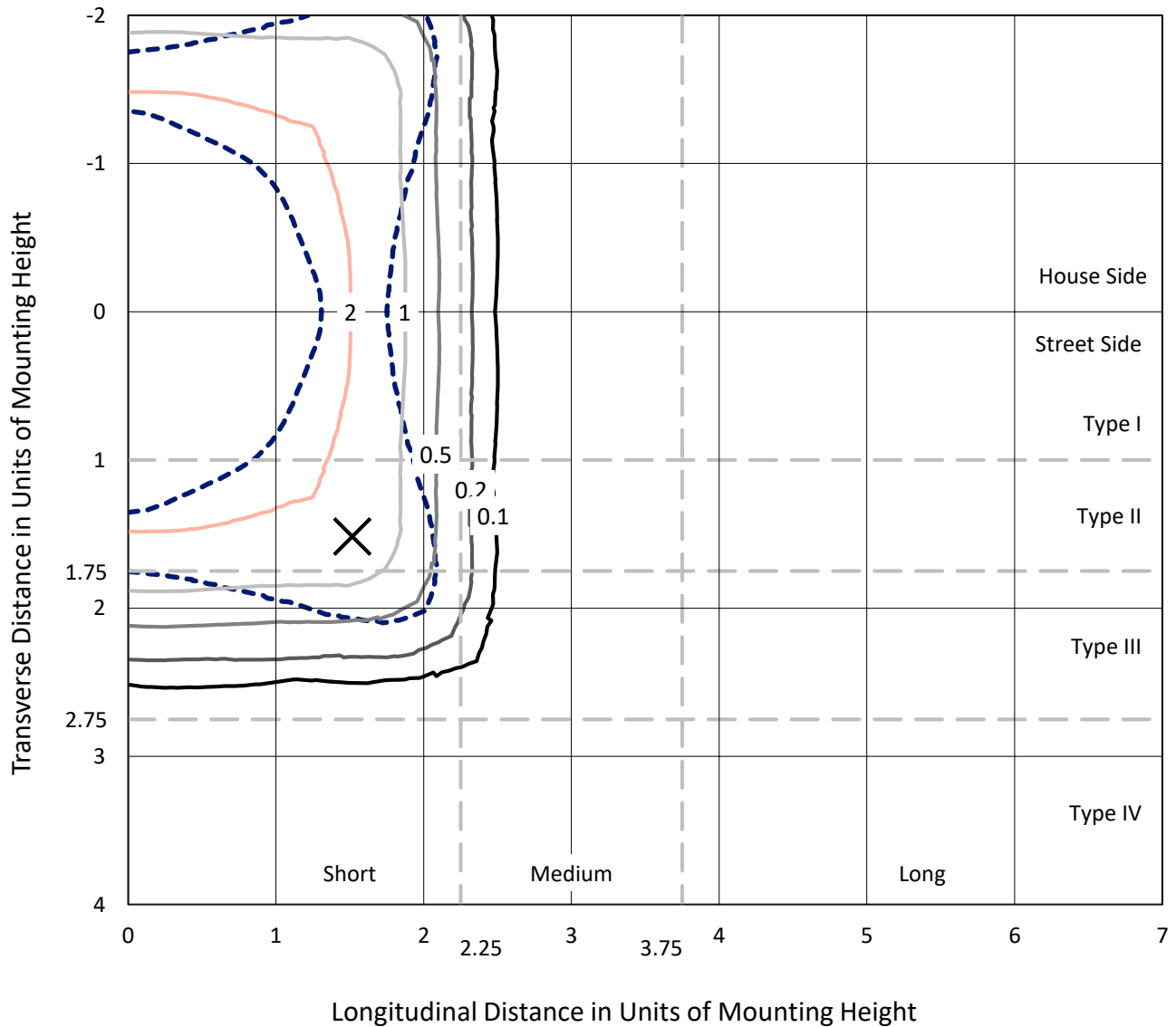


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Iso-Footcandle Lines of Horizontal Illumination

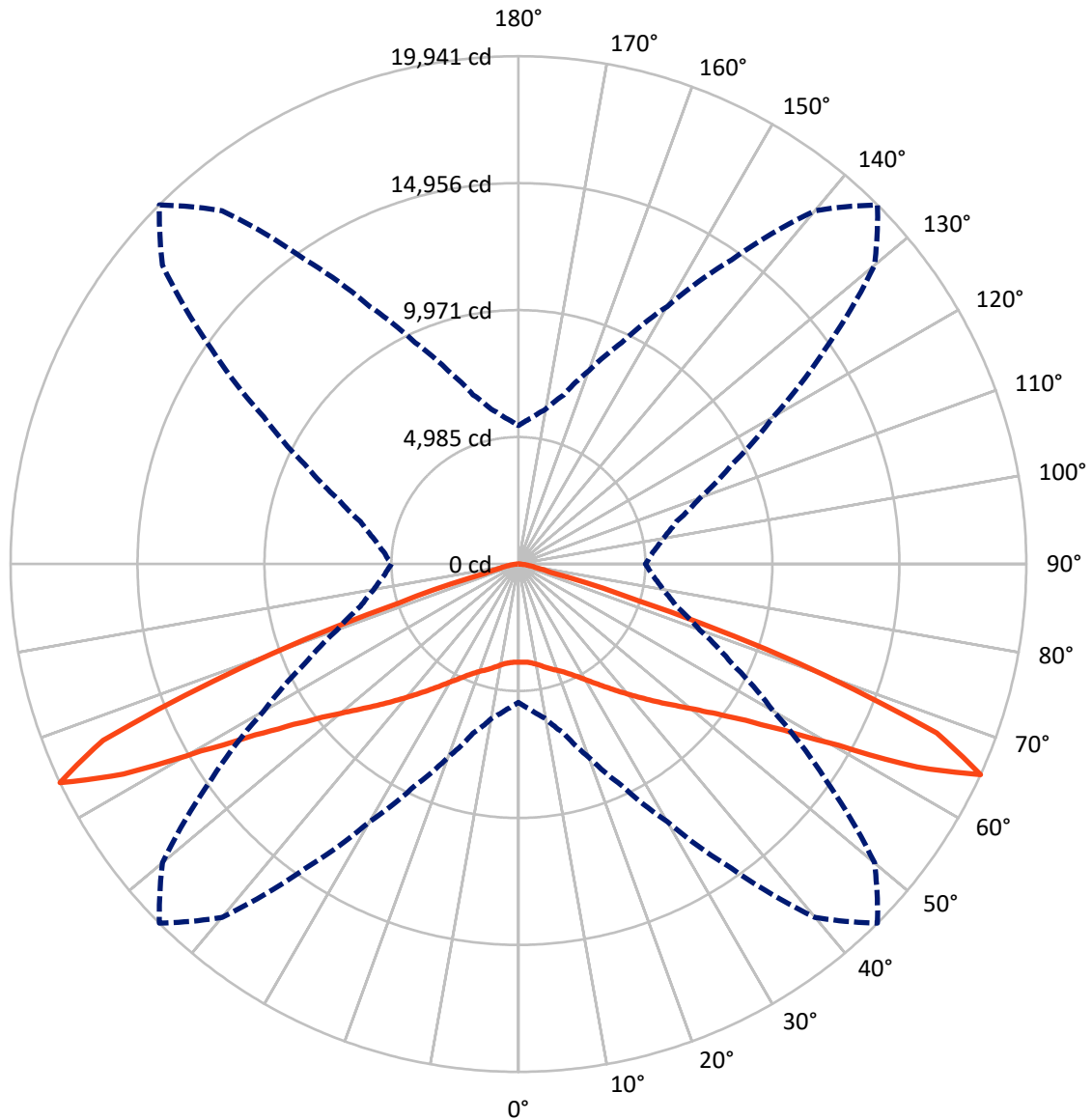
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 4.3 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	16955.0	0.0	16955.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	16955.0	0.0	16955.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	33910.0	0.0	33910.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	375.6	1.1
10°-20°	1203.9	3.6
20°-30°	2245.8	6.6
30°-40°	3786.8	11.2
40°-50°	6150.8	18.1
50°-60°	9637.3	28.4
60°-70°	9097.1	26.8
70°-80°	1226.0	3.6
80°-90°	186.7	0.6
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°	33910.0	100.0
0°-180°	33910.0	100.0

Coefficient of Utilization



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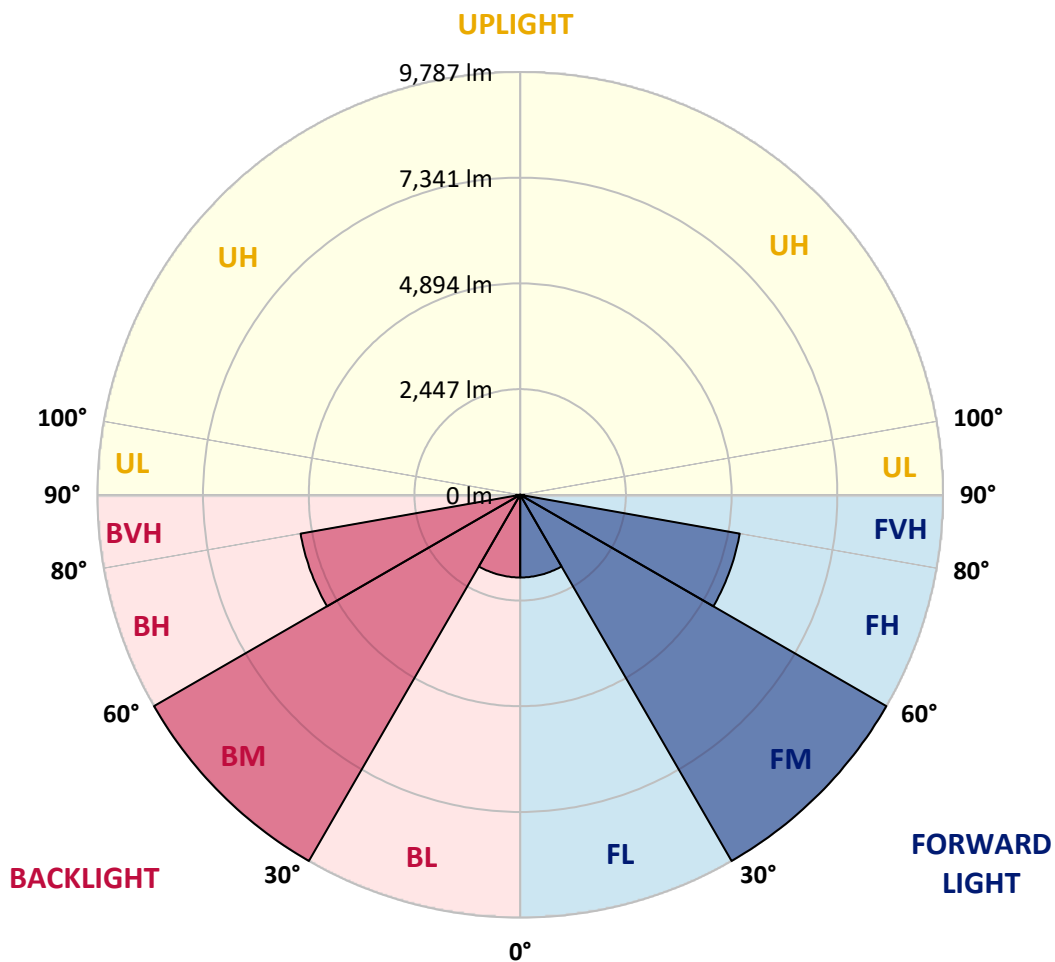
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1912.6	5.6			
FM	(30°-60°)	9787.4	28.9			
FH	(60°-80°)	5161.6	15.2			G3/7500
FVH	(80°-90°)	93.4	0.3			G1/100
BL	(0°-30°)	1912.6	5.6	B3/2500		
BM	(30°-60°)	9787.4	28.9	B5		
BH	(60°-80°)	5161.6	15.2	B5		G3/7500
BVH	(80°-90°)	93.4	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B5-U0-G3

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2
2.5°	3888.9	3888.9	3895.2	3893.1	3884.7	3878.3	3872.0	3863.6	3859.3	3855.1	3853.0
5°	3910.0	3910.0	3916.4	3914.3	3907.9	3899.5	3895.2	3888.9	3882.6	3878.3	3880.5
7.5°	3962.8	3965.0	3967.1	3965.0	3958.6	3952.3	3943.8	3941.7	3933.3	3926.9	3931.2
10°	4043.1	4043.1	4045.2	4047.3	4043.1	4028.3	4028.3	4024.1	4015.7	4007.2	4009.3
12.5°	4131.8	4131.8	4133.9	4133.9	4133.9	4125.5	4127.6	4125.5	4114.9	4110.7	4114.9
15°	4218.4	4220.6	4220.6	4224.8	4224.8	4226.9	4235.3	4235.3	4231.1	4229.0	4229.0
17.5°	4319.8	4324.1	4326.2	4332.5	4334.6	4338.8	4347.3	4349.4	4351.5	4345.2	4347.3
20°	4455.0	4457.1	4463.5	4465.6	4474.0	4474.0	4478.3	4476.2	4471.9	4463.5	4463.5
22.5°	4607.1	4611.3	4624.0	4624.0	4634.6	4628.2	4630.4	4624.0	4613.5	4609.2	4605.0
25°	4805.7	4812.0	4822.6	4818.4	4822.6	4812.0	4812.0	4812.0	4805.7	4799.3	4797.2
27.5°	5057.1	5046.5	5057.1	5048.6	5046.5	5038.0	5040.2	5035.9	5029.6	5027.5	5019.0
30°	5319.0	5306.3	5312.7	5314.8	5310.5	5308.4	5300.0	5293.6	5283.1	5285.2	5278.9
32.5°	5619.0	5606.3	5612.6	5614.7	5610.5	5614.7	5612.6	5597.8	5585.2	5593.6	5593.6
35°	5975.9	5967.5	5984.4	5990.7	5978.1	5971.7	5963.3	5946.4	5927.4	5940.0	5942.1
37.5°	6404.8	6394.2	6406.9	6423.8	6400.5	6387.9	6354.1	6328.7	6316.0	6322.4	6330.8
40°	6850.5	6852.6	6888.5	6892.7	6867.4	6852.6	6818.8	6780.8	6744.9	6744.9	6755.4
42.5°	7319.4	7325.8	7368.0	7382.8	7374.3	7346.9	7300.4	7253.9	7207.5	7215.9	7228.6
45°	7849.6	7841.2	7885.5	7921.5	7915.1	7906.7	7862.3	7777.8	7735.6	7733.5	7754.6
47.5°	8407.3	8424.2	8470.7	8531.9	8529.8	8508.7	8451.7	8373.5	8295.4	8301.7	8327.0
50°	9057.9	9081.2	9159.3	9220.6	9229.0	9222.7	9155.1	9064.3	8954.4	8960.8	8994.6
52.5°	9640.9	9674.7	9765.6	9892.3	9970.5	10006.4	9962.0	9877.5	9765.6	9771.9	9807.8
55°	10169.0	10221.8	10357.0	10530.3	10686.6	10832.3	10897.8	10895.7	10813.3	10832.3	10878.8
57.5°	10500.7	10574.6	10779.5	11058.4	11368.9	11662.5	11916.0	12154.7	12207.5	12306.8	12306.8
60°	10055.0	10228.2	10500.7	10978.1	11588.6	12247.6	12961.6	13656.6	14104.4	14457.2	14267.1
62.5°	8396.7	8652.3	9034.7	9664.2	10614.8	11791.4	13225.7	14841.6	16527.3	17558.2	16801.9
65°	5433.1	5754.1	6170.3	6877.9	8075.7	9590.2	11679.4	14583.9	18111.6	19941.0	18251.0
67.5°	2152.5	2370.1	2623.6	3126.3	4165.6	5652.8	7997.5	11580.1	15992.9	17718.7	15823.9
70°	1028.7	1064.6	1113.2	1221.0	1480.8	1998.3	3212.9	5705.6	9807.8	11626.6	9573.3
72.5°	743.6	749.9	773.1	809.0	885.1	990.7	1204.1	1744.8	3381.9	4917.6	3386.2
75°	564.0	572.5	585.1	604.1	644.3	695.0	775.2	929.5	1157.6	1335.0	1155.5
77.5°	428.8	437.3	447.8	466.8	488.0	523.9	553.4	614.7	711.9	749.9	745.7
80°	312.6	327.4	344.3	361.2	376.0	392.9	395.0	424.6	479.5	515.4	504.9
82.5°	198.6	211.2	255.6	274.6	276.7	280.9	278.8	280.9	310.5	335.9	327.4
85°	126.7	135.2	158.4	179.6	175.3	183.8	183.8	179.6	166.9	143.6	171.1
87.5°	63.4	65.5	76.0	95.1	90.8	80.3	78.2	78.2	57.0	48.6	52.8
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):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2	3857.2
2.5°	3846.7	3850.9	3844.5	3844.5	3842.4	3846.7	3840.3	3840.3
5°	3876.2	3882.6	3880.5	3880.5	3884.7	3888.9	3886.8	3884.7
7.5°	3929.0	3933.3	3937.5	3939.6	3943.8	3941.7	3945.9	3943.8
10°	4009.3	4005.1	4011.4	4005.1	4007.2	4003.0	4005.1	4005.1
12.5°	4110.7	4104.4	4100.1	4095.9	4095.9	4087.5	4087.5	4089.6
15°	4226.9	4216.3	4207.9	4203.7	4199.4	4199.4	4193.1	4197.3
17.5°	4341.0	4330.4	4315.6	4315.6	4309.3	4305.0	4300.8	4311.4
20°	4461.4	4450.8	4442.4	4440.2	4427.6	4423.3	4425.5	4438.1
22.5°	4600.8	4594.4	4594.4	4590.2	4581.8	4575.4	4575.4	4590.2
25°	4788.8	4776.1	4778.2	4780.3	4776.1	4776.1	4771.9	4782.4
27.5°	5019.0	5008.5	5014.8	5019.0	5014.8	5021.1	5014.8	5023.3
30°	5289.4	5283.1	5289.4	5295.8	5285.2	5285.2	5281.0	5287.3
32.5°	5612.6	5604.2	5608.4	5608.4	5593.6	5580.9	5564.0	5576.7
35°	5967.5	5956.9	5965.4	5971.7	5954.8	5942.1	5916.8	5927.4
37.5°	6358.3	6362.5	6373.1	6400.5	6396.3	6375.2	6356.2	6364.6
40°	6795.6	6816.7	6863.2	6882.2	6877.9	6856.8	6831.5	6835.7
42.5°	7289.9	7317.3	7365.9	7397.6	7382.8	7353.2	7321.5	7334.2
45°	7828.5	7870.8	7934.1	7965.8	7946.8	7915.1	7870.8	7894.0
47.5°	8398.9	8483.4	8567.8	8610.1	8603.8	8559.4	8502.4	8508.7
50°	9081.2	9193.1	9300.8	9343.1	9311.4	9243.8	9163.5	9161.4
52.5°	9930.3	10050.7	10139.5	10128.9	10050.7	9945.1	9854.3	9850.1
55°	10990.8	11030.9	11018.2	10927.4	10790.1	10625.3	10509.1	10490.1
57.5°	12273.0	12137.8	11939.2	11664.6	11356.2	11043.6	10832.3	10754.2
60°	13840.4	13229.9	12520.1	11772.3	11090.0	10578.8	10255.6	10059.2
62.5°	15135.3	13367.2	11780.8	10481.7	9419.1	8787.5	8346.0	8073.6
65°	14691.7	11548.4	9250.2	7575.0	6415.3	5762.6	5295.8	4985.2
67.5°	11349.9	7716.6	5369.7	3722.0	2822.2	2389.1	2087.0	1890.6
70°	5722.5	2959.5	1793.4	1265.3	1081.5	1005.5	954.8	925.2
72.5°	1679.3	1121.7	931.6	823.8	758.3	711.9	682.3	667.5
75°	929.5	758.3	669.6	608.4	566.1	534.4	515.4	502.7
77.5°	640.1	551.3	507.0	466.8	433.0	409.8	395.0	382.3
80°	447.8	403.5	384.5	363.3	338.0	319.0	297.8	289.4
82.5°	297.8	278.8	274.6	257.7	242.9	221.8	183.8	171.1
85°	175.3	173.2	173.2	166.9	156.3	137.3	109.8	109.8
87.5°	61.3	63.4	65.5	69.7	67.6	57.0	46.5	44.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)