

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: P270460

Luminaire Tested: **NAV-AF-03-D-UNV-T2-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270460
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
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-T2-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16898.2 lumens
Efficiency: N/A
Efficacy: 88.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

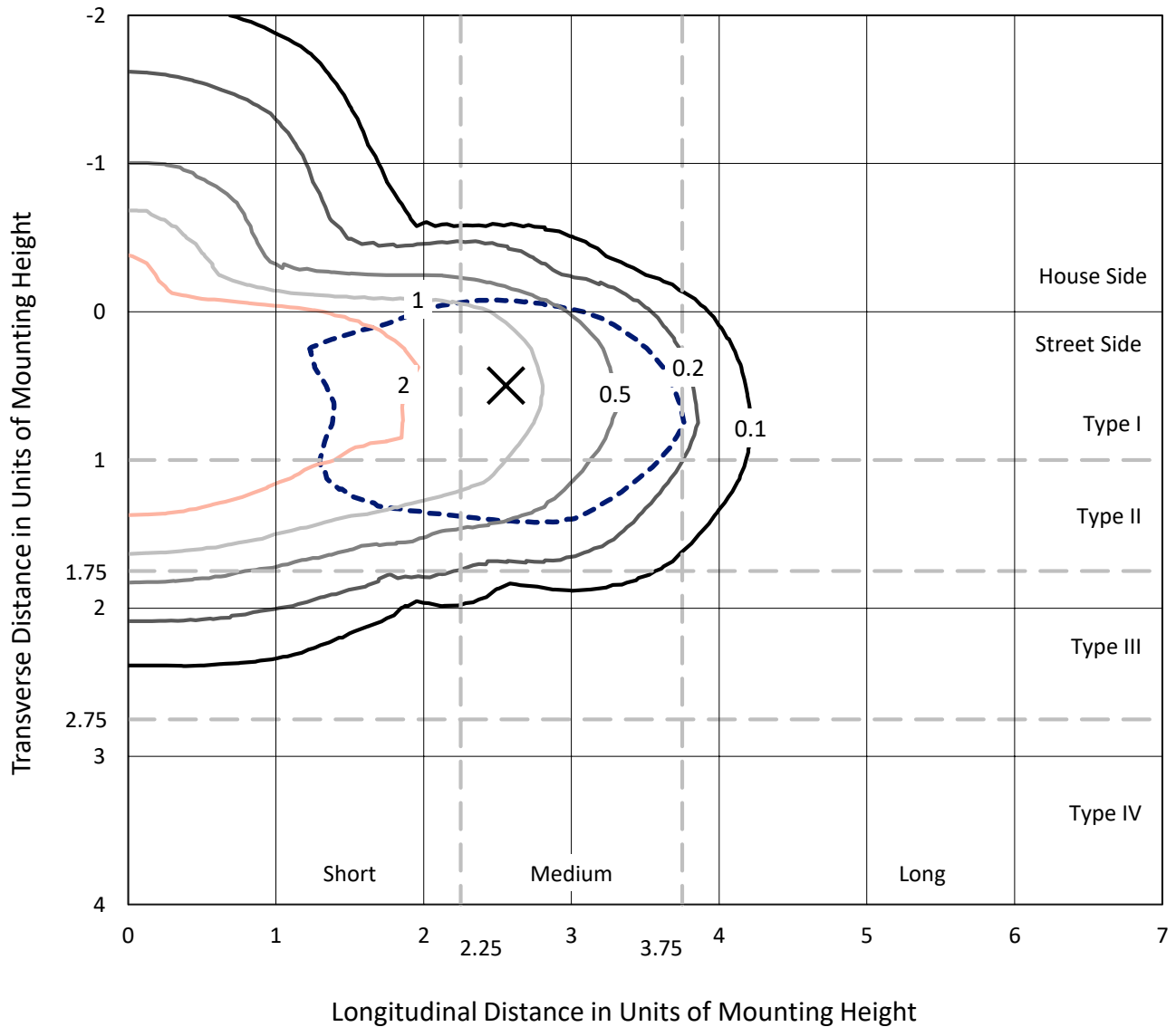
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

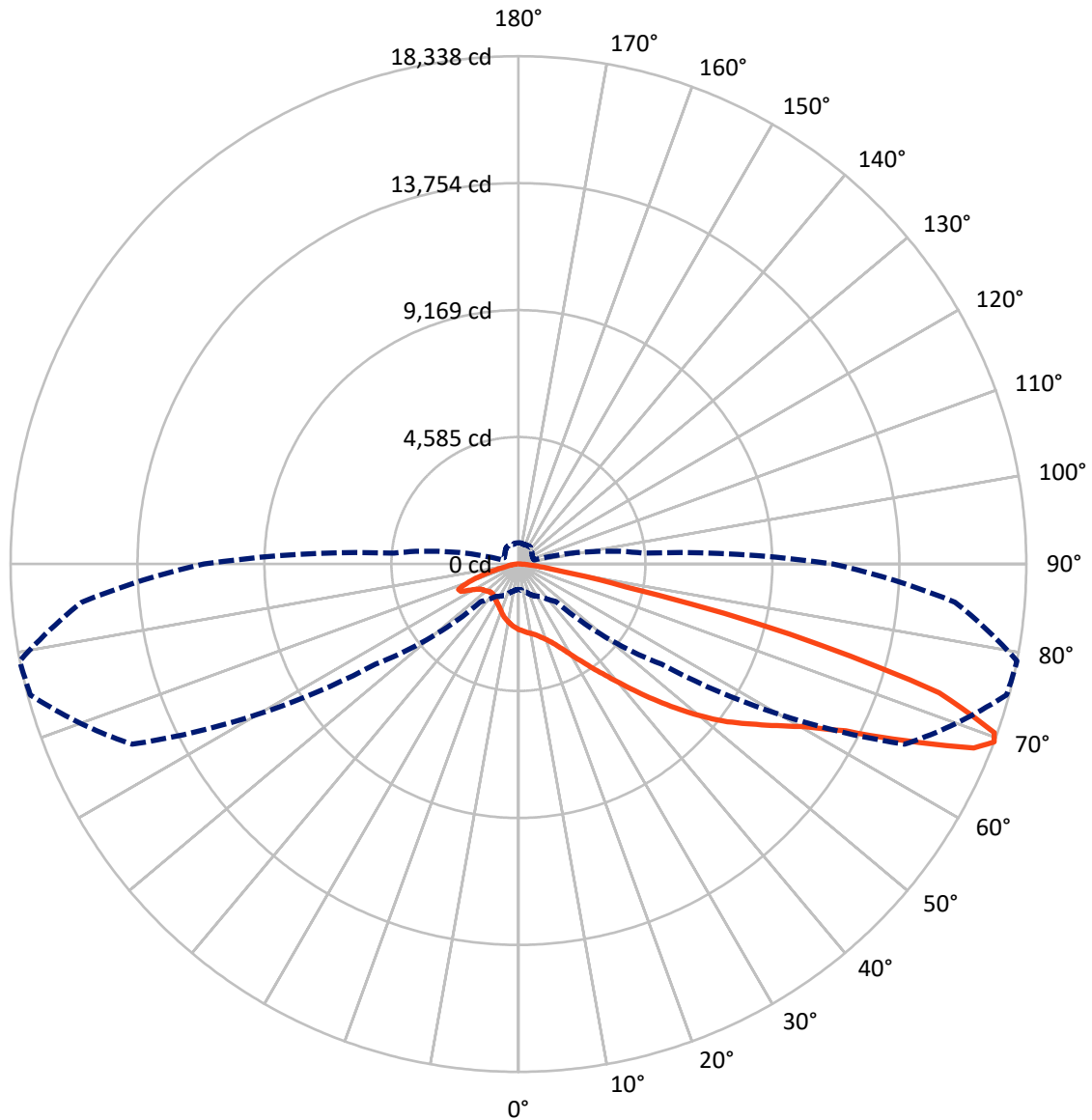
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3178.8	0.0	3178.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	13719.3	0.0	13719.3
	% Fixture	81.2	0.0	81.2
Total	Lumens	16898.2	0.0	16898.2
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.8	1.3
10°-20°	630.3	3.7
20°-30°	1041.5	6.2
30°-40°	1686.4	10.0
40°-50°	2694.0	15.9
50°-60°	3858.1	22.8
60°-70°	4298.5	25.4
70°-80°	2150.5	12.7
80°-90°	319.1	1.9
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°	16898.2	100.0
0°-180°	16898.2	100.0

Coefficient of Utilization



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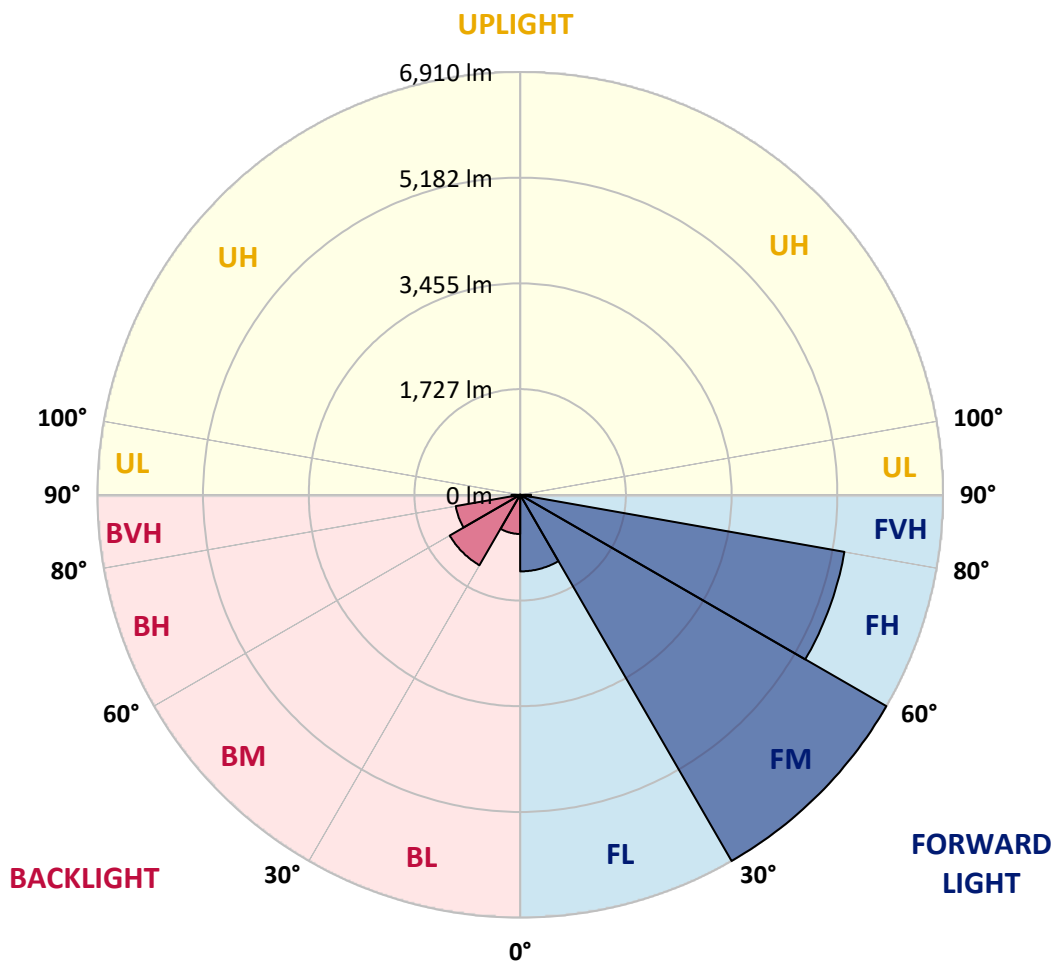
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1251.2	7.4			
FM (30°-60°)	6909.7	40.9			
FH (60°-80°)	5380.2	31.8			G3/7500
FVH (80°-90°)	178.3	1.1			G2/225
BL (0°-30°)	640.4	3.8	B2/1000		
BM (30°-60°)	1328.8	7.9	B2/2500		
BH (60°-80°)	1068.8	6.3	B3/2500		G3/2500
BVH (80°-90°)	140.8	0.8			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3
2.5°	2603.5	2598.0	2596.9	2580.3	2571.5	2552.7	2508.4	2463.2	2421.1	2399.0	2375.7
5°	2821.2	2810.3	2804.7	2777.1	2752.8	2710.7	2641.0	2569.2	2494.1	2455.3	2409.0
7.5°	2952.9	2953.9	2953.9	2931.9	2907.5	2856.7	2768.2	2669.9	2558.2	2507.3	2434.3
10°	2963.9	2965.0	2981.7	2987.1	2992.7	2966.2	2884.3	2760.5	2616.8	2550.5	2455.3
12.5°	2854.5	2862.2	2889.8	2929.6	2986.1	3014.7	2979.4	2857.8	2692.0	2611.3	2495.1
15°	2707.4	2715.1	2750.5	2811.3	2902.1	2998.2	3047.9	2969.4	2790.3	2695.3	2553.7
17.5°	2635.5	2644.4	2668.8	2717.4	2805.9	2935.1	3084.4	3088.8	2906.5	2797.0	2623.4
20°	2601.3	2607.9	2639.0	2678.7	2746.1	2869.9	3087.7	3214.9	3044.6	2917.4	2708.5
22.5°	2679.7	2682.0	2697.5	2719.6	2765.0	2860.1	3085.5	3345.3	3217.1	3068.9	2818.0
25°	2909.7	2895.3	2884.3	2856.7	2867.7	2935.1	3120.9	3484.6	3438.2	3267.9	2963.9
27.5°	3181.6	3179.6	3150.7	3086.7	3045.8	3088.8	3221.5	3640.6	3709.0	3521.0	3155.1
30°	3484.6	3485.8	3455.9	3377.4	3294.4	3298.8	3381.8	3820.8	4032.9	3826.2	3390.7
32.5°	3801.8	3821.7	3766.6	3688.0	3587.4	3555.3	3611.7	4038.5	4407.8	4186.6	3663.6
35°	4181.2	4184.5	4123.6	4008.6	3908.0	3857.1	3909.2	4310.4	4840.0	4610.0	3996.5
37.5°	4574.7	4576.9	4513.9	4366.8	4239.7	4206.6	4264.1	4641.1	5297.7	5092.0	4387.9
40°	4896.3	4919.6	4869.8	4731.6	4603.5	4583.5	4666.4	5036.7	5882.6	5662.5	4853.3
42.5°	5261.3	5287.8	5228.0	5084.2	4982.5	4975.9	5105.2	5487.8	6464.1	6322.5	5380.6
45°	5672.4	5710.0	5627.2	5465.6	5379.5	5525.5	5533.1	5987.6	7133.9	7060.9	5974.3
47.5°	6121.3	6152.2	6084.8	5911.2	5817.2	6028.4	5952.1	6528.2	7858.1	7852.5	6616.6
50°	6467.3	6501.7	6508.2	6432.0	6333.5	6360.1	6412.0	7096.3	8580.0	8666.2	7281.0
52.5°	6404.2	6437.4	6586.7	6786.9	6944.8	6876.3	6939.3	7700.0	9277.5	9460.1	7912.2
55°	5895.8	5913.5	6193.2	6668.5	7341.8	7669.0	7673.4	8356.7	9940.9	10196.2	8511.4
57.5°	4979.2	4981.6	5345.3	6046.1	7110.8	8183.1	8832.0	9181.3	10632.9	11009.8	9254.2
60°	3523.3	3532.1	3955.5	4872.0	6282.7	8121.1	10077.9	10657.2	11434.4	11924.2	10211.8
62.5°	2091.7	2111.6	2431.1	3166.3	4666.4	7325.1	10814.2	13282.9	12615.1	13265.2	11744.0
65°	1360.9	1377.6	1568.7	1938.0	2757.2	5329.7	10572.2	15825.6	14849.4	15374.5	13946.1
67.5°	1048.1	1061.3	1211.6	1435.0	1691.5	2881.0	8452.8	16358.5	17569.1	17732.6	15804.6
69°	920.9	931.9	1042.6	1257.0	1424.0	1907.0	6299.3	15391.1	18248.9	18338.4	15827.7
70°	853.5	862.4	966.2	1151.9	1307.8	1522.3	4821.3	14267.9	18000.1	18228.9	15371.2
72.5°	703.2	710.9	784.8	927.5	1069.1	1084.6	2135.9	10418.5	15156.7	15888.6	13007.5
75°	587.0	591.4	640.1	744.1	865.6	863.5	1091.1	5901.2	9248.8	10121.1	8031.7
77.5°	489.8	493.1	525.1	589.3	683.3	679.8	768.3	2547.1	4083.9	3940.1	2765.0
80°	432.3	434.5	451.0	467.7	527.3	524.0	569.3	1169.7	1661.7	1535.6	1045.8
82.5°	328.3	332.7	416.8	424.4	409.1	394.6	397.0	681.0	851.2	775.0	561.6
85°	185.7	186.8	267.5	312.9	356.0	267.5	257.5	351.5	420.0	368.1	245.4
87.5°	83.0	86.2	128.3	148.1	192.3	156.9	147.1	149.3	181.3	150.3	97.2
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°	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3	2371.3
2.5°	2353.6	2334.9	2290.7	2245.4	2199.9	2171.3	2141.4	2113.7	2102.8	2101.7	2080.7
5°	2363.6	2319.3	2218.8	2108.2	2003.2	1921.5	1852.8	1808.6	1765.4	1757.8	1738.9
7.5°	2366.9	2295.1	2131.5	1954.5	1794.3	1681.4	1612.9	1583.2	1562.2	1556.6	1549.9
10°	2365.9	2264.1	2034.1	1792.1	1609.7	1524.6	1499.1	1505.6	1514.5	1518.9	1518.9
12.5°	2383.6	2249.7	1936.8	1639.4	1490.3	1449.3	1469.3	1503.6	1530.1	1541.1	1543.3
15°	2415.5	2240.9	1829.7	1506.8	1406.2	1416.2	1464.9	1514.5	1552.1	1568.7	1573.1
17.5°	2455.3	2228.8	1705.8	1397.4	1357.6	1391.8	1454.8	1517.9	1563.2	1584.3	1587.6
20°	2499.5	2211.1	1577.6	1315.6	1314.5	1357.6	1420.6	1491.4	1540.1	1563.2	1562.2
22.5°	2559.4	2194.5	1458.2	1255.9	1266.9	1306.8	1358.6	1422.8	1468.1	1489.1	1484.7
25°	2639.0	2179.0	1351.0	1202.8	1212.7	1239.3	1275.8	1324.5	1356.5	1367.5	1359.8
27.5°	2746.1	2166.8	1266.9	1154.1	1153.1	1165.2	1187.3	1213.9	1229.3	1226.0	1213.9
30°	2877.7	2154.7	1205.0	1111.1	1095.6	1094.5	1104.5	1119.8	1129.9	1109.9	1100.1
32.5°	3024.8	2133.7	1149.7	1073.5	1045.8	1035.8	1040.2	1061.3	1102.2	1082.3	1074.6
35°	3198.2	2109.3	1094.5	1032.5	1011.5	992.7	996.1	1041.5	1165.2	1150.9	1143.2
37.5°	3407.2	2087.2	1043.7	988.3	987.2	964.1	961.8	1016.0	1181.8	1150.9	1144.3
40°	3658.2	2082.8	998.2	939.6	957.4	948.5	940.9	973.9	1090.1	1027.0	1014.8
42.5°	3961.0	2102.8	965.0	893.3	923.1	944.1	929.7	937.6	985.0	928.7	918.6
45°	4314.9	2156.9	940.9	852.3	886.6	940.9	924.3	917.6	925.3	894.4	887.7
47.5°	4727.2	2253.0	924.3	818.0	852.3	931.9	922.0	908.7	905.4	887.7	883.4
50°	5168.3	2382.5	913.1	787.2	821.4	916.5	920.9	902.1	896.6	888.9	886.6
52.5°	5606.1	2522.8	899.9	760.7	796.0	897.6	922.0	895.5	887.7	883.4	881.1
55°	6041.7	2668.8	875.6	737.4	777.2	875.6	920.9	886.6	877.7	877.7	877.7
57.5°	6606.7	2890.9	843.5	718.6	752.9	846.8	906.5	876.7	864.4	865.6	866.8
60°	7422.4	3263.5	808.1	697.5	720.8	813.7	884.4	859.0	844.6	849.1	850.2
62.5°	8785.7	3914.6	759.4	667.7	687.7	778.3	855.6	834.6	821.4	829.1	830.3
65°	10603.1	4702.8	695.4	630.2	653.3	738.4	819.2	805.9	791.5	810.4	809.3
67.5°	11711.9	4933.9	627.9	590.4	620.2	696.5	773.9	768.3	758.3	791.5	789.3
69°	11348.2	4516.0	589.3	564.9	597.0	667.7	745.1	742.9	735.2	767.2	765.0
70°	10783.3	4125.8	564.9	548.3	584.8	650.1	726.3	726.3	718.6	746.2	740.7
72.5°	8661.7	3060.0	508.5	506.4	542.8	601.4	675.4	681.0	676.6	686.6	681.0
75°	5085.5	1844.0	453.3	459.9	491.9	549.5	619.1	623.6	619.1	617.9	619.1
77.5°	1763.4	826.9	400.3	410.2	437.7	496.4	557.2	566.0	559.4	551.6	553.9
80°	689.9	481.0	342.8	357.0	380.3	436.7	495.2	500.9	490.8	489.8	481.0
82.5°	414.6	292.9	266.4	289.7	318.4	379.2	427.9	425.6	417.9	463.3	405.8
85°	180.2	162.6	194.6	217.7	232.1	284.1	361.5	351.5	332.7	292.9	286.3
87.5°	72.9	84.0	107.3	129.4	139.2	183.6	247.7	238.8	242.2	199.0	197.8
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)