

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: P270476

Luminaire Tested: **NAV-AF-03-D-UNV-T4FT-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270476
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
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-T4FT-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17400.7 lumens
Efficiency: N/A
Efficacy: 91.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B2 - 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

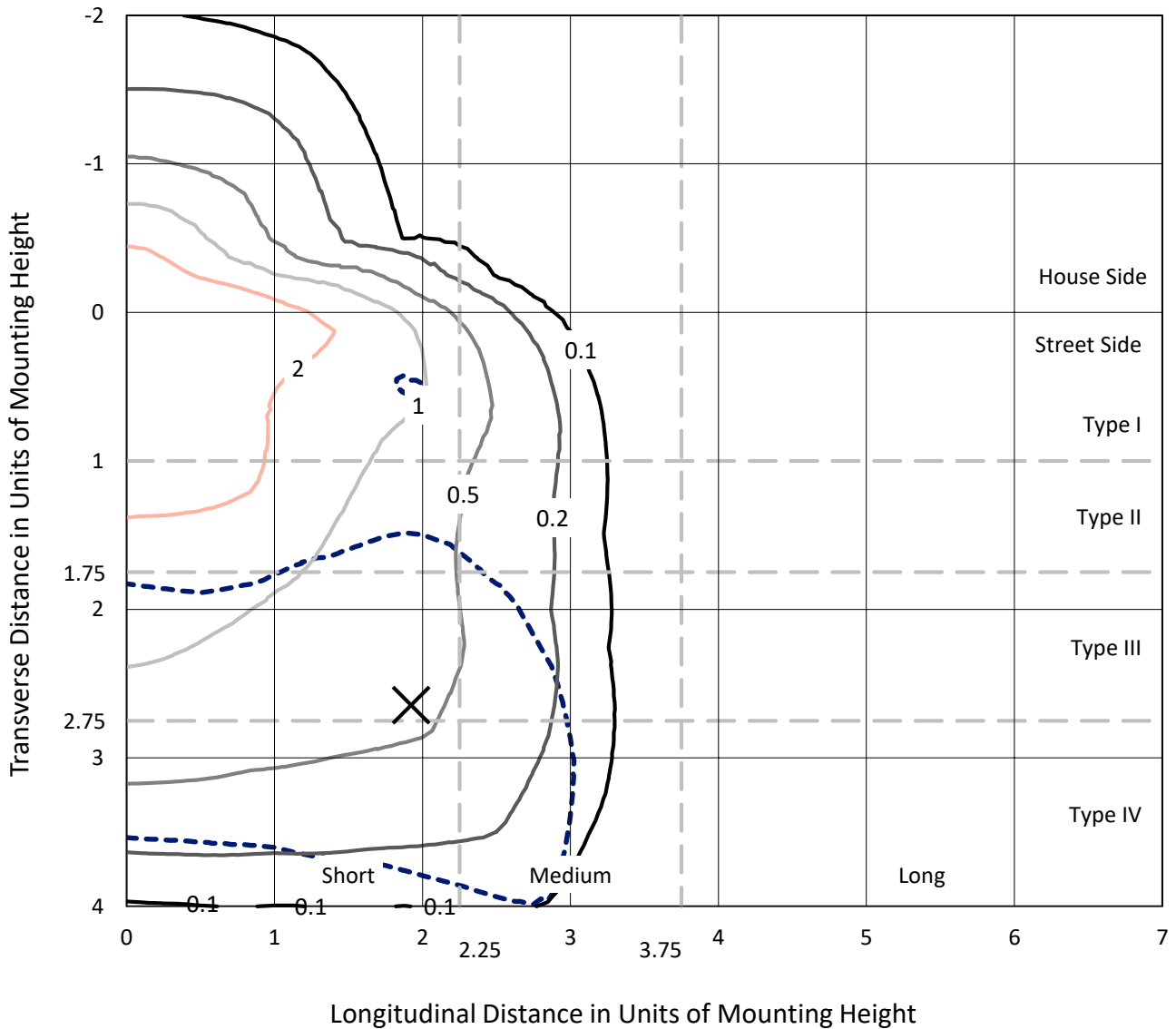


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Iso-Footcandle Lines of Horizontal Illumination

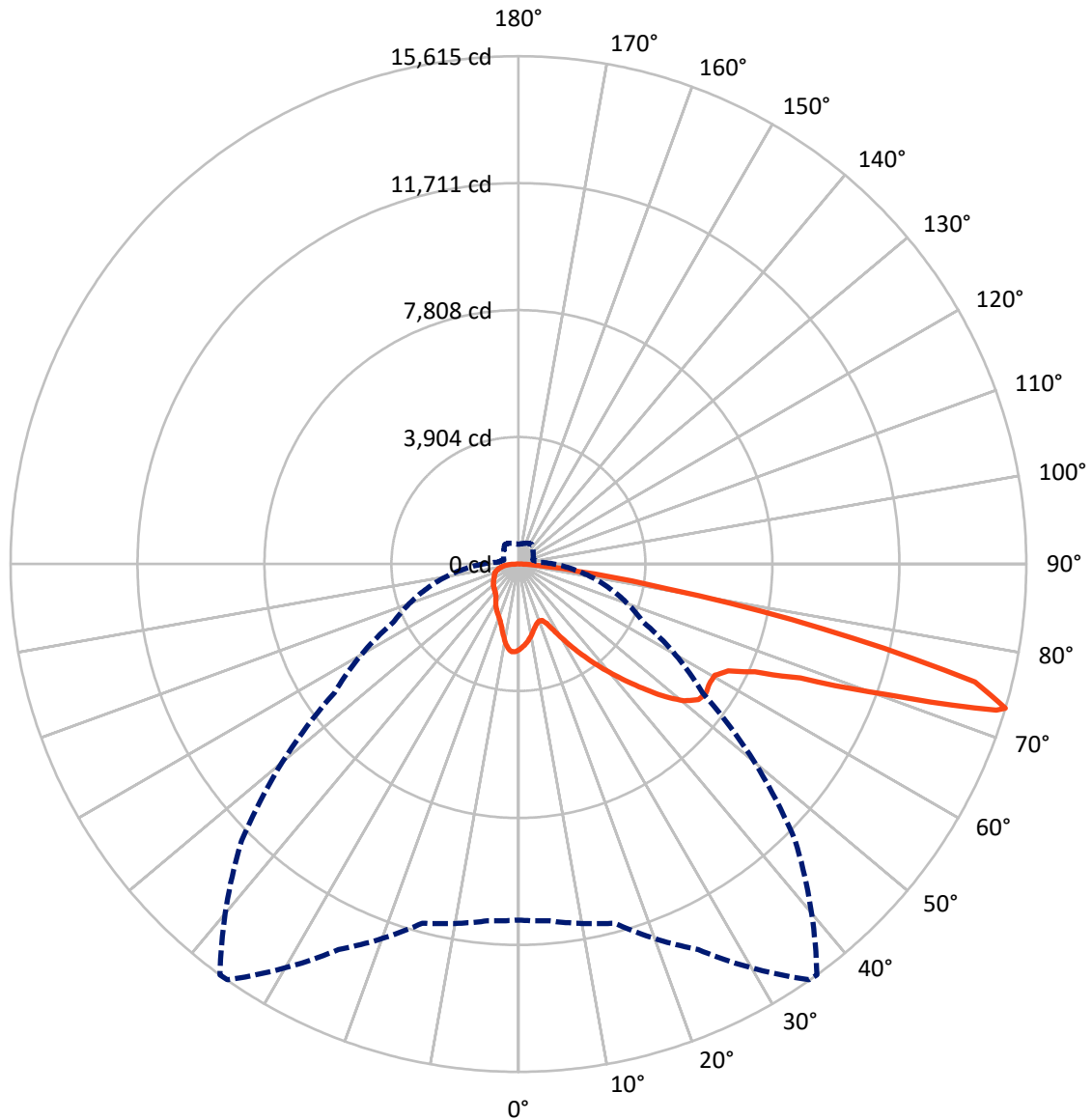
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3355.4	0.0	3355.4
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	14045.3	0.0	14045.3
	% Fixture	80.7	0.0	80.7
Total	Lumens	17400.7	0.0	17400.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.4	1.4
10°-20°	601.3	3.5
20°-30°	964.0	5.5
30°-40°	1594.5	9.2
40°-50°	2467.3	14.2
50°-60°	3303.0	19.0
60°-70°	4314.7	24.8
70°-80°	3524.3	20.3
80°-90°	392.3	2.3
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°	17400.7	100.0
0°-180°	17400.7	100.0



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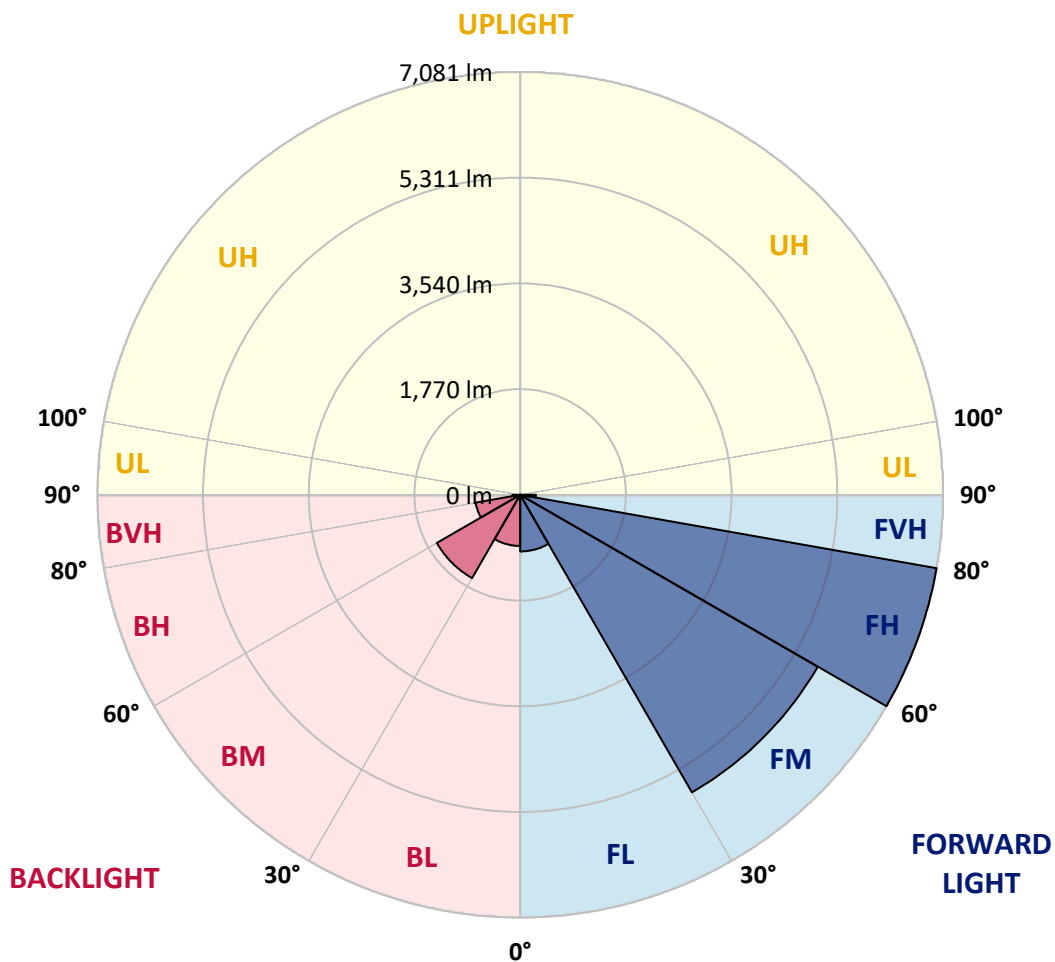
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	948.1	5.4			
FM	(30°-60°)	5753.3	33.1			
FH	(60°-80°)	7080.8	40.7			G3/7500
FVH	(80°-90°)	263.1	1.5			G3/500
BL	(0°-30°)	856.5	4.9	B2/1000		
BM	(30°-60°)	1611.4	9.3	B2/2500		
BH	(60°-80°)	758.2	4.4	B2/1000		G2/1000
BVH	(80°-90°)	129.2	0.7			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6
2.5°	2535.0	2541.8	2542.8	2550.6	2550.6	2549.5	2552.8	2566.1	2572.7	2588.1	2601.4
5°	2410.2	2417.9	2421.2	2434.4	2451.0	2452.2	2464.3	2489.7	2514.0	2548.3	2577.1
7.5°	2269.7	2278.6	2287.4	2315.1	2339.4	2341.6	2364.9	2405.8	2437.8	2479.9	2531.8
10°	2133.7	2136.0	2144.9	2180.1	2212.3	2215.6	2248.7	2295.2	2338.3	2396.9	2455.4
12.5°	2022.2	2028.7	2026.5	2053.0	2080.7	2082.9	2127.1	2185.8	2248.7	2315.1	2384.7
15°	1983.4	1982.3	1959.1	1957.9	1970.2	1972.4	2015.4	2084.0	2154.8	2236.6	2326.2
17.5°	2010.0	2001.2	1940.2	1902.7	1895.0	1897.2	1929.2	2004.4	2079.5	2173.5	2280.7
20°	2155.9	2121.5	1979.0	1888.3	1862.8	1862.8	1881.7	1942.6	2025.4	2134.9	2269.7
22.5°	2501.9	2448.9	2144.9	1983.4	1893.8	1885.1	1870.6	1917.1	2008.8	2140.4	2315.1
25°	2937.5	2912.0	2448.9	2236.6	2052.0	2023.3	1928.1	1944.7	2043.1	2200.0	2438.9
27.5°	3341.1	3296.8	2847.9	2604.7	2343.8	2299.7	2098.4	2031.0	2124.9	2310.7	2618.0
30°	3576.5	3546.7	3258.2	3026.0	2715.2	2659.0	2370.4	2201.1	2270.8	2493.1	2872.3
32.5°	3833.1	3815.3	3669.3	3458.2	3117.7	3052.5	2722.0	2478.8	2494.1	2735.2	3178.6
35°	4081.8	4105.1	4022.2	3867.4	3551.1	3490.4	3194.1	2841.2	2769.5	3007.2	3505.7
37.5°	4380.2	4385.9	4333.9	4233.3	4006.6	3956.9	3712.5	3228.2	3069.1	3296.8	3822.0
40°	4976.3	4888.8	4685.4	4605.8	4471.0	4440.1	4161.4	3583.2	3347.8	3594.2	4120.4
42.5°	5620.8	5484.8	5166.3	5035.9	4981.7	4953.0	4535.1	3819.8	3608.6	3891.6	4413.5
45°	6140.4	6029.9	5718.0	5556.6	5563.3	5516.9	4861.2	4031.0	3891.6	4190.1	4740.7
47.5°	6652.3	6467.6	6118.3	6095.1	6172.4	6104.0	5173.0	4242.1	4186.8	4515.2	5068.0
50°	6685.5	6517.5	6375.9	6561.6	6694.3	6609.1	5456.0	4518.6	4493.1	4908.8	5490.4
52.5°	6281.8	6257.6	6473.1	6786.1	7006.1	6929.7	5687.1	4802.6	4805.9	5400.7	6004.5
55°	6134.9	6104.0	6362.5	6747.3	7044.8	6999.5	5859.6	5123.3	5153.0	5997.8	6556.1
57.5°	6382.5	6305.2	6356.0	6674.3	6954.0	6927.5	6038.6	5479.2	5533.4	6685.5	7065.8
60°	7150.9	6992.8	6723.1	6782.7	6957.5	6941.9	6295.1	5876.2	5966.8	7401.9	7388.6
62.5°	8301.7	8122.7	7573.3	7307.9	7269.2	7239.4	6718.7	6363.8	6409.0	7919.3	7200.6
65°	9564.3	9371.9	8718.6	8284.1	8056.4	7992.2	7401.9	6951.9	6667.7	7918.1	6468.8
67.5°	10981.7	10778.3	10127.1	9712.6	9466.0	9356.4	8510.7	7427.2	6583.7	7248.2	5176.4
70°	12433.4	12239.9	11941.3	12086.2	12194.5	12027.5	10257.6	7585.4	5980.0	5682.7	3475.9
72.5°	11662.8	11647.2	11873.8	13247.0	15335.4	15368.7	12002.2	7138.7	4620.3	3377.5	1852.9
73°	10947.5	11012.6	11432.8	13075.6	15604.1	15615.1	12036.4	6907.6	4242.1	2909.9	1627.4
75°	5671.5	6113.9	7672.8	10602.4	14448.8	14500.8	10610.2	5229.5	2528.5	1616.4	1096.7
77.5°	1519.0	1499.1	2472.0	5165.3	9633.0	9564.3	6704.2	2531.8	1211.8	1013.7	769.5
80°	520.7	527.3	841.4	1889.4	4496.3	4656.8	2909.9	1104.5	797.2	706.4	545.0
82.5°	265.3	274.3	440.0	803.8	1880.6	1840.7	936.5	650.1	534.0	429.0	305.2
85°	141.6	146.0	242.2	416.9	689.9	697.7	329.5	347.1	339.4	243.3	150.3
87.5°	69.7	71.9	116.2	183.6	255.4	246.6	115.0	150.3	166.9	137.1	83.0
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°	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6	2635.6
2.5°	2618.0	2618.0	2632.4	2656.6	2674.4	2691.0	2702.0	2719.7	2729.7	2728.5	2727.4
5°	2600.4	2611.4	2640.1	2669.9	2689.9	2703.1	2703.1	2710.8	2710.8	2707.5	2703.1
7.5°	2559.5	2578.2	2620.3	2646.8	2652.2	2638.0	2609.1	2587.1	2559.5	2545.1	2539.5
10°	2494.1	2518.5	2571.6	2583.7	2555.0	2504.1	2434.4	2374.8	2321.7	2297.3	2289.7
12.5°	2430.1	2462.2	2511.9	2493.1	2424.5	2325.1	2217.7	2136.0	2076.3	2053.0	2045.4
15°	2376.9	2415.7	2454.3	2395.8	2276.3	2138.1	2019.8	1943.7	1898.3	1880.6	1876.2
17.5°	2341.6	2386.9	2400.2	2290.8	2124.9	1970.2	1865.2	1815.4	1795.4	1787.7	1785.6
20°	2343.8	2394.7	2362.6	2189.0	1979.0	1823.1	1753.4	1739.1	1739.1	1739.1	1738.0
22.5°	2404.7	2448.9	2347.1	2093.9	1838.7	1699.2	1669.4	1681.5	1690.4	1690.4	1689.4
25°	2530.6	2555.0	2358.2	2002.2	1707.0	1592.1	1593.1	1616.4	1624.0	1624.0	1621.9
27.5°	2723.0	2703.1	2378.2	1900.5	1577.7	1494.7	1510.2	1531.3	1536.7	1533.4	1532.2
30°	2964.0	2884.5	2394.7	1781.1	1456.1	1404.1	1417.3	1429.6	1425.2	1417.3	1416.3
32.5°	3233.8	3069.1	2384.7	1647.3	1348.8	1310.1	1317.9	1324.6	1317.9	1299.0	1299.0
35°	3501.4	3236.1	2330.6	1501.3	1263.6	1219.4	1218.3	1239.3	1238.3	1216.1	1217.3
37.5°	3735.7	3367.6	2225.6	1367.6	1190.8	1153.2	1157.6	1170.9	1177.5	1147.6	1144.4
40°	3940.2	3458.2	2077.4	1253.8	1132.1	1134.3	1122.2	1101.1	1093.3	1080.1	1078.0
42.5°	4132.7	3521.3	1920.3	1158.6	1102.3	1127.7	1086.8	1037.1	1016.1	1028.2	1035.9
45°	4321.7	3592.1	1768.9	1080.1	1064.8	1107.8	1051.3	996.1	971.7	977.4	985.1
47.5°	4552.8	3690.3	1586.4	996.1	1007.2	1071.3	1029.3	969.6	933.1	911.1	904.4
50°	4856.7	3833.1	1350.0	905.5	946.4	1031.6	1010.6	931.0	891.1	846.9	835.9
52.5°	5237.1	3968.0	1111.2	832.5	896.6	997.2	979.5	897.8	849.1	796.0	787.2
55°	5616.4	3986.7	905.5	769.5	840.3	950.8	942.0	871.1	802.6	759.5	750.8
57.5°	5881.7	3808.8	767.2	716.4	786.0	893.4	907.6	839.1	764.0	730.9	725.2
60°	5886.1	3383.0	683.3	681.0	745.1	843.6	872.3	801.6	739.7	717.6	713.2
62.5°	5418.4	2726.4	629.1	654.5	715.3	802.6	845.8	780.5	734.2	725.2	720.8
65°	4541.7	2014.4	586.0	630.3	687.7	768.4	823.7	773.9	731.8	728.5	725.2
67.5°	3353.3	1380.9	549.5	599.2	656.8	732.9	802.6	764.0	718.6	731.8	727.4
70°	2109.4	922.0	515.2	563.9	615.8	692.1	775.0	746.2	702.0	694.3	679.9
72.5°	1190.8	666.6	474.2	518.5	562.8	637.9	737.4	716.4	664.4	633.5	619.1
73°	1075.7	631.2	464.3	507.5	550.7	626.8	728.5	707.5	653.3	619.1	605.8
75°	787.2	516.3	419.0	462.2	499.6	576.1	686.6	663.4	604.7	563.9	555.1
77.5°	570.5	397.9	360.4	399.0	432.3	505.2	623.6	597.1	539.5	517.5	508.6
80°	411.2	301.8	298.4	336.1	364.8	438.9	556.1	528.5	473.1	538.4	524.0
82.5°	245.4	193.4	218.8	260.9	290.8	368.1	483.2	451.0	397.9	402.4	342.8
85°	117.1	109.5	136.1	171.3	192.3	252.1	402.4	377.0	318.4	260.9	255.4
87.5°	51.9	49.8	65.2	76.3	102.9	151.5	275.3	244.2	231.0	138.2	108.3
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)