

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: P270473

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270473
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
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1050mA 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: 15861.7 lumens
Efficiency: N/A
Efficacy: 95.6 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

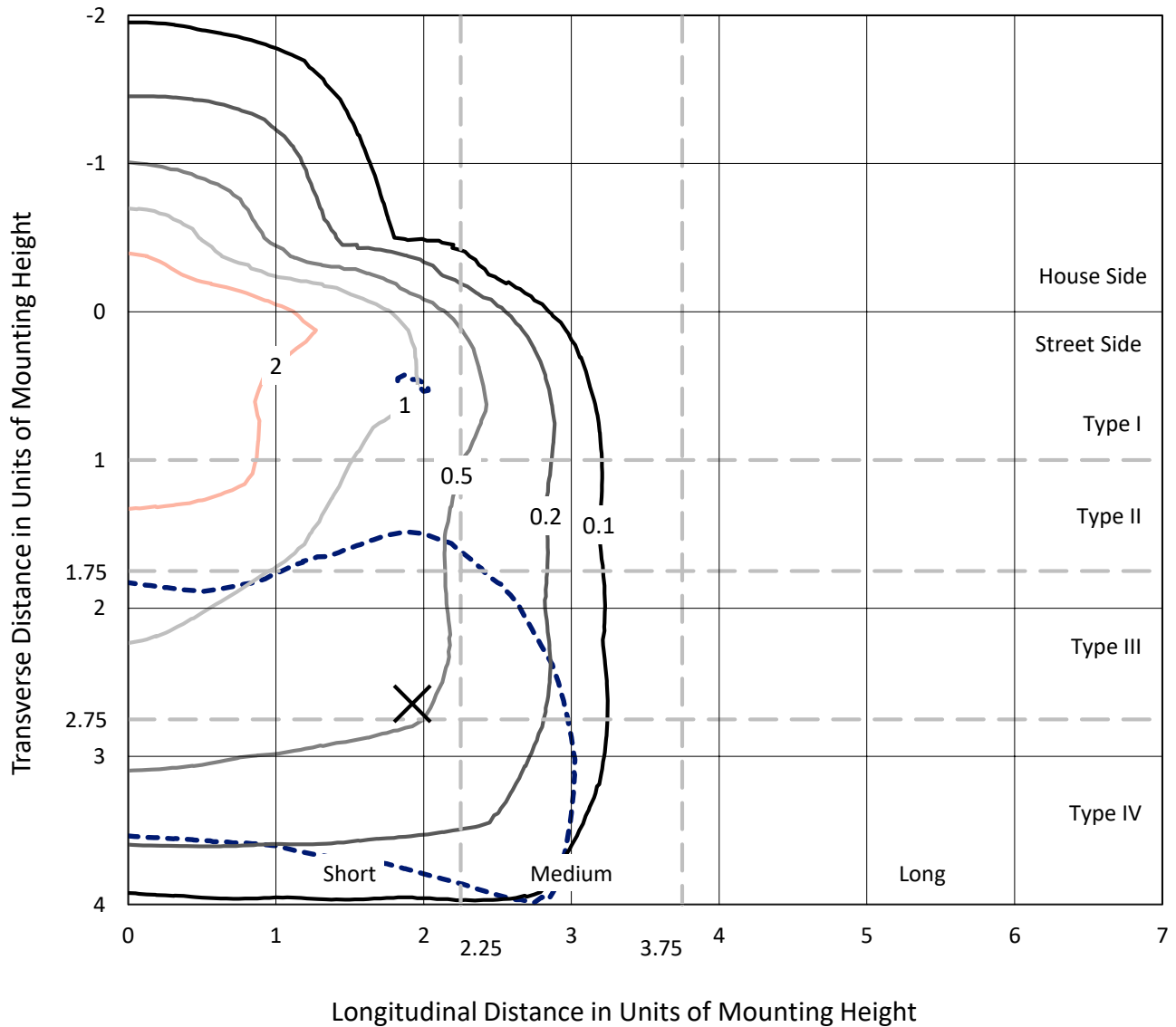
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

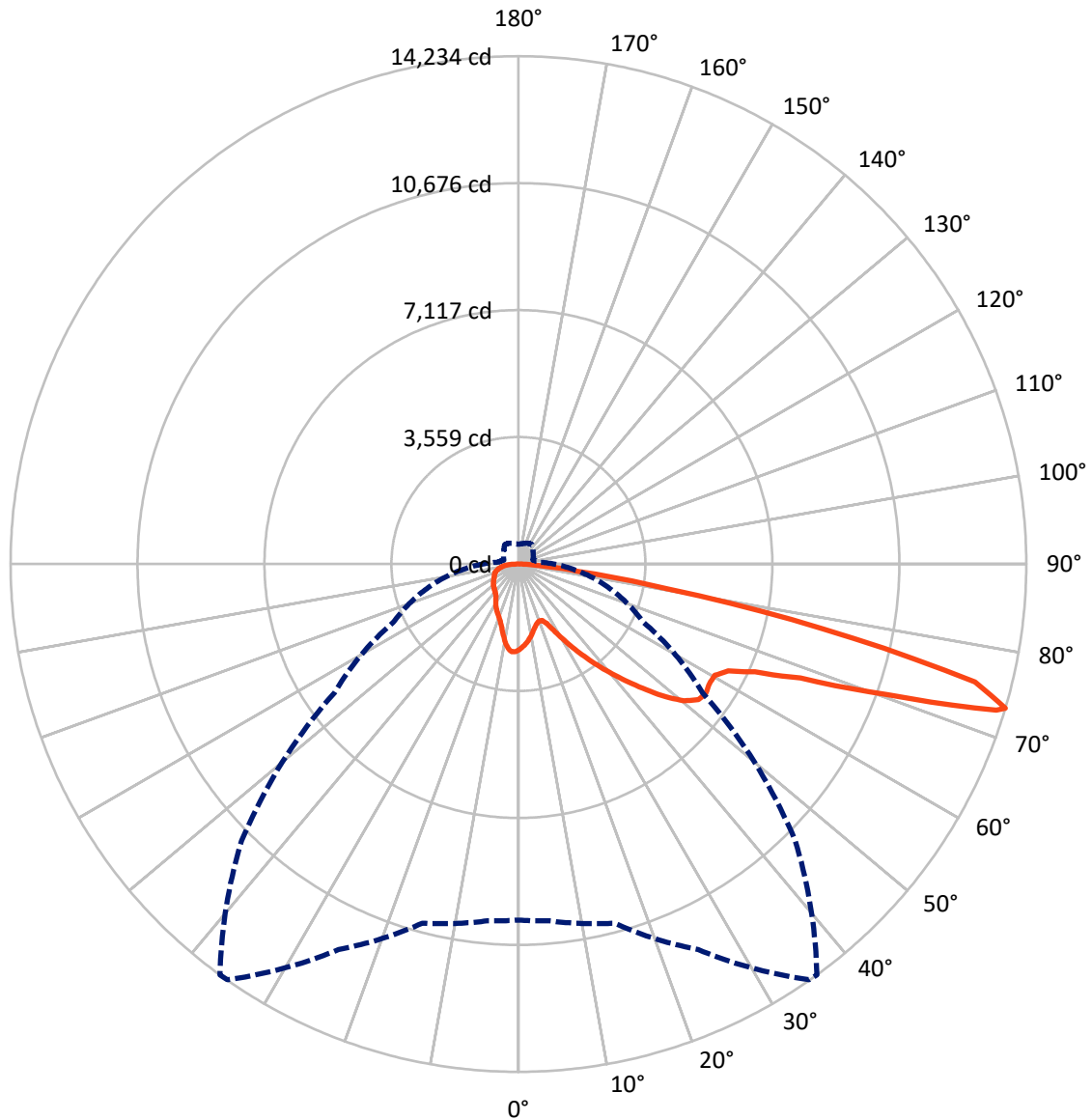
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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	3058.6	0.0	3058.6
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	12803.1	0.0	12803.1
	% Fixture	80.7	0.0	80.7
Total	Lumens	15861.7	0.0	15861.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.2	1.4
10°-20°	548.1	3.5
20°-30°	878.7	5.5
30°-40°	1453.5	9.2
40°-50°	2249.1	14.2
50°-60°	3010.8	19.0
60°-70°	3933.1	24.8
70°-80°	3212.7	20.3
80°-90°	357.6	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°	15861.7	100.0
0°-180°	15861.7	100.0



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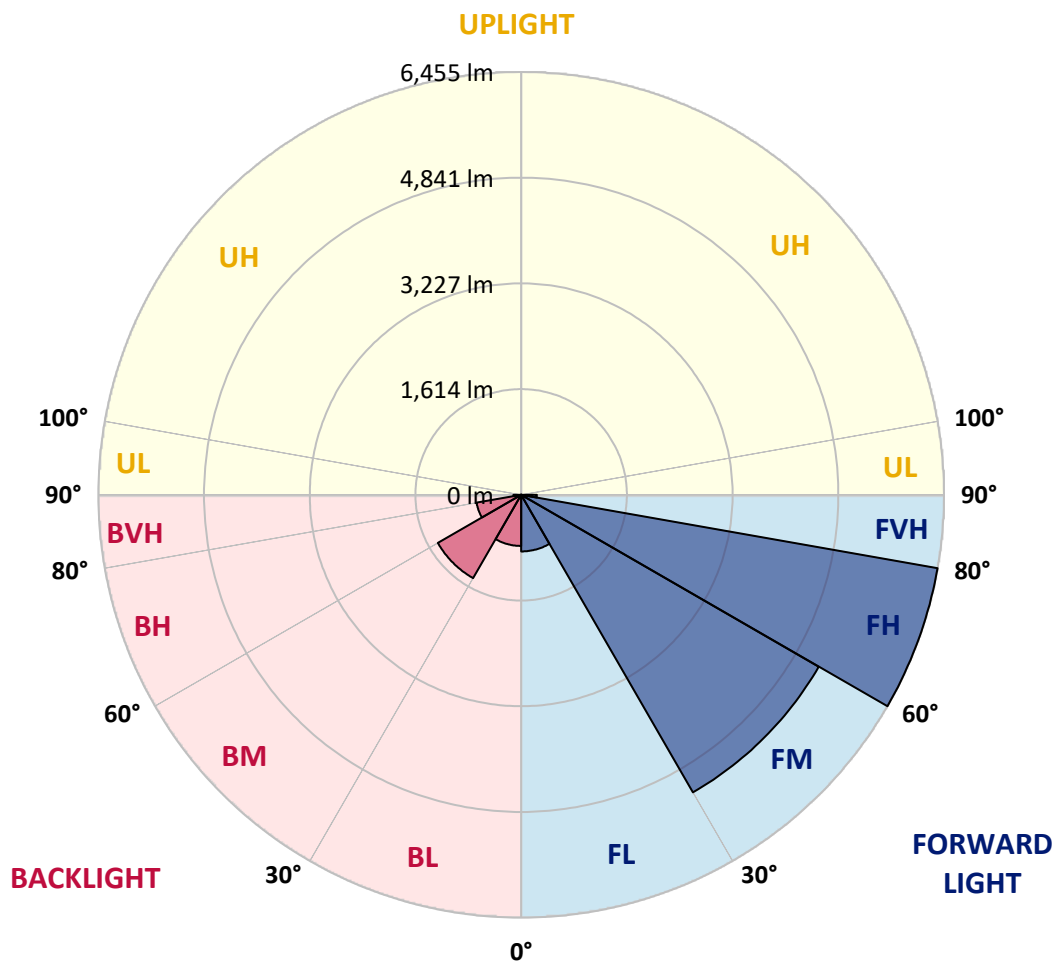
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	864.3	5.4			
FM (30°-60°)	5244.4	33.1			
FH (60°-80°)	6454.6	40.7			G3/7500
FVH (80°-90°)	239.8	1.5			G3/500
BL (0°-30°)	780.7	4.9	B2/1000		
BM (30°-60°)	1468.9	9.3	B2/2500		
BH (60°-80°)	691.2	4.4	B2/1000		G2/1000
BVH (80°-90°)	117.8	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°	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5
2.5°	2310.9	2316.9	2317.9	2325.1	2325.1	2323.9	2327.0	2339.0	2345.1	2359.3	2371.3
5°	2197.1	2204.0	2207.0	2219.2	2234.3	2235.3	2246.4	2269.6	2291.8	2322.9	2349.2
7.5°	2068.9	2077.2	2085.1	2110.3	2132.4	2134.6	2155.8	2192.9	2222.1	2260.4	2307.8
10°	1945.0	1947.0	1955.2	1987.4	2016.7	2019.6	2049.8	2092.2	2131.5	2184.9	2238.3
12.5°	1843.2	1849.3	1847.3	1871.4	1896.7	1898.7	1939.0	1992.4	2049.8	2110.3	2173.8
15°	1808.0	1807.0	1785.8	1784.8	1795.9	1797.9	1837.3	1899.6	1964.2	2038.8	2120.4
17.5°	1832.2	1824.1	1768.8	1734.4	1727.4	1729.3	1758.6	1827.2	1895.7	1981.3	2079.0
20°	1965.2	1934.1	1803.9	1721.3	1698.2	1698.2	1715.3	1770.6	1846.2	1946.1	2068.9
22.5°	2280.6	2232.3	1955.2	1808.0	1726.4	1718.3	1705.3	1747.6	1831.1	1951.1	2110.3
25°	2677.7	2654.5	2232.3	2038.8	1870.5	1844.3	1757.7	1772.7	1862.4	2005.6	2223.1
27.5°	3045.6	3005.3	2596.1	2374.4	2136.4	2096.3	1912.9	1851.3	1936.9	2106.3	2386.4
30°	3260.2	3233.0	2969.9	2758.3	2475.2	2423.7	2160.8	2006.5	2070.1	2272.6	2618.3
32.5°	3494.0	3477.9	3344.8	3152.4	2842.0	2782.5	2481.2	2259.4	2273.6	2493.2	2897.5
35°	3720.8	3742.0	3666.3	3525.3	3237.0	3181.5	2911.5	2590.1	2524.5	2741.2	3195.7
37.5°	3992.8	3997.9	3950.6	3858.8	3652.2	3607.0	3384.2	2942.8	2797.6	3005.3	3483.9
40°	4536.1	4456.5	4271.0	4198.5	4075.5	4047.4	3793.4	3266.2	3051.6	3276.4	3756.1
42.5°	5123.7	4999.6	4709.5	4590.5	4541.1	4514.9	4134.0	3481.9	3289.5	3547.4	4023.1
45°	5597.2	5496.5	5212.3	5065.3	5071.2	5028.9	4431.2	3674.4	3547.4	3819.6	4321.4
47.5°	6063.9	5895.7	5577.1	5555.9	5626.5	5564.0	4715.6	3866.9	3816.4	4115.9	4619.8
50°	6094.1	5941.0	5811.9	5981.3	6102.2	6024.7	4973.5	4118.9	4095.7	4474.5	5004.7
52.5°	5726.2	5704.1	5900.6	6185.9	6386.4	6316.9	5184.1	4377.9	4380.9	4923.2	5473.4
55°	5592.3	5564.0	5799.8	6150.5	6421.8	6380.4	5341.3	4670.2	4697.3	5467.4	5976.2
57.5°	5818.1	5747.4	5793.8	6084.1	6339.1	6314.8	5504.6	4994.7	5044.1	6094.1	6440.8
60°	6518.5	6374.4	6128.3	6182.9	6342.0	6328.0	5738.5	5356.5	5439.1	6747.2	6735.1
62.5°	7567.5	7404.3	6903.5	6661.6	6626.3	6599.0	6124.4	5800.9	5842.1	7218.9	6563.7
65°	8718.5	8543.2	7947.5	7551.4	7343.9	7285.3	6747.2	6337.1	6078.0	7217.8	5896.7
67.5°	10010.4	9825.0	9231.4	8853.4	8628.8	8529.0	7758.0	6770.3	6001.4	6607.2	4718.4
70°	11333.6	11157.3	10885.2	11017.3	11115.9	10963.9	9350.4	6914.6	5451.2	5180.0	3168.5
72.5°	10631.3	10617.2	10823.8	12075.5	13979.2	14009.3	10940.6	6507.3	4211.7	3078.9	1689.1
73°	9979.2	10038.6	10421.6	11919.3	14224.0	14234.2	10971.9	6296.7	3866.9	2652.5	1483.6
75°	5169.9	5573.2	6994.2	9664.8	13170.9	13218.3	9671.8	4766.9	2304.8	1473.4	999.8
77.5°	1384.6	1366.6	2253.5	4708.5	8780.9	8718.5	6111.3	2307.8	1104.6	924.1	701.4
80°	474.7	480.8	767.0	1722.3	4098.6	4244.9	2652.5	1006.8	726.5	643.9	496.9
82.5°	241.9	249.9	401.2	732.7	1714.2	1677.9	853.6	592.6	486.8	391.0	278.1
85°	128.9	132.9	220.8	380.0	628.9	635.9	300.4	316.5	309.3	221.7	137.0
87.5°	63.5	65.4	105.8	167.4	232.8	224.8	104.8	137.0	152.2	125.0	75.5
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°	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5	2402.5
2.5°	2386.4	2386.4	2399.6	2421.7	2437.9	2453.0	2463.1	2479.2	2488.2	2487.2	2486.1
5°	2370.4	2380.4	2406.6	2433.9	2452.0	2464.1	2464.1	2471.1	2471.1	2468.2	2464.1
7.5°	2333.1	2350.1	2388.5	2412.7	2417.7	2404.7	2378.4	2358.2	2333.1	2320.0	2314.9
10°	2273.6	2295.8	2344.1	2355.3	2329.0	2282.7	2219.2	2164.7	2116.3	2094.2	2087.1
12.5°	2215.1	2244.3	2289.7	2272.6	2210.1	2119.5	2021.6	1947.0	1892.6	1871.4	1864.4
15°	2166.7	2202.0	2237.3	2183.9	2075.1	1949.1	1841.3	1771.6	1730.3	1714.2	1710.3
17.5°	2134.6	2175.9	2187.9	2088.2	1936.9	1795.9	1700.1	1654.8	1636.6	1629.6	1627.5
20°	2136.4	2182.9	2153.6	1995.4	1803.9	1661.9	1598.4	1585.2	1585.2	1585.2	1584.3
22.5°	2192.0	2232.3	2139.6	1908.8	1676.0	1548.9	1521.8	1532.9	1541.0	1541.0	1540.0
25°	2306.8	2329.0	2149.6	1825.1	1556.0	1451.2	1452.2	1473.4	1480.4	1480.4	1478.4
27.5°	2482.1	2464.1	2167.8	1732.4	1438.1	1362.5	1376.7	1395.7	1400.8	1397.9	1396.9
30°	2701.9	2629.3	2182.9	1623.5	1327.2	1279.9	1292.0	1303.1	1299.0	1292.0	1291.0
32.5°	2947.8	2797.6	2173.8	1501.6	1229.5	1194.2	1201.4	1207.3	1201.4	1184.1	1184.1
35°	3191.7	2949.9	2124.4	1368.6	1151.8	1111.7	1110.6	1129.8	1128.7	1108.6	1109.5
37.5°	3405.4	3069.8	2028.7	1246.7	1085.4	1051.1	1055.1	1067.2	1073.4	1046.0	1043.1
40°	3591.9	3152.4	1893.6	1142.9	1032.1	1033.9	1022.9	1003.8	996.7	984.6	982.6
42.5°	3767.1	3209.9	1750.5	1056.1	1004.8	1027.9	990.7	945.3	926.2	937.2	944.3
45°	3939.4	3274.3	1612.5	984.6	970.4	1009.9	958.4	908.0	885.9	890.8	897.9
47.5°	4150.1	3364.1	1446.2	908.0	918.1	976.5	938.3	883.8	850.5	830.5	824.4
50°	4427.2	3494.0	1230.5	825.5	862.7	940.3	921.1	848.5	812.2	772.0	761.9
52.5°	4774.0	3616.9	1012.7	758.9	817.3	909.1	892.9	818.4	774.0	725.7	717.6
55°	5119.6	3634.2	825.5	701.4	766.0	866.8	858.6	794.1	731.7	692.4	684.2
57.5°	5361.4	3471.9	699.4	653.1	716.6	814.4	827.3	764.9	696.4	666.2	661.2
60°	5365.5	3083.8	622.9	620.8	679.3	768.9	795.2	730.6	674.2	654.1	650.1
62.5°	4939.2	2485.3	573.5	596.7	652.0	731.7	770.9	711.5	669.1	661.2	657.1
65°	4140.0	1836.2	534.1	574.5	626.8	700.4	750.9	705.4	667.3	664.1	661.2
67.5°	3056.7	1258.7	500.9	546.2	598.6	668.2	731.7	696.4	655.0	667.3	663.0
70°	1922.9	840.5	469.6	514.0	561.4	630.9	706.4	680.2	640.0	632.9	619.8
72.5°	1085.4	607.8	432.4	472.7	512.9	581.6	672.2	653.1	605.6	577.5	564.3
73°	980.6	575.5	423.3	462.5	502.0	571.4	664.1	645.1	595.5	564.3	552.3
75°	717.6	470.6	382.0	421.2	455.5	525.1	625.8	604.6	551.3	514.0	505.9
77.5°	519.9	362.8	328.5	363.9	394.0	460.7	568.4	544.3	491.8	471.6	463.5
80°	375.0	275.2	272.0	306.4	332.6	400.0	507.0	481.8	431.4	490.8	477.7
82.5°	223.8	176.3	199.6	237.8	265.1	335.5	440.3	411.2	362.8	366.9	312.4
85°	106.8	99.8	124.0	156.2	175.3	229.7	366.9	343.6	290.2	237.8	232.8
87.5°	47.4	45.4	59.5	69.6	93.8	138.1	250.9	222.7	210.7	126.0	98.8
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)