

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: P195555

Luminaire Tested: **NAV-AF-03-D-UNV-RW-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195555
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
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-RW-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 5000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12196 lumens
Efficiency: N/A
Efficacy: 127.0 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): 96
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

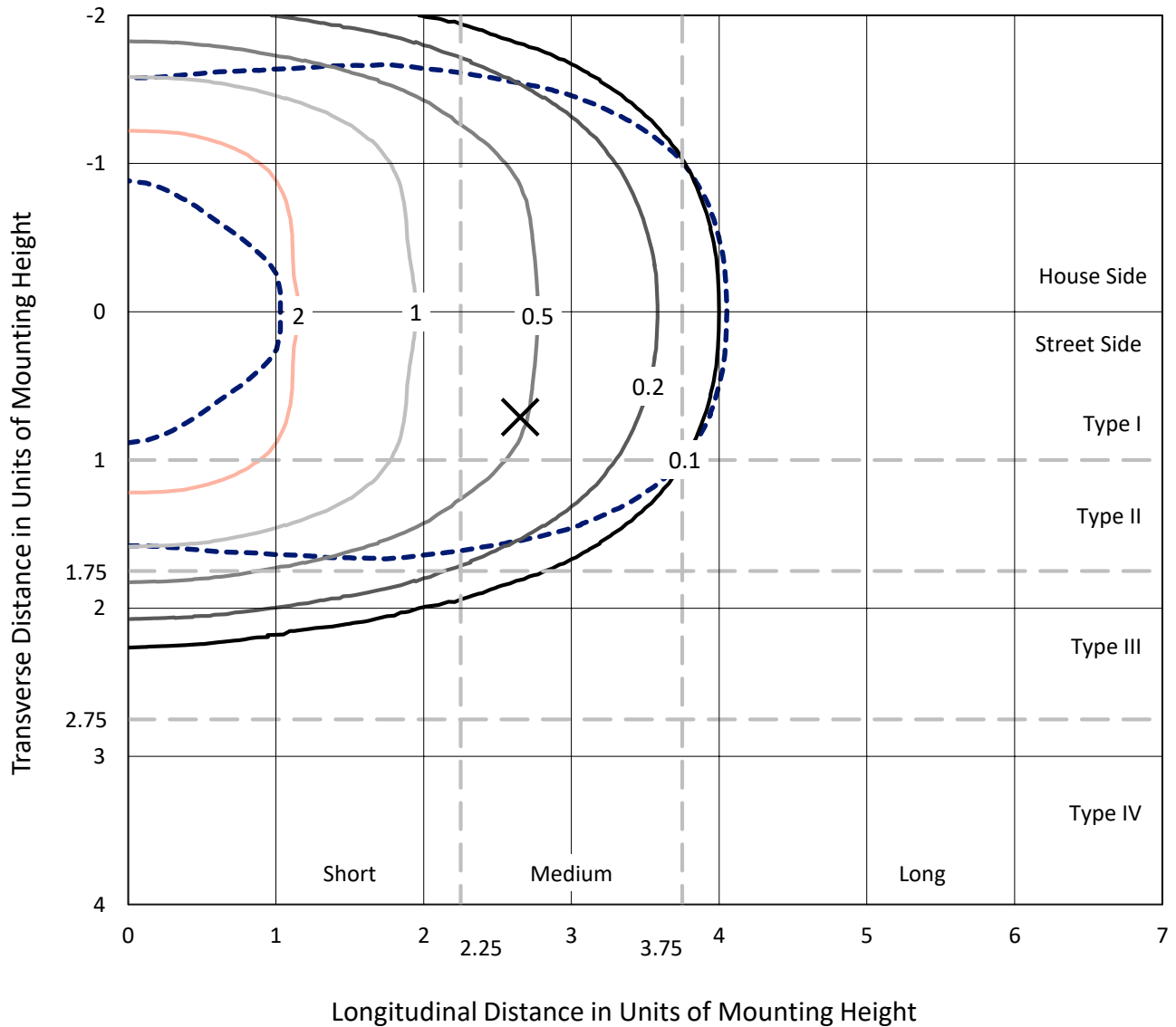


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Iso-Footcandle Lines of Horizontal Illumination

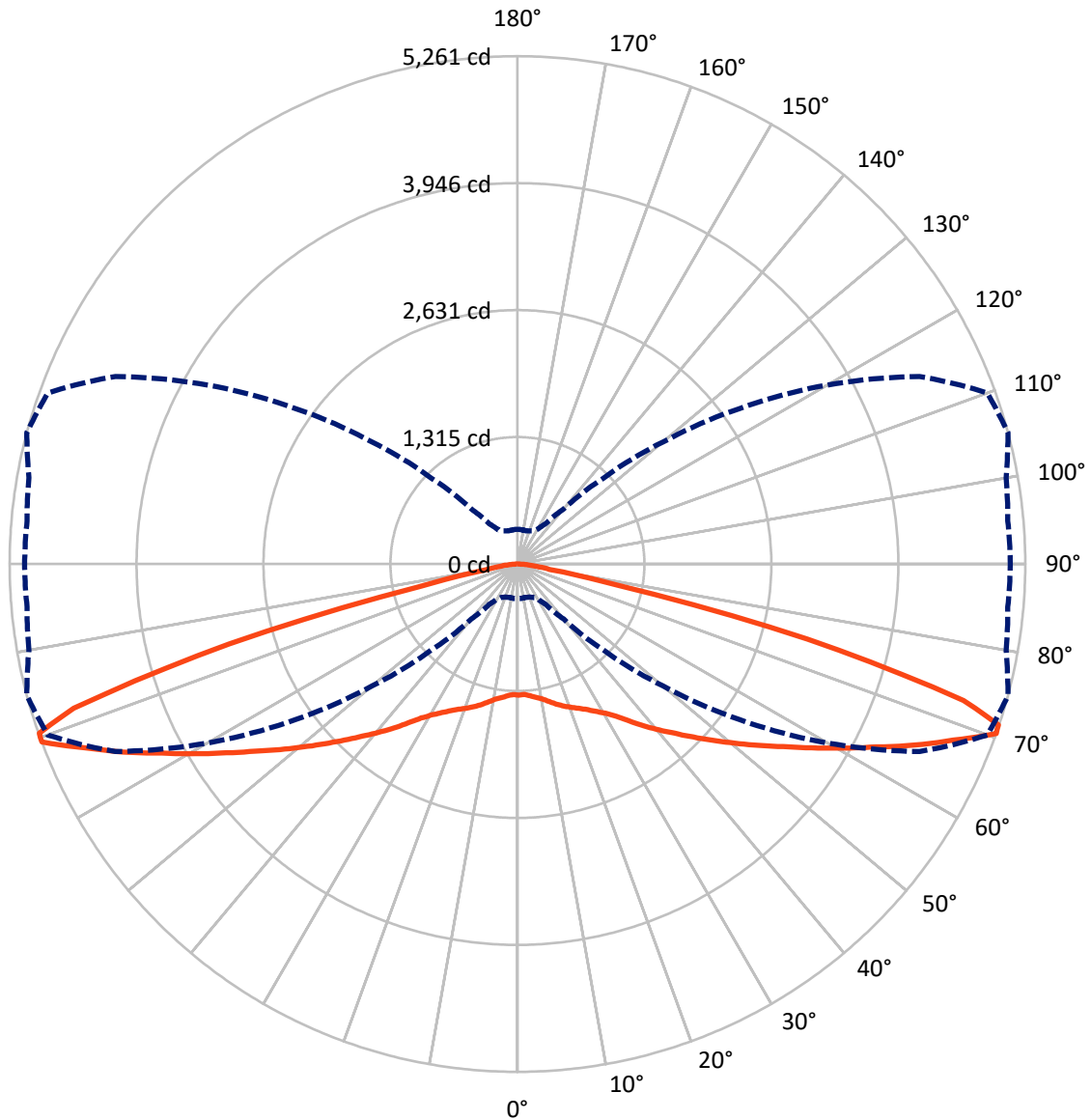
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.4 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6098.0	0.0	6098.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6098.0	0.0	6098.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	12196.0	0.0	12196.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.3	1.1
10°-20°	404.0	3.3
20°-30°	758.8	6.2
30°-40°	1336.7	11.0
40°-50°	2215.3	18.2
50°-60°	3081.8	25.3
60°-70°	2909.2	23.9
70°-80°	1242.6	10.2
80°-90°	117.4	1.0
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°	12196.0	100.0
0°-180°	12196.0	100.0



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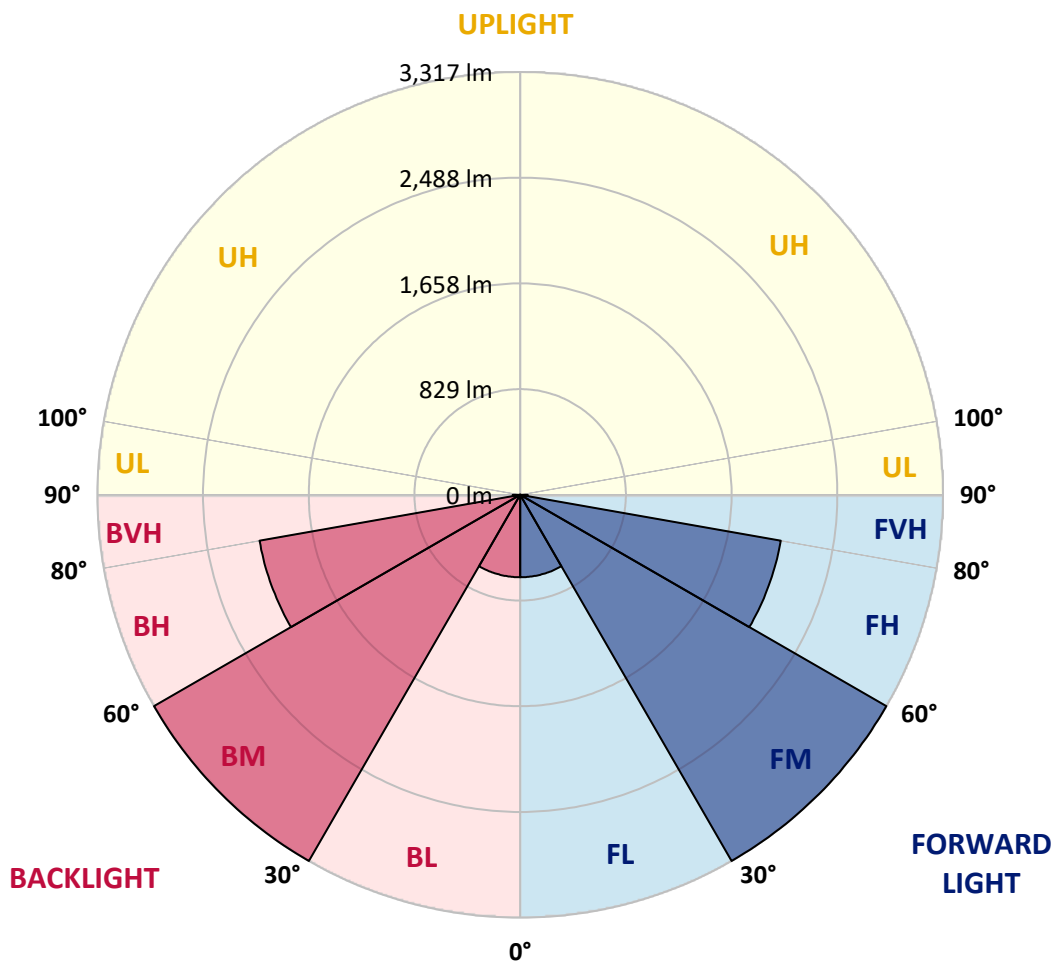
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	646.5	5.3			
FM	(30°-60°)	3316.8	27.2			
FH	(60°-80°)	2075.9	17.0			G2/5000
FVH	(80°-90°)	58.7	0.5			G1/100
BL	(0°-30°)	646.5	5.3	B2/1000		
BM	(30°-60°)	3316.8	27.2	B3/5000		
BH	(60°-80°)	2075.9	17.0	B3/2500		G3/2500
BVH	(80°-90°)	58.7	0.5			G1/100
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°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1
2.5°	1366.6	1365.8	1366.6	1364.3	1365.0	1364.3	1364.3	1361.2	1361.2	1359.7	1357.4
5°	1351.3	1352.8	1352.8	1352.8	1355.1	1355.1	1358.1	1358.9	1361.2	1363.5	1365.0
7.5°	1326.0	1326.8	1329.1	1330.6	1335.2	1341.3	1347.4	1354.3	1360.4	1368.1	1376.5
10°	1304.6	1306.2	1310.0	1313.8	1322.2	1329.9	1340.6	1351.3	1362.0	1375.0	1388.0
12.5°	1293.2	1295.5	1301.6	1307.7	1320.7	1330.6	1345.2	1362.0	1376.5	1388.7	1403.2
15°	1294.7	1295.5	1303.9	1312.3	1330.6	1344.4	1365.0	1384.9	1402.5	1416.2	1433.0
17.5°	1316.9	1318.4	1326.8	1339.0	1356.6	1374.2	1396.4	1417.0	1440.7	1456.7	1476.6
20°	1360.4	1362.7	1371.9	1384.9	1404.0	1422.3	1445.3	1466.7	1491.1	1510.2	1530.1
22.5°	1417.0	1420.8	1430.8	1446.8	1465.9	1488.1	1511.8	1533.9	1556.9	1576.0	1592.8
25°	1492.7	1497.2	1507.9	1524.0	1543.1	1566.8	1591.3	1614.2	1637.9	1652.4	1666.2
27.5°	1594.3	1602.0	1613.4	1626.4	1643.2	1668.4	1691.4	1710.5	1733.4	1749.5	1758.6
30°	1731.1	1741.8	1751.0	1764.7	1777.0	1803.7	1822.1	1837.4	1854.9	1864.1	1866.4
32.5°	1898.5	1908.4	1917.6	1927.5	1944.4	1968.8	1986.4	1994.8	2004.0	2002.4	1994.0
35°	2087.3	2094.9	2100.3	2117.8	2145.4	2161.4	2174.4	2177.5	2179.0	2162.9	2146.9
37.5°	2286.0	2295.2	2299.7	2327.3	2353.2	2371.6	2377.7	2384.6	2380.0	2353.2	2324.2
40°	2500.8	2510.7	2524.5	2548.1	2578.7	2596.3	2603.9	2603.2	2599.4	2568.0	2520.6
42.5°	2711.7	2723.9	2735.4	2776.7	2801.9	2831.7	2835.5	2834.8	2826.3	2790.4	2735.4
45°	2890.5	2905.1	2928.8	2974.6	3015.1	3051.0	3065.6	3070.9	3062.5	3024.3	2961.6
47.5°	3038.1	3048.0	3077.8	3133.6	3185.6	3238.3	3267.3	3288.0	3287.2	3259.7	3193.2
50°	3138.9	3150.4	3187.1	3249.8	3314.7	3376.6	3434.0	3480.6	3502.7	3482.9	3421.0
52.5°	3168.0	3182.5	3230.7	3305.6	3381.2	3464.5	3550.1	3632.7	3682.3	3694.6	3646.4
55°	3045.7	3061.7	3132.1	3236.0	3360.6	3483.6	3613.6	3731.3	3833.7	3881.1	3862.0
57.5°	2689.5	2701.0	2790.4	2924.9	3103.0	3319.3	3537.9	3753.4	3929.2	4052.3	4073.7
60°	2127.0	2141.5	2239.4	2381.5	2584.1	2857.7	3163.4	3516.5	3861.2	4143.2	4283.1
62.5°	1435.3	1445.3	1539.3	1669.2	1890.9	2154.5	2495.4	2942.5	3434.0	3937.6	4332.0
65°	753.6	753.6	817.0	908.0	1084.5	1320.7	1670.0	2128.5	2713.2	3342.2	4001.8
67.5°	437.2	436.4	450.9	471.6	527.4	622.9	815.5	1152.5	1705.9	2438.1	3188.6
70°	360.7	358.5	356.2	356.2	364.6	379.1	415.8	508.3	743.7	1257.3	1961.9
71°	344.7	343.2	337.1	334.8	338.6	346.2	362.3	405.1	528.1	857.5	1465.1
72.5°	325.6	321.8	312.6	308.8	309.5	312.6	317.2	334.0	371.4	487.6	835.4
75°	296.5	287.4	275.9	270.6	268.3	267.5	267.5	272.1	280.5	294.3	342.4
77.5°	262.9	249.9	237.7	232.3	228.5	226.2	224.7	221.6	220.1	226.2	243.8
80°	222.4	208.7	198.7	195.7	193.4	188.8	182.7	176.6	172.7	175.8	186.5
82.5°	172.0	158.2	159.7	160.5	156.7	149.0	142.9	136.0	129.2	127.6	133.0
85°	136.8	129.9	125.3	135.3	126.9	117.7	109.3	97.8	81.8	67.3	73.4
87.5°	58.9	59.6	85.6	129.2	113.1	91.0	75.7	61.1	39.0	29.0	29.8
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°	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1	1358.1
2.5°	1356.6	1356.6	1354.3	1352.8	1352.8	1352.8	1351.3	1352.0
5°	1365.8	1367.3	1368.8	1368.1	1370.4	1372.7	1371.9	1371.1
7.5°	1381.1	1385.7	1390.2	1392.5	1395.6	1398.7	1399.4	1397.1
10°	1396.4	1405.5	1412.4	1418.5	1422.3	1425.4	1427.7	1426.9
12.5°	1415.5	1428.5	1440.7	1452.9	1461.3	1465.9	1470.5	1469.0
15°	1446.8	1461.3	1476.6	1492.7	1505.7	1512.5	1519.4	1517.9
17.5°	1489.6	1502.6	1514.8	1530.9	1546.9	1554.6	1562.2	1561.4
20°	1543.1	1553.0	1559.9	1569.1	1584.4	1592.8	1599.7	1597.4
22.5°	1604.2	1607.3	1608.1	1611.1	1623.4	1633.3	1642.5	1644.8
25°	1670.7	1668.4	1663.9	1661.6	1670.0	1680.7	1692.1	1695.2
27.5°	1753.3	1745.6	1734.2	1725.0	1727.3	1741.1	1754.0	1757.1
30°	1857.2	1839.6	1815.2	1797.6	1794.6	1809.1	1822.8	1827.4
32.5°	1975.7	1952.0	1918.4	1891.6	1880.2	1893.1	1905.4	1912.3
35°	2116.3	2090.3	2049.8	2015.4	1997.1	2005.5	2026.9	2034.5
37.5°	2282.9	2247.0	2201.9	2158.4	2127.8	2129.3	2152.2	2161.4
40°	2467.1	2415.2	2357.8	2303.6	2259.2	2256.2	2276.8	2283.7
42.5°	2659.0	2592.5	2525.2	2454.1	2399.1	2389.2	2415.9	2416.7
45°	2865.3	2779.7	2696.4	2613.9	2556.6	2539.0	2565.0	2568.0
47.5°	3085.4	2978.4	2879.8	2790.4	2728.5	2701.0	2726.2	2730.8
50°	3314.7	3203.9	3089.3	2989.9	2917.3	2883.7	2913.5	2916.5
52.5°	3541.7	3437.0	3323.1	3209.3	3121.4	3083.1	3118.3	3129.0
55°	3770.2	3669.4	3562.4	3448.5	3337.7	3304.0	3342.2	3353.7
57.5°	4007.9	3910.9	3813.8	3699.2	3591.4	3540.2	3581.5	3597.5
60°	4270.1	4184.5	4092.8	3977.4	3871.1	3811.5	3846.7	3865.0
62.5°	4527.7	4510.1	4426.8	4306.8	4172.3	4112.6	4142.5	4155.4
65°	4549.1	4834.1	4830.3	4711.1	4523.1	4422.9	4431.4	4437.5
67.5°	3970.5	4624.7	5042.8	5080.2	4870.8	4714.1	4695.8	4699.6
70°	2811.1	3709.1	4596.4	5178.8	5261.4	5139.9	5100.1	5106.2
71°	2252.4	3182.5	4159.3	4942.7	5255.3	5220.1	5197.9	5214.0
72.5°	1437.6	2344.8	3295.6	4232.6	4832.6	5004.6	5029.8	5039.7
75°	522.0	1008.9	1707.4	2446.5	3100.7	3550.9	3798.5	3818.4
77.5°	280.5	361.5	558.7	834.6	1048.6	1163.2	1177.0	1182.4
80°	206.4	239.2	273.6	312.6	337.1	341.6	333.2	315.7
82.5°	146.0	165.1	178.8	192.6	202.5	194.1	161.3	123.1
85°	84.8	93.2	100.9	107.8	109.3	103.2	68.0	55.8
87.5°	33.6	36.7	35.9	40.5	39.0	35.9	26.8	22.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)