

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: P233586

Luminaire Tested: **VRDN-C018-D-UNV-T4**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P233586  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-15)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: VRDN-C018-D-UNV-T4  
Description: VERDEON ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 1210mA LED AND TYPE IV OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5888 lumens  
Efficiency: N/A  
Efficacy: 117.8 lumens/watt  
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

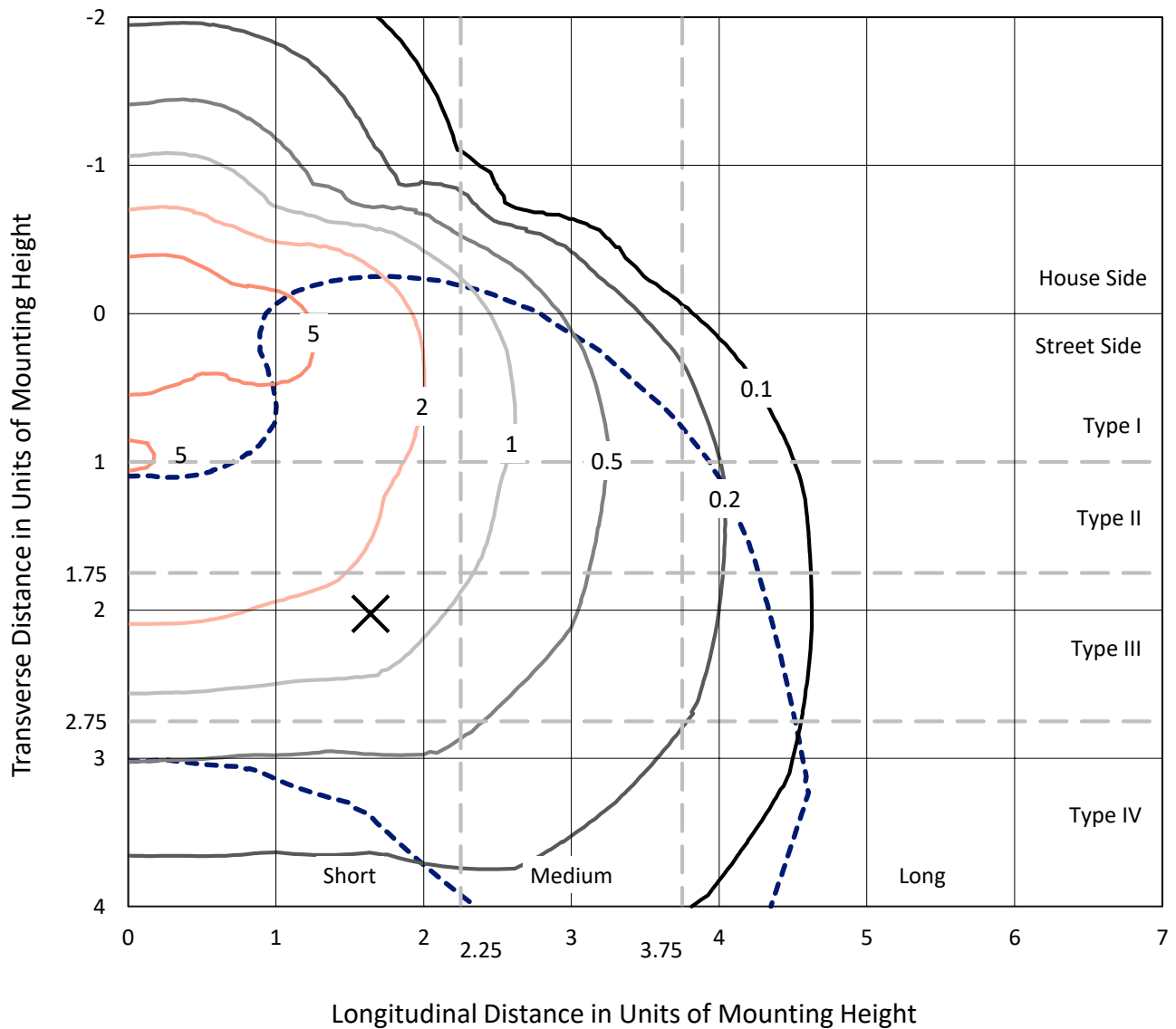
Input Watts (W): 50  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

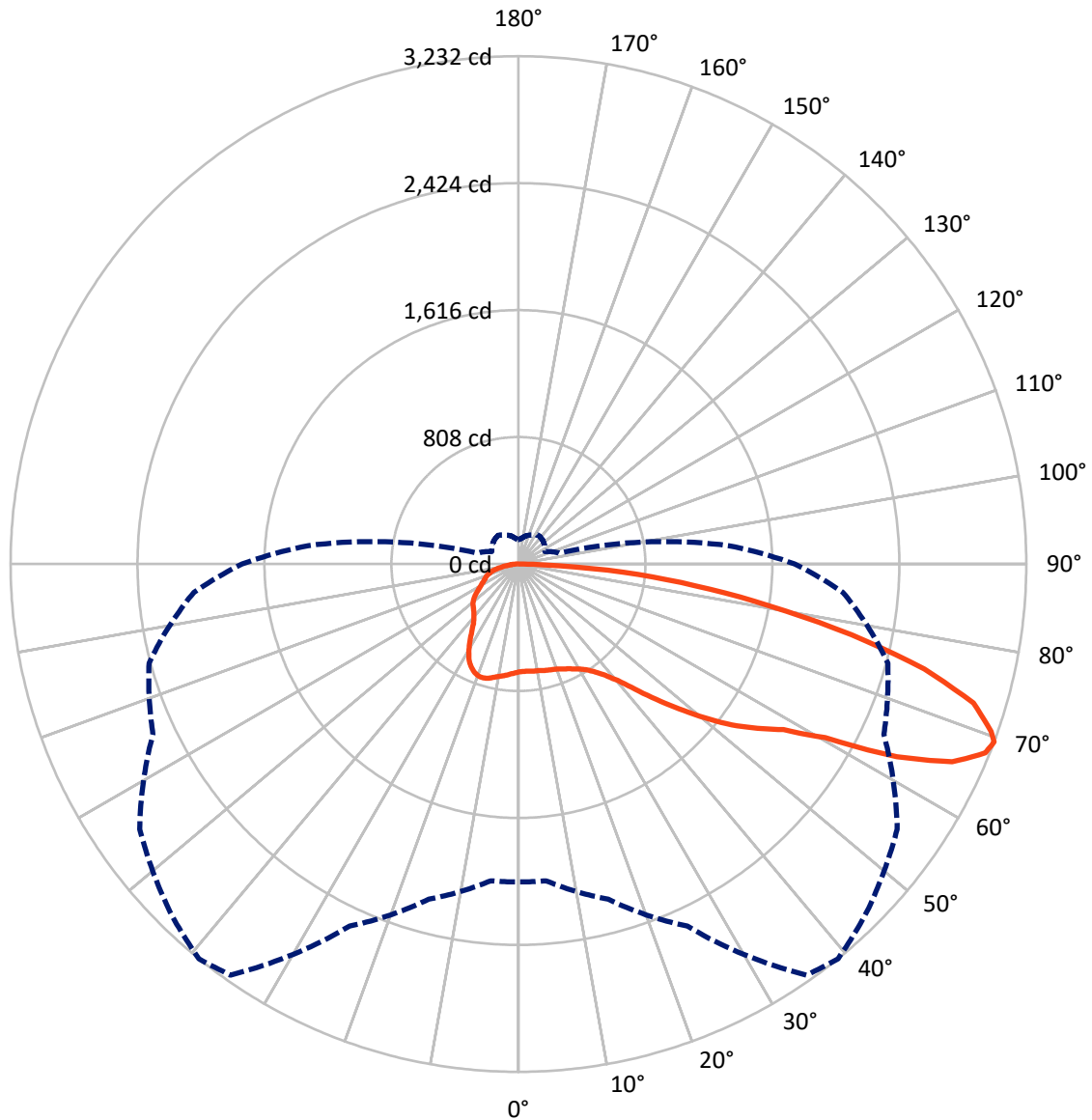
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.1 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral      - - - Horizontal Cone Through 69-Deg Vertical

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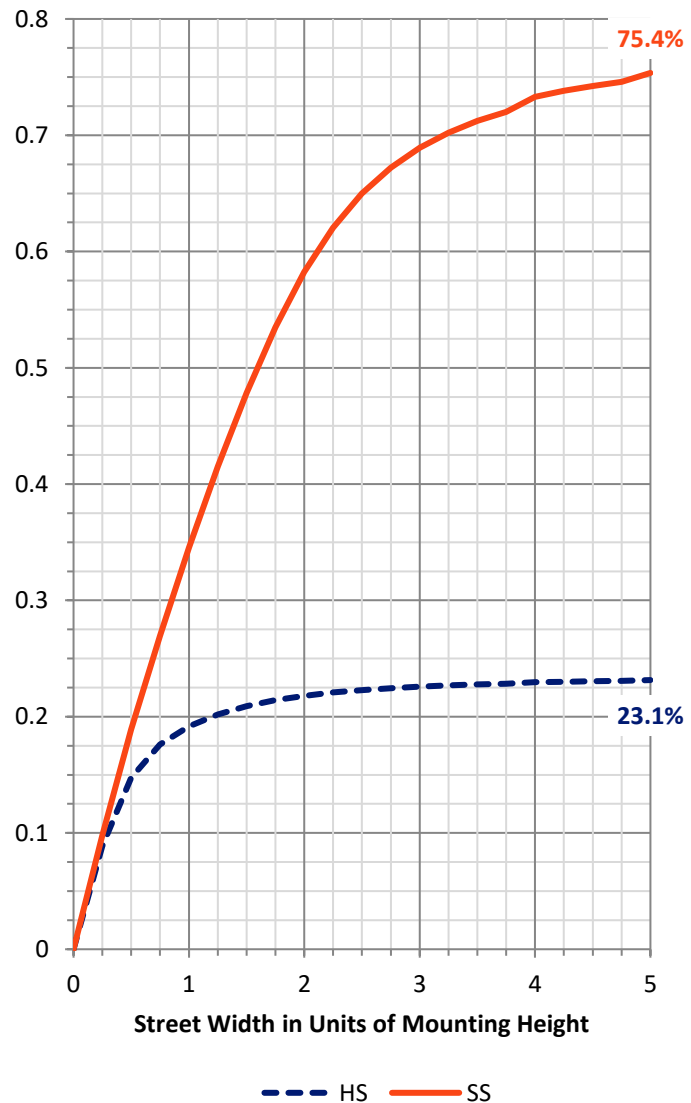
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1380.3	0.0	1380.3
	% Fixture	23.4	0.0	23.4
<b>Street Side</b>	Lumens	4507.7	0.0	4507.7
	% Fixture	76.6	0.0	76.6
<b>Total</b>	Lumens	5888.0	0.0	5888.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.6	1.1
10°-20°	206.0	3.5
20°-30°	346.8	5.9
30°-40°	502.4	8.5
40°-50°	812.1	13.8
50°-60°	1188.9	20.2
60°-70°	1488.1	25.3
70°-80°	1063.8	18.1
80°-90°	213.3	3.6
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°	5888.0	100.0
0°-180°	5888.0	100.0



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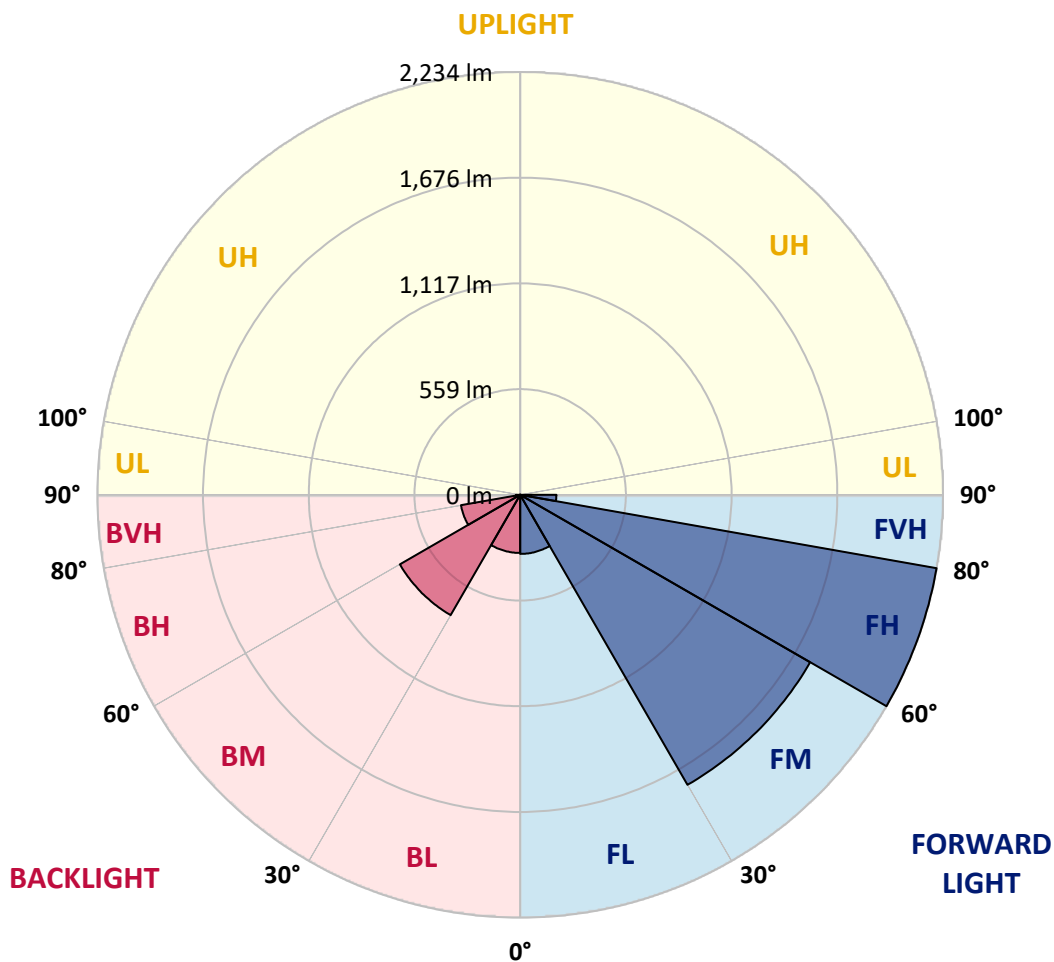
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	312.4	5.3			
FM	(30°-60°)	1769.4	30.1			
FH	(60°-80°)	2234.5	37.9			G2/5000
FVH	(80°-90°)	191.5	3.3			G2/225
BL	(0°-30°)	307.1	5.2	B1/500		
BM	(30°-60°)	734.0	12.5	B1/1000		
BH	(60°-80°)	317.4	5.4	B1/500		G1/500
BVH	(80°-90°)	21.8	0.4			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8
2.5°	697.8	696.7	694.5	685.8	684.8	684.2	685.3	682.0	681.5	682.6	681.5
5°	698.3	697.2	694.5	686.9	685.8	684.8	685.3	682.6	683.1	685.8	685.8
7.5°	699.4	698.3	695.6	687.5	689.6	688.6	690.7	686.9	686.9	689.1	689.6
10°	696.7	696.1	694.5	688.6	691.8	689.6	691.8	692.3	694.5	696.1	695.6
12.5°	689.6	689.6	689.6	686.9	696.1	695.6	699.4	703.2	708.6	711.3	713.0
15°	685.3	684.8	688.6	688.0	699.4	701.0	707.5	717.3	725.4	732.5	734.7
17.5°	689.6	689.6	694.5	693.4	704.8	705.9	713.0	727.1	740.6	754.2	760.2
20°	694.5	695.1	701.0	702.7	713.5	713.0	720.0	737.4	755.8	775.9	786.2
22.5°	709.7	709.2	714.1	710.8	723.3	725.4	731.4	746.6	772.7	798.2	815.0
25°	721.1	722.7	727.6	725.4	735.8	738.5	748.2	762.9	793.8	824.2	854.0
27.5°	732.0	735.2	739.0	738.5	752.6	755.8	763.4	786.2	822.0	858.4	900.2
30°	748.2	747.2	749.9	754.7	773.2	775.4	784.6	812.3	855.7	902.9	958.8
32.5°	769.9	768.9	771.6	775.9	798.2	803.6	816.1	845.9	900.7	957.7	1026.0
35°	804.1	806.8	809.0	814.4	836.1	843.7	860.6	898.5	962.0	1053.2	1150.8
37.5°	923.0	917.0	905.0	883.3	889.3	898.0	921.9	976.1	1068.4	1223.0	1312.5
40°	1108.5	1101.5	1064.0	1000.5	971.8	974.0	997.3	1071.1	1197.0	1422.7	1505.2
42.5°	1283.2	1274.6	1230.1	1150.8	1093.9	1087.4	1089.5	1174.7	1338.0	1622.4	1666.3
45°	1448.2	1452.5	1384.7	1323.9	1258.8	1229.0	1219.7	1283.2	1494.8	1795.4	1809.0
47.5°	1606.1	1609.3	1532.8	1474.2	1411.3	1376.6	1358.7	1408.0	1639.2	1935.4	1922.9
50°	1767.2	1775.9	1671.2	1621.3	1563.2	1538.3	1520.9	1553.4	1798.7	2069.5	2030.9
52.5°	1994.6	1958.2	1820.9	1750.4	1709.2	1701.6	1683.7	1710.3	1968.0	2187.7	2107.4
55°	2247.4	2169.8	2025.5	1902.3	1845.4	1845.4	1829.6	1860.6	2142.7	2276.2	2169.8
57.5°	2329.4	2336.9	2287.0	2153.0	2000.0	1988.1	1972.9	2015.2	2292.5	2355.4	2193.2
60°	2472.6	2493.8	2532.3	2420.5	2345.1	2243.6	2151.4	2174.2	2421.6	2420.5	2218.1
62.5°	2543.7	2563.8	2684.2	2624.0	2695.1	2702.1	2529.6	2353.8	2517.1	2453.1	2230.1
65°	2476.4	2490.5	2651.1	2730.3	2936.5	3034.7	2949.5	2595.2	2567.6	2439.5	2185.6
67.5°	2255.6	2282.1	2415.1	2656.5	3151.9	3206.7	3127.0	2926.7	2589.3	2443.8	2149.8
69°	2023.3	2023.9	2208.4	2543.1	3194.2	3232.2	3134.6	2942.5	2566.5	2433.5	2073.2
70°	1892.6	1906.1	2042.9	2444.9	3178.5	3191.0	3116.1	2941.9	2550.7	2430.3	2000.5
72.5°	1476.9	1469.9	1606.1	2044.5	3000.5	3028.2	2945.7	2858.9	2537.7	2290.3	1692.3
75°	1032.6	1054.3	1187.7	1549.1	2585.5	2668.5	2668.5	2746.6	2335.9	1957.1	1223.5
77.5°	768.3	771.6	878.5	1183.4	2080.3	2166.6	2245.8	2311.4	1825.8	1340.7	546.9
80°	520.3	525.2	622.9	873.0	1541.5	1620.7	1746.1	1590.3	1086.3	463.9	62.4
82.5°	327.7	334.2	411.8	613.1	1098.8	1134.6	1173.1	898.0	361.9	53.7	39.6
85°	194.8	195.9	248.5	391.8	670.1	672.3	631.0	413.5	97.1	32.0	25.0
87.5°	81.4	85.7	108.5	173.6	196.4	155.2	96.6	33.1	14.7	13.0	8.7
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°	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8	685.8
2.5°	678.2	684.2	683.1	684.8	686.9	691.3	696.1	694.0	696.7	702.7	702.7
5°	684.2	689.1	690.7	694.0	696.7	701.0	704.3	703.2	709.2	717.9	717.9
7.5°	689.1	692.9	698.3	702.1	704.8	713.5	716.8	714.6	718.9	729.2	729.8
10°	696.1	699.9	708.1	711.9	717.3	721.6	726.0	725.4	729.8	739.0	740.6
12.5°	713.5	716.2	727.6	733.0	733.0	738.5	735.2	729.8	732.0	737.4	738.5
15°	736.3	740.1	754.7	757.5	754.7	755.8	748.2	730.9	722.2	723.8	724.4
17.5°	762.3	768.9	785.7	781.9	778.6	770.5	750.9	724.9	698.9	689.1	690.7
20°	790.0	798.2	817.7	809.5	797.6	776.5	745.0	700.5	660.3	637.0	635.9
22.5°	822.0	832.3	850.8	836.7	810.1	773.2	724.9	670.6	619.6	583.3	581.1
25°	866.0	877.4	883.9	855.7	812.3	761.3	696.1	630.0	565.9	522.5	519.3
27.5°	915.9	921.9	908.8	866.5	802.0	735.8	660.3	578.4	507.9	472.1	467.2
30°	971.2	966.4	925.7	861.1	775.4	695.6	604.4	512.8	456.3	427.6	423.2
32.5°	1035.3	1020.1	938.7	845.9	740.1	643.0	543.7	471.0	425.9	397.2	395.0
35°	1140.5	1097.1	959.8	822.6	693.4	581.1	487.8	435.2	399.9	364.1	358.7
37.5°	1293.0	1211.1	990.8	800.9	643.0	521.4	445.5	406.4	375.5	335.3	327.7
40°	1451.4	1345.1	1041.8	777.0	595.8	477.5	422.1	394.5	364.1	326.1	315.8
42.5°	1596.3	1472.6	1101.5	747.2	546.4	442.2	410.7	391.2	360.8	325.0	316.9
45°	1727.6	1592.5	1162.8	713.0	492.1	414.0	401.5	385.2	354.3	320.1	313.6
47.5°	1838.3	1694.5	1224.6	673.4	440.0	396.6	391.8	374.4	345.6	312.5	307.1
50°	1930.0	1767.8	1259.9	631.6	397.2	383.6	377.6	355.9	326.6	295.7	292.5
52.5°	1997.8	1813.3	1291.9	609.3	363.5	362.5	358.7	337.5	309.3	277.3	270.8
55°	2045.0	1850.8	1277.8	592.0	327.7	335.9	333.7	320.7	296.8	259.4	253.9
57.5°	2047.7	1854.0	1247.4	488.9	292.5	303.9	307.7	309.8	283.2	250.1	243.6
60°	2045.0	1830.2	1191.0	358.7	258.3	271.8	285.9	285.9	267.5	234.9	230.1
62.5°	2032.6	1783.0	1059.7	255.6	231.1	249.1	267.5	259.4	243.6	217.6	212.7
65°	1975.6	1704.3	829.1	208.4	219.8	236.0	244.7	233.3	213.2	186.1	183.9
67.5°	1871.9	1524.1	479.7	191.0	210.0	224.6	231.7	214.3	195.3	169.3	168.2
69°	1758.0	1341.8	270.2	186.7	204.0	217.0	223.0	204.0	185.6	160.6	155.7
70°	1656.0	1179.1	175.8	182.9	198.0	212.2	216.5	197.0	179.6	154.1	150.8
72.5°	1254.5	710.3	118.3	167.1	181.8	192.6	199.1	180.7	161.2	135.6	129.1
75°	685.3	193.2	104.2	143.2	161.7	176.3	178.0	154.6	126.4	100.4	97.7
77.5°	133.5	66.2	89.5	118.3	128.6	146.0	144.9	129.1	109.6	85.2	81.9
80°	50.5	47.7	74.9	84.6	90.6	109.1	115.6	104.2	91.2	58.1	49.9
82.5°	34.2	35.3	55.9	49.9	55.3	64.6	81.4	79.2	72.2	39.6	35.3
85°	23.9	27.7	30.9	21.2	27.1	40.7	53.7	52.1	44.5	27.7	25.0
87.5°	7.1	7.6	8.7	10.9	16.8	30.4	44.0	36.4	24.4	20.6	17.9
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)