

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: P233488

Luminaire Tested: **VRDN-C02-D-UNV-T2**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233488
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-10)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: VRDN-CO2-D-UNV-T2
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1140mA LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11015 lumens
Efficiency: N/A
Efficacy: 122.4 lumens/watt
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 90
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

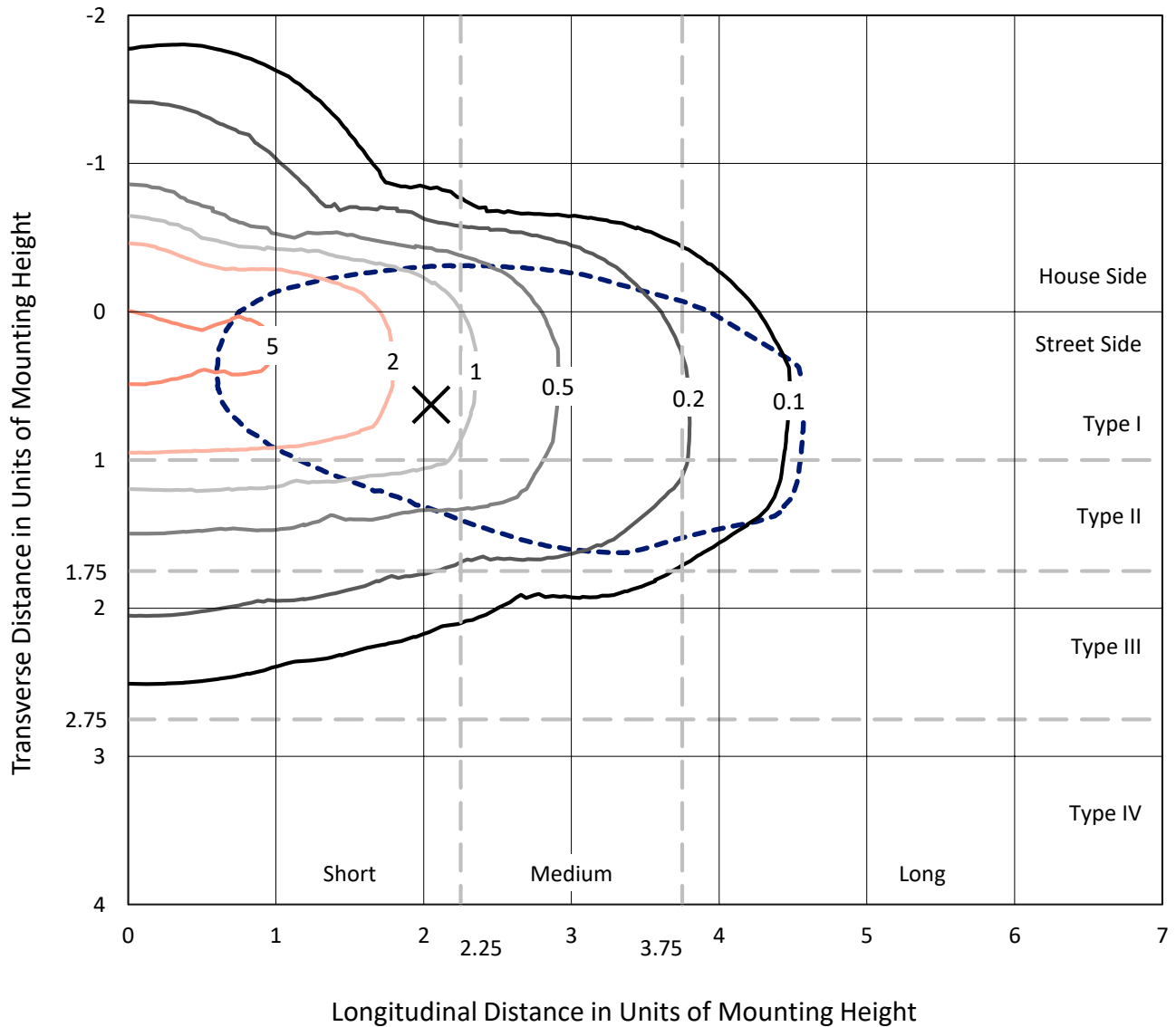


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

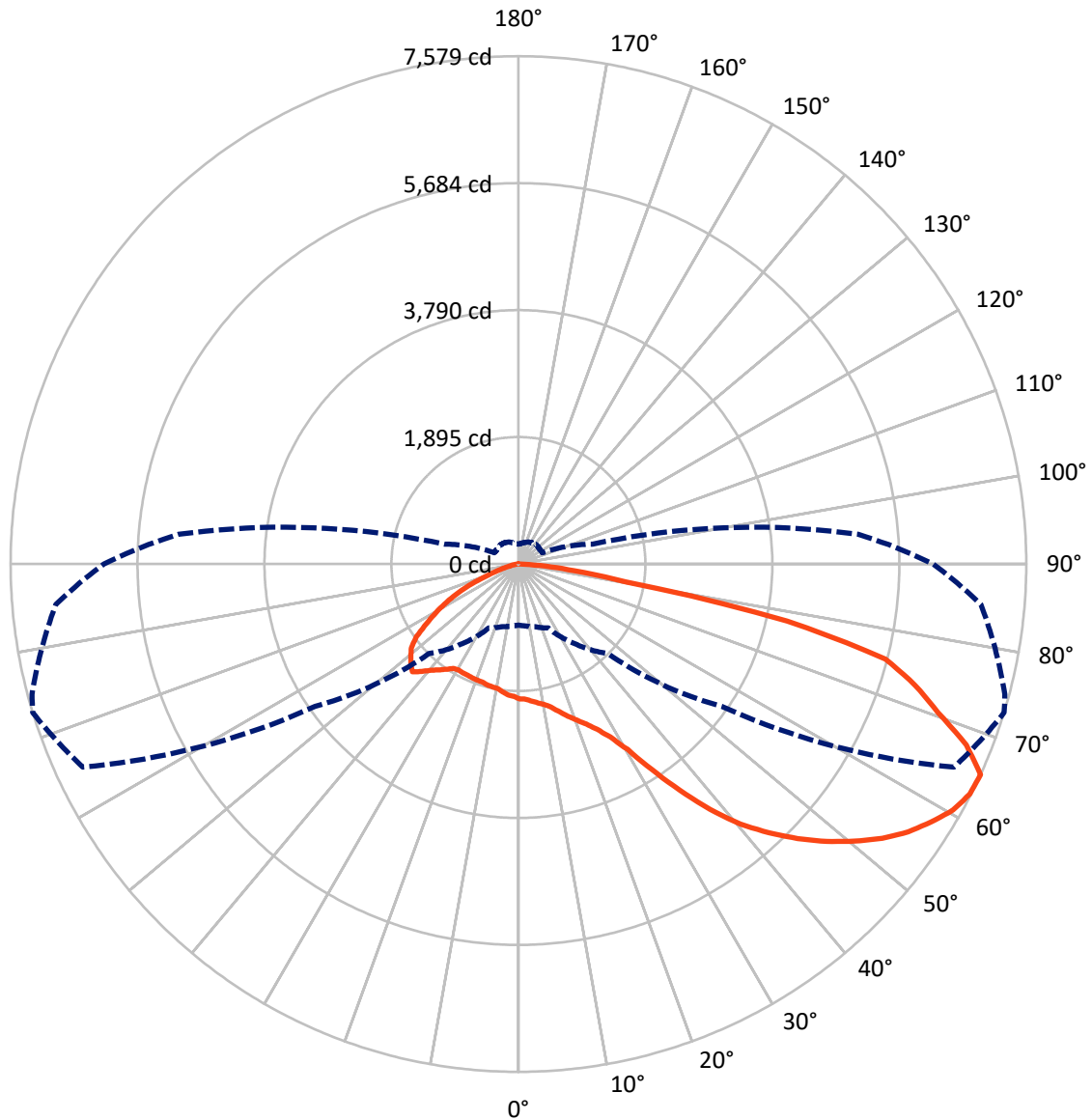


Based on 20 foot mounting height. Maximum calculated value = 5.8 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 73-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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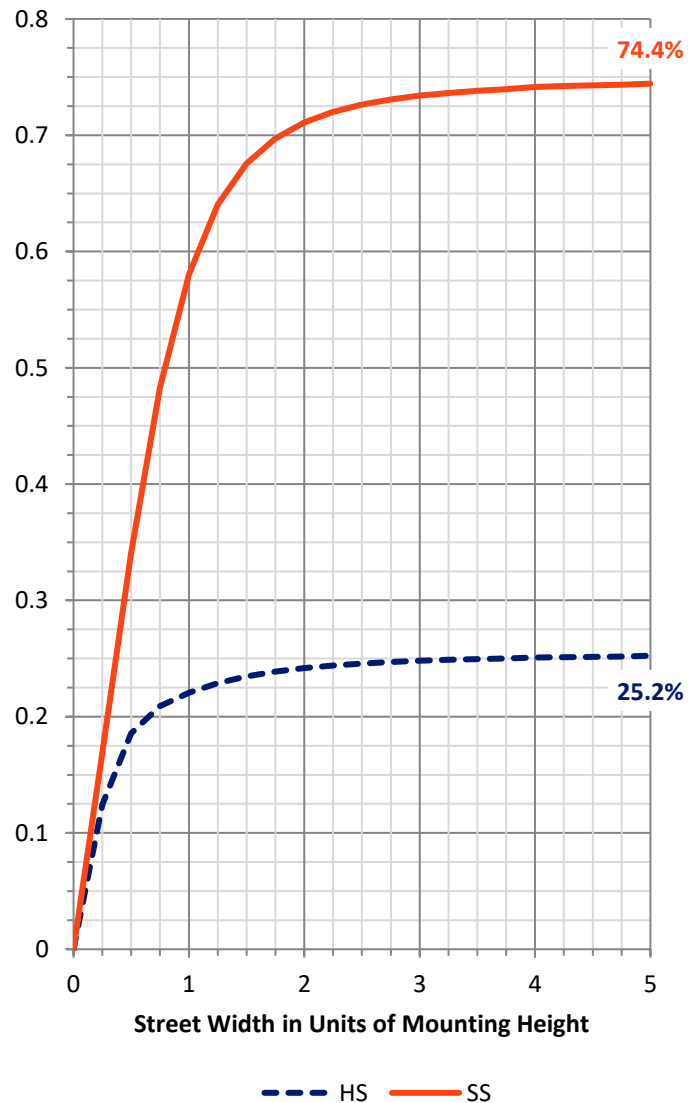
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2823.6	0.0	2823.6
	% Fixture	25.6	0.0	25.6
Street Side	Lumens	8191.4	0.0	8191.4
	% Fixture	74.4	0.0	74.4
Total	Lumens	11015.0	0.0	11015.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.2	1.7
10°-20°	581.1	5.3
20°-30°	974.8	8.8
30°-40°	1429.5	13.0
40°-50°	1932.0	17.5
50°-60°	2238.1	20.3
60°-70°	2186.2	19.8
70°-80°	1312.8	11.9
80°-90°	168.1	1.5
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°	11015.0	100.0
0°-180°	11015.0	100.0



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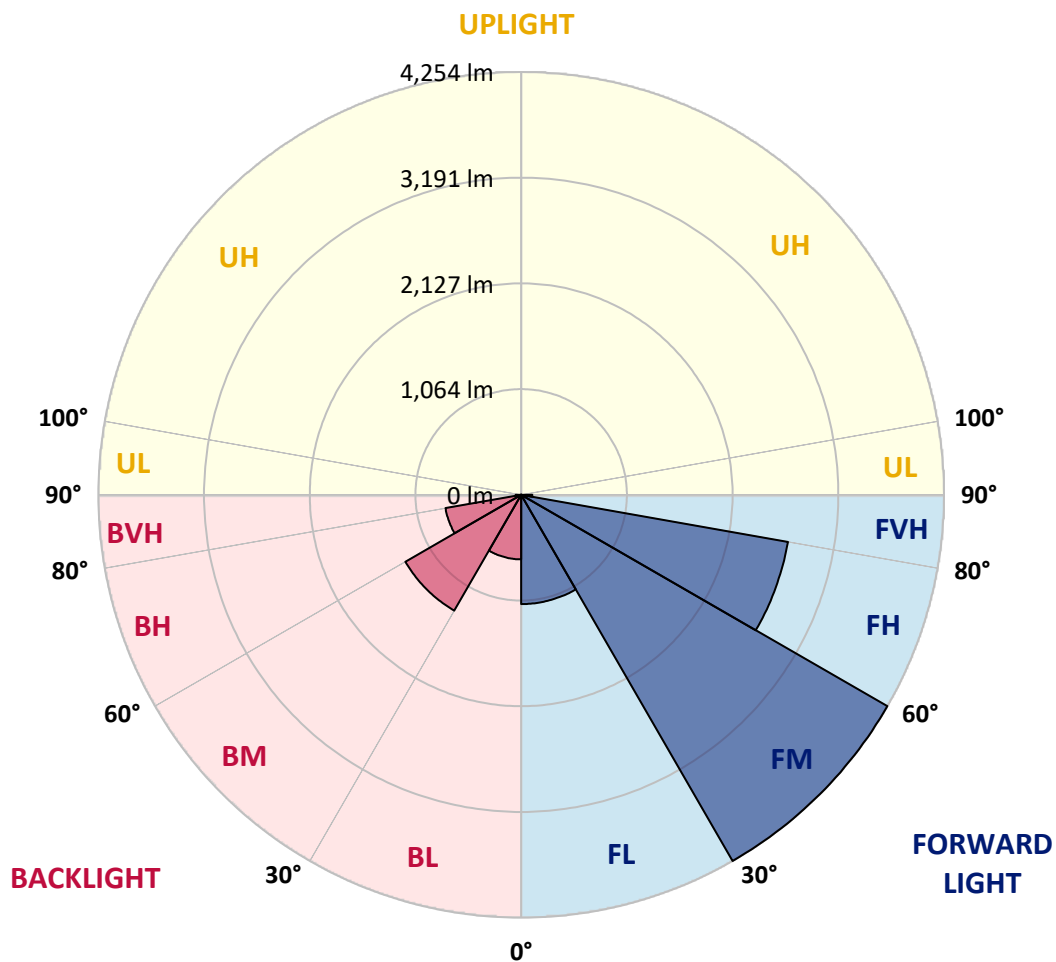
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1099.1	10.0			
FM (30°-60°)	4254.3	38.6			
FH (60°-80°)	2726.0	24.7			G2/5000
FVH (80°-90°)	112.0	1.0			G2/225
BL (0°-30°)	649.0	5.9	B2/1000		
BM (30°-60°)	1345.3	12.2	B2/2500		
BH (60°-80°)	773.1	7.0	B2/1000		G2/1000
BVH (80°-90°)	56.2	0.5			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	73°	75°	85°
0°	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1
2.5°	2138.1	2146.1	2137.1	2111.1	2098.1	2089.1	2062.1	2038.1	2019.1	2017.1	1999.1
5°	2220.1	2232.1	2217.1	2184.1	2171.1	2152.1	2122.1	2089.1	2055.1	2048.1	2012.1
7.5°	2324.1	2326.1	2318.1	2285.1	2258.1	2218.1	2166.1	2131.1	2092.1	2081.1	2024.1
10°	2412.1	2411.1	2401.1	2369.1	2342.1	2307.1	2234.1	2177.1	2131.1	2117.1	2038.1
12.5°	2496.1	2494.1	2484.1	2451.1	2417.1	2388.1	2333.1	2256.1	2194.1	2176.1	2078.1
15°	2600.1	2595.1	2579.1	2535.1	2508.1	2474.1	2434.1	2357.1	2286.1	2261.1	2136.1
17.5°	2680.1	2679.1	2667.1	2630.1	2598.1	2561.1	2524.1	2464.1	2387.1	2359.1	2193.1
20°	2726.1	2722.1	2719.1	2690.1	2682.1	2662.1	2609.1	2563.1	2486.1	2457.1	2257.1
22.5°	2775.1	2776.1	2777.1	2762.1	2785.1	2768.1	2729.1	2673.1	2595.1	2562.1	2347.1
25°	2786.1	2788.1	2808.1	2841.1	2869.1	2900.1	2872.1	2817.1	2733.1	2698.1	2470.1
27.5°	2755.1	2763.1	2823.1	2879.1	2978.1	3018.1	3013.1	3010.1	2924.1	2889.1	2639.1
30°	2783.1	2783.1	2824.1	2920.1	3045.1	3150.1	3173.1	3237.1	3211.1	3186.1	2923.1
32.5°	2699.1	2714.1	2787.1	2921.1	3119.1	3272.1	3376.1	3554.2	3657.2	3636.2	3325.1
35°	2541.1	2561.1	2668.1	2873.1	3156.1	3416.1	3602.2	3945.2	4144.2	4169.2	3809.2
37.5°	2419.1	2436.1	2570.1	2798.1	3170.1	3551.2	3863.2	4385.2	4642.2	4629.2	4219.2
40°	2270.1	2300.1	2435.1	2709.1	3137.1	3666.2	4146.2	4789.2	5105.2	5045.2	4609.2
42.5°	2136.1	2162.1	2275.1	2567.1	3091.1	3731.2	4402.2	5205.2	5482.2	5434.2	4978.2
45°	1994.1	2017.1	2122.1	2397.1	2984.1	3763.2	4642.2	5603.2	5844.2	5790.2	5320.2
47.5°	1831.1	1862.1	1987.1	2237.1	2827.1	3743.2	4817.2	5949.3	6188.3	6148.3	5603.2
50°	1420.1	1452.1	1779.1	2087.1	2609.1	3660.2	4974.2	6295.3	6499.3	6461.3	5853.2
52.5°	1289.1	1303.1	1405.1	1915.1	2382.1	3496.1	5072.2	6580.3	6802.3	6764.3	6089.3
55°	1209.1	1219.1	1276.1	1564.1	2189.1	3232.1	5084.2	6876.3	7057.3	7007.3	6340.3
57.5°	1127.0	1138.0	1201.1	1349.1	1995.1	2819.1	4957.2	7127.3	7264.3	7210.3	6580.3
60°	1058.0	1064.0	1126.0	1228.1	1776.1	2409.1	4630.2	7298.3	7455.3	7385.3	6815.3
62.5°	995.0	1003.0	1048.0	1141.0	1592.1	2102.1	4174.2	7299.3	7560.3	7517.3	6934.3
65°	913.0	925.0	969.0	1053.0	1443.1	1892.1	3702.2	7172.3	7579.3	7515.3	6928.3
67.5°	818.0	833.0	873.0	940.0	1245.1	1668.1	3044.1	7005.3	7208.3	7197.3	6642.3
70°	723.0	723.0	768.0	822.0	1033.0	1428.1	2405.1	6410.3	6642.3	6659.3	6129.3
72.5°	610.0	612.0	647.0	694.0	832.0	1172.0	1752.1	5480.2	6192.3	5986.3	5528.2
75°	512.0	510.0	546.0	585.0	677.0	923.0	1143.0	4026.2	5659.2	5705.2	4865.2
77.5°	272.0	262.0	308.0	339.0	397.0	513.0	634.0	2019.1	4098.2	4188.2	3895.2
80°	77.0	78.0	204.0	228.0	261.0	254.0	294.0	770.0	1621.1	1827.1	2271.1
82.5°	46.0	53.0	116.0	136.0	102.0	66.0	112.0	428.0	839.0	940.0	1127.0
85°	24.0	26.0	41.0	51.0	39.0	33.0	34.0	180.0	408.0	415.0	450.0
87.5°	11.0	11.0	15.0	16.0	10.0	6.0	4.0	3.0	3.0	2.0	2.0
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°	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1	2014.1
2.5°	1985.1	1995.1	1978.1	1965.1	1955.1	1949.1	1942.1	1925.1	1930.1	1937.1	1936.1
5°	1995.1	2000.1	1970.1	1929.1	1891.1	1864.1	1846.1	1819.1	1819.1	1830.1	1830.1
7.5°	2004.1	1997.1	1936.1	1867.1	1824.1	1802.1	1773.1	1744.1	1739.1	1747.1	1748.1
10°	2009.1	1979.1	1894.1	1830.1	1774.1	1729.1	1692.1	1659.1	1658.1	1669.1	1671.1
12.5°	2031.1	1973.1	1891.1	1803.1	1719.1	1671.1	1627.1	1590.1	1577.1	1578.1	1580.1
15°	2065.1	1997.1	1887.1	1766.1	1675.1	1611.1	1547.1	1500.1	1488.1	1504.1	1510.1
17.5°	2106.1	2036.1	1868.1	1732.1	1621.1	1544.1	1480.1	1438.1	1400.1	1383.1	1380.1
20°	2160.1	2069.1	1878.1	1682.1	1569.1	1466.1	1386.1	1335.1	1303.1	1301.1	1299.1
22.5°	2231.1	2106.1	1880.1	1649.1	1487.1	1380.1	1281.1	1252.1	1195.1	1174.0	1183.1
25°	2325.1	2162.1	1875.1	1614.1	1424.1	1280.1	1161.0	1108.0	1087.0	1063.0	1065.0
27.5°	2446.1	2251.1	1888.1	1568.1	1321.1	1158.0	1025.0	968.0	936.0	916.0	919.0
30°	2692.1	2386.1	1887.1	1524.1	1226.1	1032.0	882.0	844.0	812.0	794.0	803.0
32.5°	3042.1	2679.1	1929.1	1465.1	1118.0	863.0	762.0	719.0	692.0	672.0	677.0
35°	3475.1	2998.1	2037.1	1385.1	995.0	734.0	665.0	612.0	579.0	571.0	568.0
37.5°	3877.2	3280.1	2139.1	1332.1	854.0	663.0	576.0	523.0	494.0	504.0	504.0
40°	4236.2	3654.2	2254.1	1247.1	726.0	582.0	477.0	453.0	438.0	455.0	461.0
42.5°	4507.2	4013.2	2410.1	1135.0	622.0	486.0	408.0	425.0	431.0	443.0	440.0
45°	4843.2	4218.2	2564.1	1031.0	531.0	405.0	394.0	429.0	443.0	454.0	449.0
47.5°	5152.2	4377.2	2533.1	839.0	447.0	392.0	401.0	429.0	453.0	471.0	468.0
50°	5418.2	4576.2	2474.1	652.0	429.0	404.0	408.0	418.0	454.0	466.0	466.0
52.5°	5584.2	4773.2	2401.1	527.0	442.0	419.0	412.0	411.0	435.0	444.0	436.0
55°	5784.2	4977.2	2212.1	489.0	447.0	429.0	423.0	414.0	421.0	414.0	418.0
57.5°	6006.3	5178.2	1922.1	478.0	444.0	426.0	458.0	410.0	406.0	381.0	375.0
60°	6201.3	5257.2	1668.1	453.0	428.0	418.0	426.0	405.0	385.0	352.0	339.0
62.5°	6274.3	5250.2	1410.1	427.0	404.0	406.0	405.0	390.0	372.0	339.0	331.0
65°	6186.3	5090.2	1143.0	396.0	385.0	393.0	383.0	361.0	331.0	304.0	297.0
67.5°	5888.2	4682.2	849.0	355.0	354.0	369.0	362.0	332.0	299.0	278.0	278.0
70°	5318.2	4180.2	550.0	295.0	317.0	343.0	343.0	311.0	268.0	250.0	255.0
72.5°	4694.2	3597.2	356.0	219.0	250.0	311.0	309.0	287.0	247.0	224.0	225.0
75°	4066.2	2854.1	230.0	151.0	162.0	265.0	274.0	234.0	192.0	164.0	159.0
77.5°	3091.1	2147.1	146.0	88.0	103.0	162.0	208.0	195.0	196.0	239.0	237.0
80°	1901.1	1294.1	106.0	43.0	51.0	106.0	168.0	186.0	261.0	172.0	158.0
82.5°	952.0	605.0	56.0	26.0	29.0	47.0	100.0	223.0	190.0	114.0	108.0
85°	356.0	163.0	17.0	13.0	16.0	24.0	41.0	204.0	121.0	91.0	89.0
87.5°	2.0	3.0	3.0	4.0	6.0	7.0	15.0	97.0	61.0	44.0	42.0
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)