

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: P233533

Luminaire Tested: **VRDN-C016-D-UNV-T3**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233533
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-14)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: VRDN-C016-D-UNV-T3
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 4000K, 950mA LED AND TYPE III OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4862 lumens
Efficiency: N/A
Efficacy: 124.7 lumens/watt
Luminous Opening: Rectangular (W 0.79' x L: 1.25' x H: 0')
IES Classification: Type III - Medium - Semi-Cutoff
BUG Rating: B1 - U0 - G1

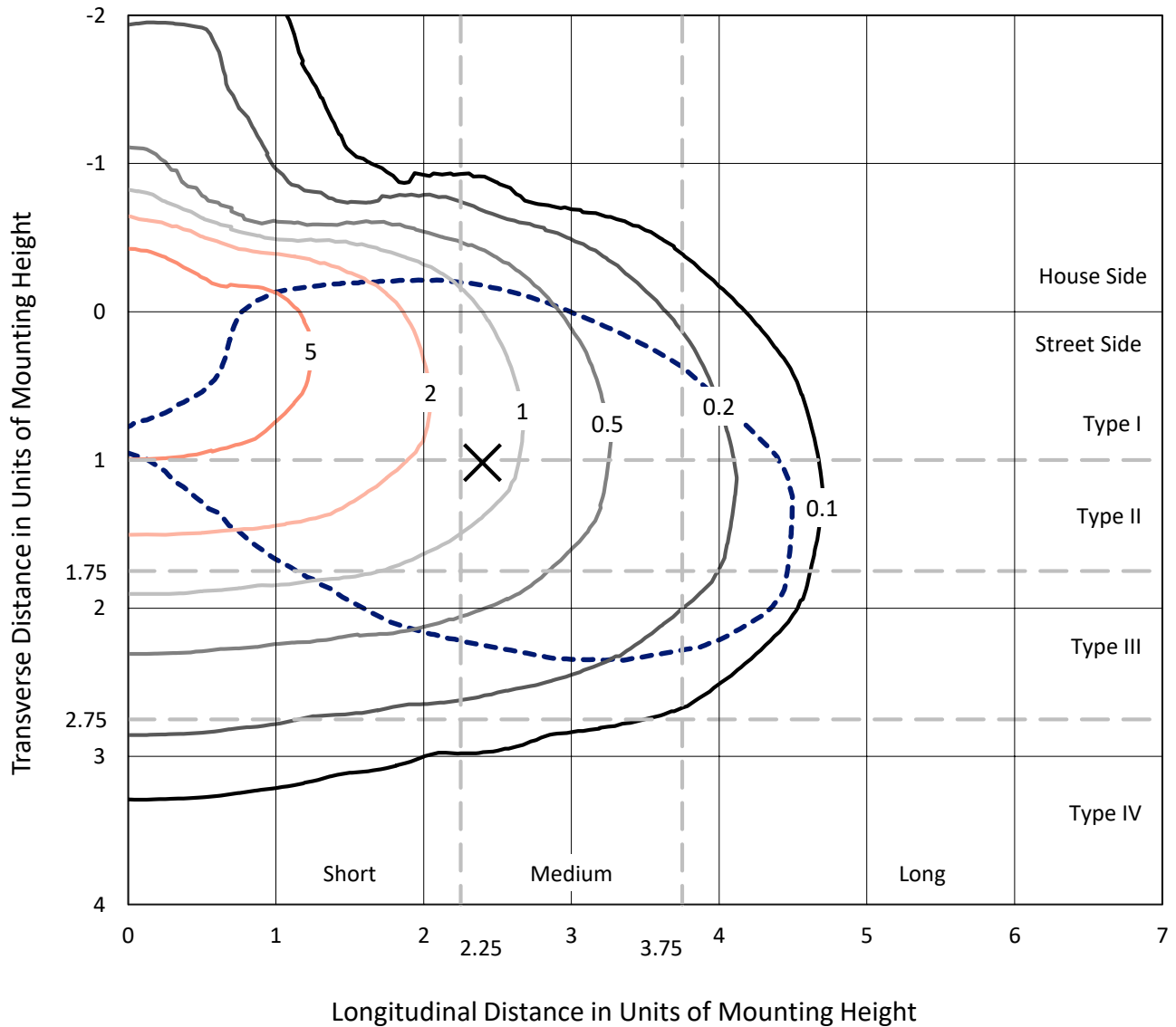
Input Watts (W): 39
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

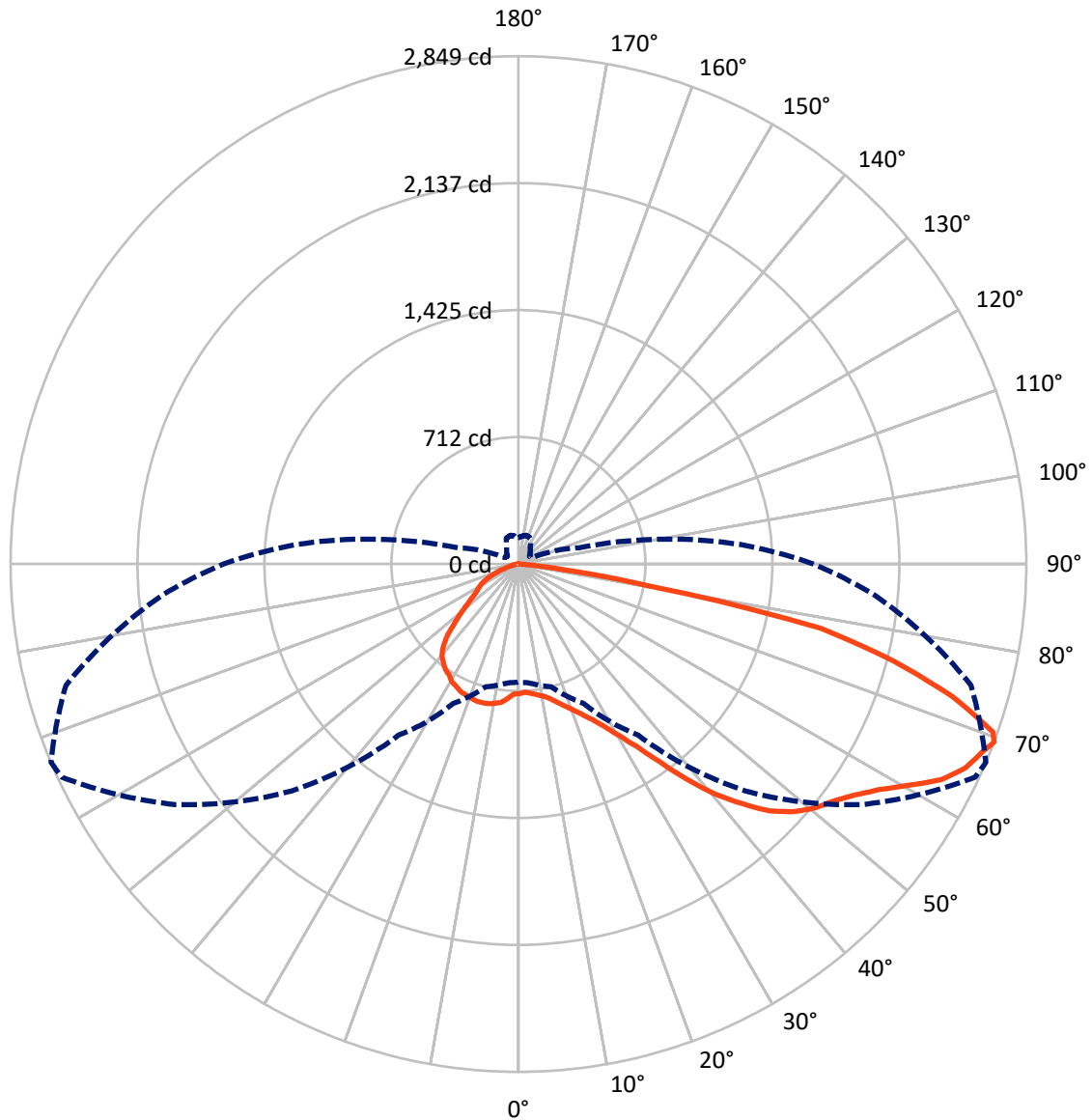
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type III - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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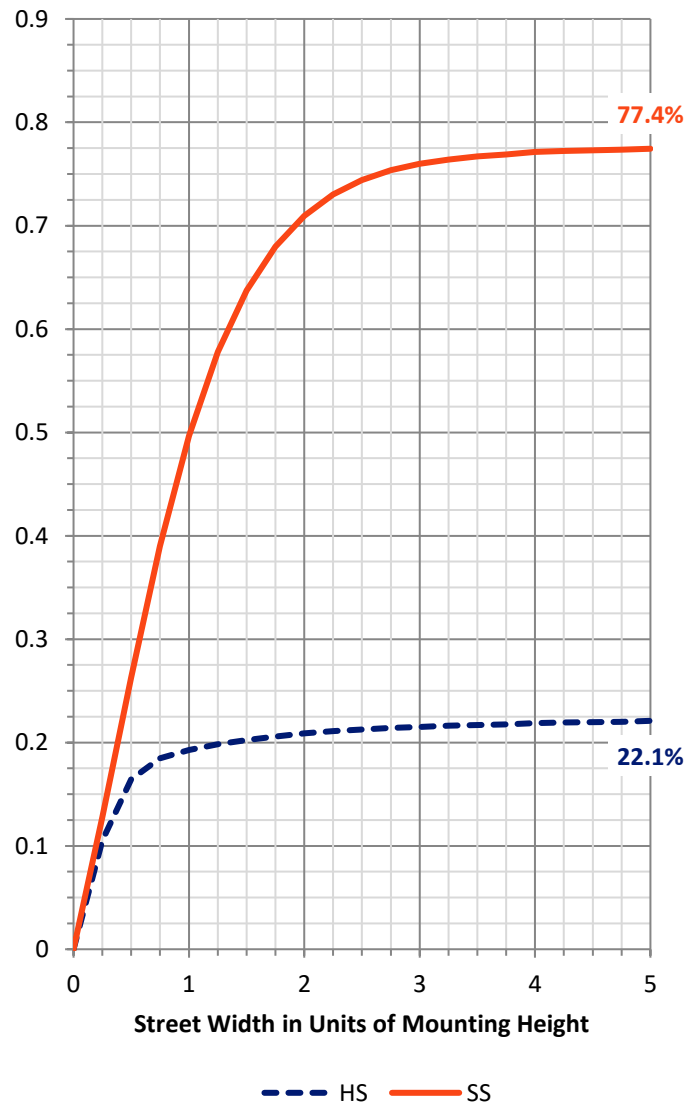
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1094.9	0.0	1094.9
	% Fixture	22.5	0.0	22.5
Street Side	Lumens	3767.1	0.0	3767.1
	% Fixture	77.5	0.0	77.5
Total	Lumens	4862.0	0.0	4862.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.7	1.5
10°-20°	234.8	4.8
20°-30°	404.4	8.3
30°-40°	601.5	12.4
40°-50°	828.4	17.0
50°-60°	990.3	20.4
60°-70°	1045.1	21.5
70°-80°	626.3	12.9
80°-90°	57.6	1.2
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°	4862.0	100.0
0°-180°	4862.0	100.0



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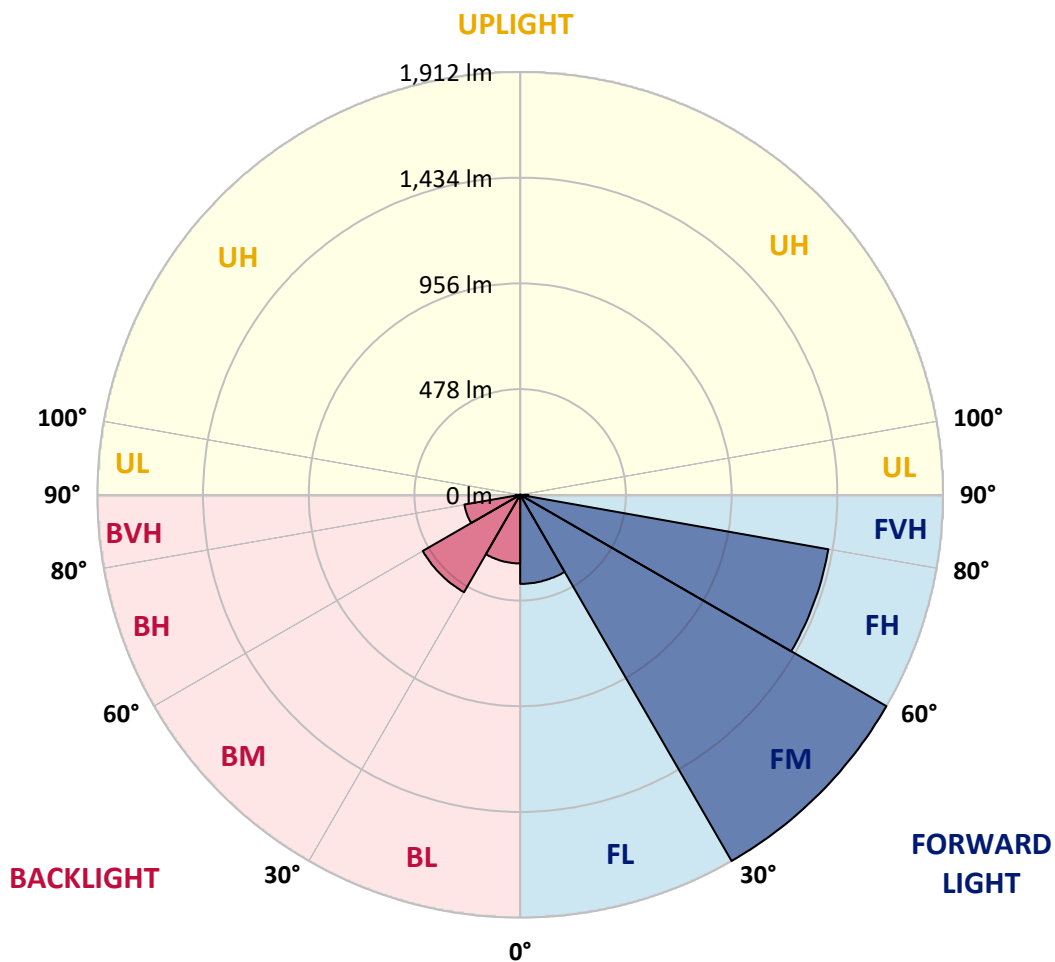
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	402.6	8.3			
FM (30°-60°)	1912.0	39.3			
FH (60°-80°)	1415.3	29.1			G1/1800
FVH (80°-90°)	37.3	0.8			G1/100
BL (0°-30°)	310.2	6.4	B1/500		
BM (30°-60°)	508.3	10.5	B1/1000		
BH (60°-80°)	256.0	5.3	B1/500		G1/500
BVH (80°-90°)	20.4	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-G1

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3
2.5°	739.2	738.7	736.5	728.6	727.7	726.8	721.5	721.9	720.6	721.9	722.4
5°	759.5	757.8	755.5	747.1	744.1	740.1	732.1	731.7	728.6	729.5	730.3
7.5°	784.7	783.0	781.2	771.5	768.4	761.3	748.9	742.7	740.1	741.0	742.3
10°	818.8	815.7	813.0	798.9	794.0	782.1	767.0	756.4	752.9	754.2	757.8
12.5°	857.7	853.7	849.3	834.7	828.1	809.5	791.8	778.1	772.8	775.9	778.5
15°	897.9	895.7	893.9	876.7	867.4	847.1	825.0	807.7	802.9	805.5	806.8
17.5°	951.0	949.6	946.5	928.9	911.2	887.7	859.0	840.9	836.0	837.3	834.2
20°	1008.9	1005.3	1003.6	983.7	965.1	932.8	899.7	874.0	872.7	873.1	863.4
22.5°	1073.9	1069.9	1066.3	1048.2	1025.2	987.7	944.3	915.6	916.5	917.4	895.7
25°	1140.2	1137.1	1134.0	1116.7	1093.8	1052.6	1000.5	968.2	967.8	968.2	938.1
27.5°	1209.6	1206.0	1205.6	1191.5	1168.5	1126.5	1066.3	1033.6	1033.6	1031.9	986.3
30°	1271.5	1275.0	1275.0	1267.1	1245.4	1203.4	1146.8	1114.1	1118.5	1115.0	1057.1
32.5°	1339.1	1338.2	1344.4	1338.2	1320.6	1281.6	1234.3	1213.6	1221.1	1232.6	1174.7
35°	1378.5	1384.7	1400.1	1409.0	1400.6	1368.7	1334.3	1350.2	1360.3	1412.1	1342.7
37.5°	1424.0	1429.3	1450.5	1472.2	1475.7	1458.5	1458.5	1510.7	1530.6	1598.2	1517.3
40°	1455.4	1460.7	1483.7	1508.9	1543.4	1555.3	1586.3	1667.2	1695.5	1741.0	1647.3
42.5°	1436.8	1439.5	1489.0	1550.4	1601.3	1658.8	1707.8	1810.4	1837.4	1869.2	1754.3
45°	1404.1	1409.0	1463.8	1562.8	1650.4	1764.4	1826.3	1945.2	1976.2	1973.1	1836.5
47.5°	1367.9	1375.4	1436.4	1546.9	1692.4	1855.9	1934.6	2058.4	2076.1	2054.0	1893.5
50°	1327.6	1340.4	1405.4	1531.0	1722.9	1936.0	2015.1	2143.3	2152.6	2107.5	1943.5
52.5°	1281.6	1290.0	1362.1	1500.5	1744.1	1989.0	2079.2	2206.5	2210.5	2173.8	1996.1
55°	1218.0	1225.5	1305.5	1459.8	1747.2	2020.4	2120.3	2274.2	2287.4	2251.6	2043.8
57.5°	1149.5	1158.7	1241.0	1401.0	1718.9	2033.2	2169.8	2361.3	2386.9	2335.6	2082.3
60°	1069.9	1081.8	1164.9	1329.4	1663.2	2053.1	2262.2	2488.1	2520.0	2430.7	2119.0
62.5°	987.2	993.8	1070.3	1230.4	1576.5	2063.3	2346.2	2633.1	2663.7	2520.4	2136.2
65°	870.9	881.5	949.6	1111.4	1454.5	2019.5	2385.6	2734.4	2756.5	2593.4	2119.4
67.5°	747.6	747.6	805.5	969.1	1291.8	1903.7	2369.7	2783.0	2809.5	2644.6	2066.4
69°	662.3	668.9	713.1	862.1	1172.5	1800.7	2352.4	2827.7	2849.3	2628.3	2005.4
70°	596.8	602.6	647.2	784.3	1083.6	1719.3	2315.3	2807.8	2823.7	2577.9	1941.3
72.5°	439.0	443.9	474.8	546.4	814.8	1387.3	2087.6	2538.5	2548.3	2318.4	1712.7
75°	299.3	302.0	325.4	369.2	475.3	970.0	1705.6	2144.2	2172.9	2010.7	1402.3
77.5°	103.5	111.4	125.6	169.8	203.4	381.1	1156.1	1689.7	1732.6	1557.1	981.0
80°	35.4	34.9	67.2	87.1	107.0	175.1	365.6	708.2	748.5	641.9	353.2
82.5°	26.5	27.4	44.7	48.2	32.7	64.5	142.4	216.6	237.4	207.3	146.3
85°	16.8	16.4	19.9	20.8	15.0	27.4	34.5	34.9	36.3	31.4	31.8
87.5°	9.3	9.3	8.8	7.5	4.0	3.5	3.1	3.1	2.7	2.7	2.7
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°	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3	727.3
2.5°	720.2	726.4	727.7	729.5	733.9	739.6	747.6	747.6	750.7	760.0	763.1
5°	730.3	737.9	747.6	757.8	769.7	782.5	795.3	799.8	805.9	818.3	821.0
7.5°	745.8	754.2	771.0	784.7	794.9	807.7	818.3	820.1	828.1	839.5	841.8
10°	761.7	769.3	786.1	793.1	806.8	821.0	826.3	828.9	835.6	844.4	843.1
12.5°	783.4	785.6	797.5	802.4	809.0	817.9	820.5	820.5	824.5	838.7	839.1
15°	804.6	804.6	806.4	803.7	804.6	809.0	809.5	803.7	808.2	815.2	812.6
17.5°	827.2	821.0	813.0	801.5	791.4	790.9	781.6	767.9	763.9	774.1	773.7
20°	848.4	837.8	818.8	792.7	778.5	759.5	736.1	728.1	727.7	729.5	728.1
22.5°	876.2	854.6	820.1	784.3	745.4	715.3	695.9	668.9	668.0	664.0	657.8
25°	909.4	878.5	825.8	775.0	718.4	679.5	632.6	603.9	587.6	591.1	580.5
27.5°	952.3	914.7	828.1	754.7	681.3	615.4	558.8	521.7	507.5	501.3	494.3
30°	1011.1	953.2	844.0	737.4	635.3	548.2	478.8	424.9	404.5	409.8	410.7
32.5°	1105.3	1026.1	852.4	703.4	582.2	474.8	384.6	326.3	314.3	329.4	333.3
35°	1269.3	1139.3	872.3	683.0	521.7	389.0	286.0	262.2	264.8	277.6	278.5
37.5°	1430.6	1282.5	933.7	638.8	449.2	288.2	221.9	209.1	221.9	238.3	240.5
40°	1543.8	1394.4	988.1	595.1	347.5	208.7	169.3	153.9	172.4	198.5	203.4
42.5°	1644.2	1483.2	1026.6	534.5	237.8	149.0	121.6	125.6	153.0	172.0	176.4
45°	1716.2	1544.3	1053.1	455.8	151.6	112.7	108.8	121.6	147.7	162.7	164.0
47.5°	1761.8	1580.1	1033.6	359.0	114.1	106.5	107.0	123.3	149.4	166.2	165.8
50°	1802.9	1599.1	970.4	284.7	108.3	102.1	109.2	128.2	155.2	170.7	169.8
52.5°	1846.7	1617.6	893.5	223.3	103.9	99.9	111.9	131.3	155.2	164.9	163.6
55°	1884.2	1634.0	835.6	179.5	100.8	99.5	114.5	136.2	154.3	158.3	155.6
57.5°	1903.7	1606.2	772.8	150.8	97.7	99.5	116.3	135.3	159.6	172.4	169.8
60°	1893.1	1580.1	721.9	140.1	93.3	99.0	117.2	145.0	195.9	207.8	206.9
62.5°	1873.6	1551.3	650.8	126.0	88.4	99.9	116.7	153.9	225.5	221.5	210.4
65°	1833.8	1493.9	553.5	109.6	83.6	101.7	116.7	173.3	196.7	192.3	187.5
67.5°	1748.9	1369.6	443.0	94.2	78.3	96.4	114.9	164.9	169.3	157.8	152.1
69°	1653.9	1251.1	350.6	85.8	75.2	93.7	114.5	159.2	166.7	154.3	147.7
70°	1579.6	1158.7	283.4	79.6	72.1	92.8	114.1	155.2	165.3	151.6	144.6
72.5°	1315.7	936.4	148.5	64.1	61.5	84.4	110.1	151.6	165.8	145.5	135.3
75°	1033.6	666.2	98.6	49.1	47.3	73.8	100.8	145.9	156.1	130.9	115.4
77.5°	637.5	291.8	68.1	34.0	34.5	57.5	86.7	130.4	157.4	132.2	112.3
80°	185.2	112.7	43.3	23.0	21.2	34.0	68.1	112.3	149.4	135.7	122.5
82.5°	107.0	73.4	29.2	14.6	12.8	15.5	42.9	87.1	131.7	124.2	126.9
85°	24.3	20.3	10.6	7.1	7.1	8.8	14.6	50.4	91.1	106.5	120.3
87.5°	2.7	2.7	2.7	2.7	2.7	2.2	2.7	13.7	39.8	56.6	65.9
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)