

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: P233800

Luminaire Tested: **VRDN-C02-D-UNV-T4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233800
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1710-389-34)
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-T4-HSS
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 4000K, 1140mA LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9683 lumens
Efficiency: N/A
Efficacy: 107.6 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 - G3

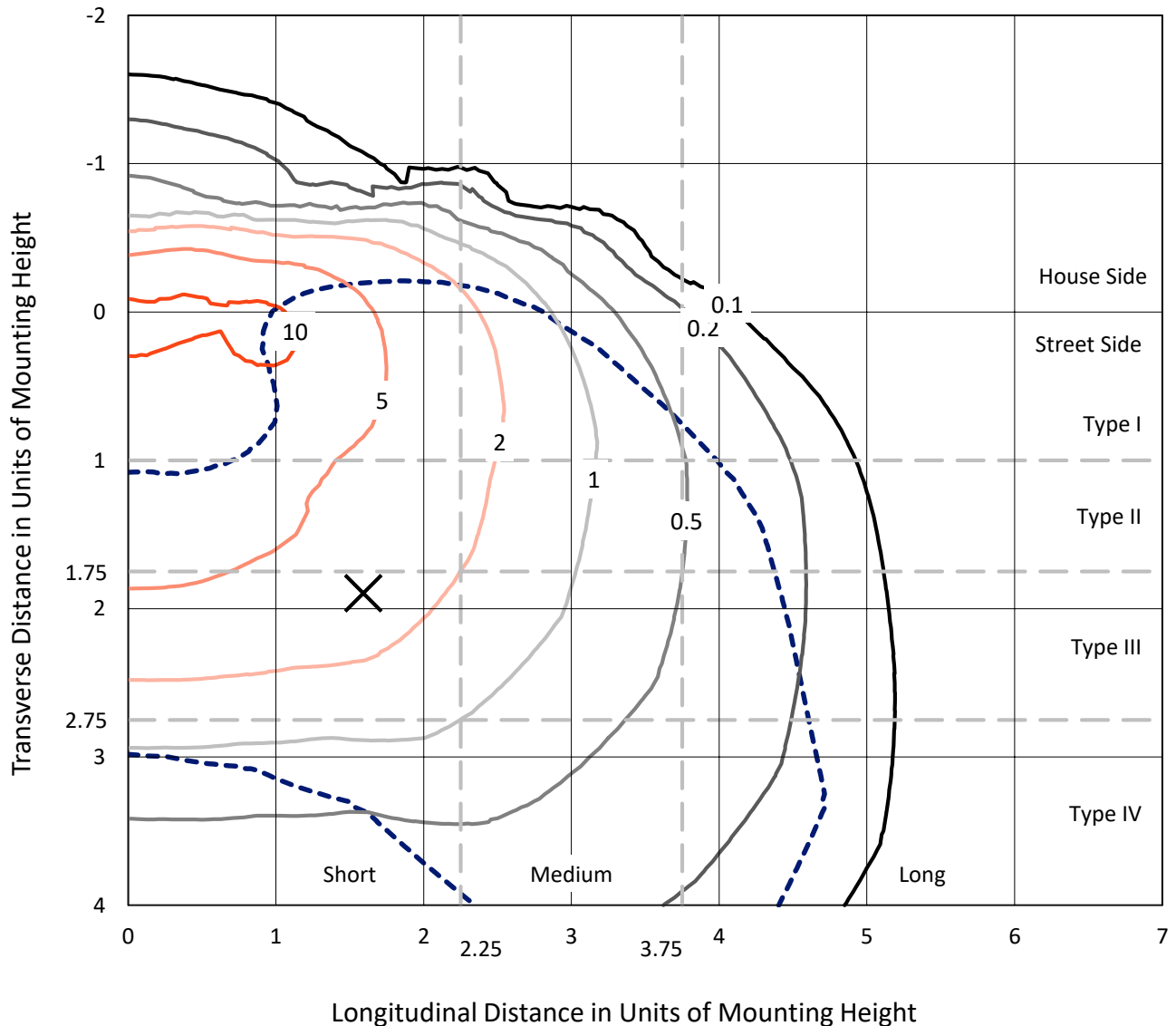
Input Watts (W): 90
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P233800
 CATALOG NUMBER: VRDN-C02-D-UNV-T4-HSS

Iso-Footcandle Lines of Horizontal Illumination

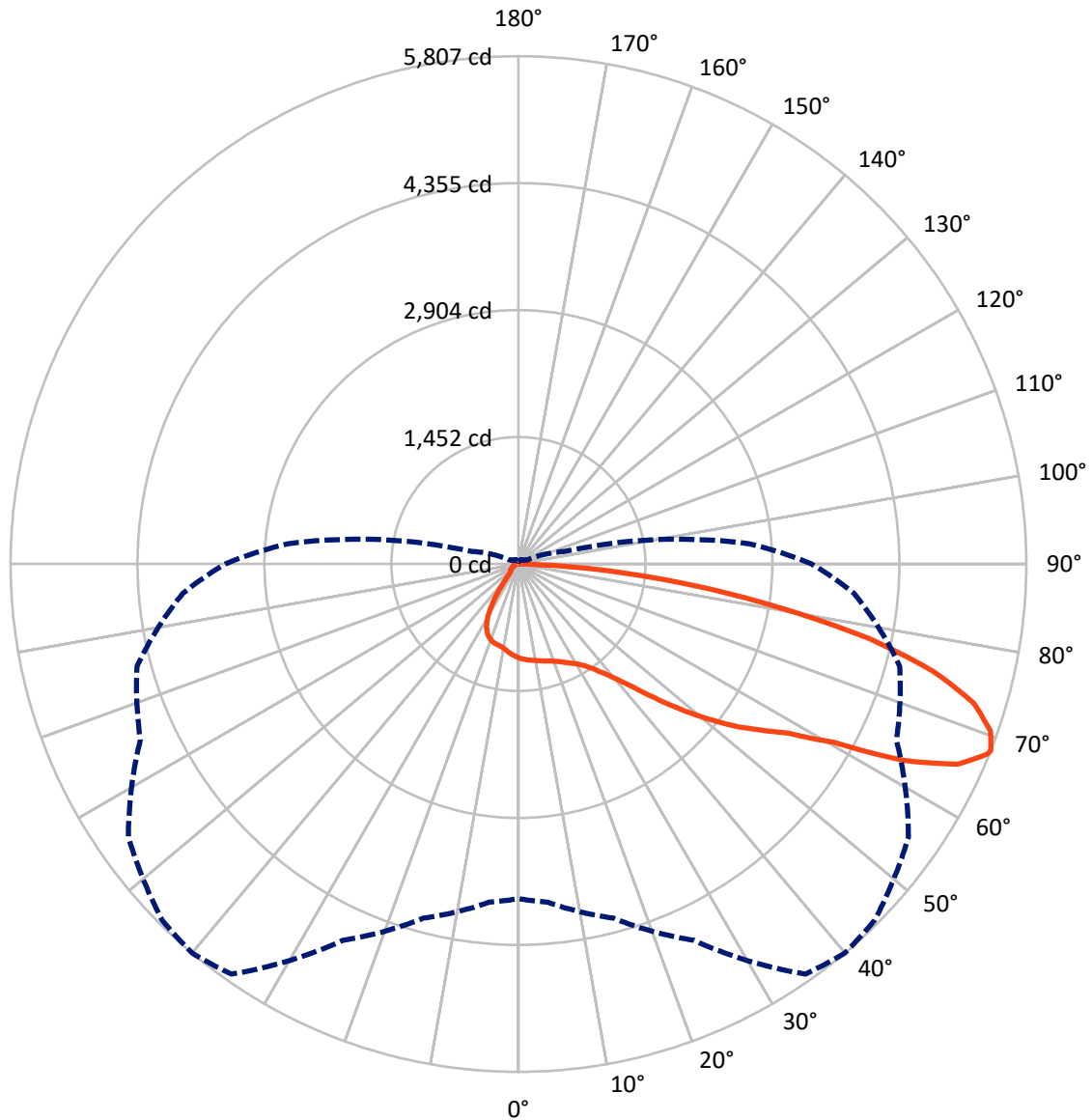
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.6 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P233800
CATALOG NUMBER: VRDN-C02-D-UNV-T4-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

REPORT NUMBER: P233800

CATALOG NUMBER: VRDN-C02-D-UNV-T4-HSS

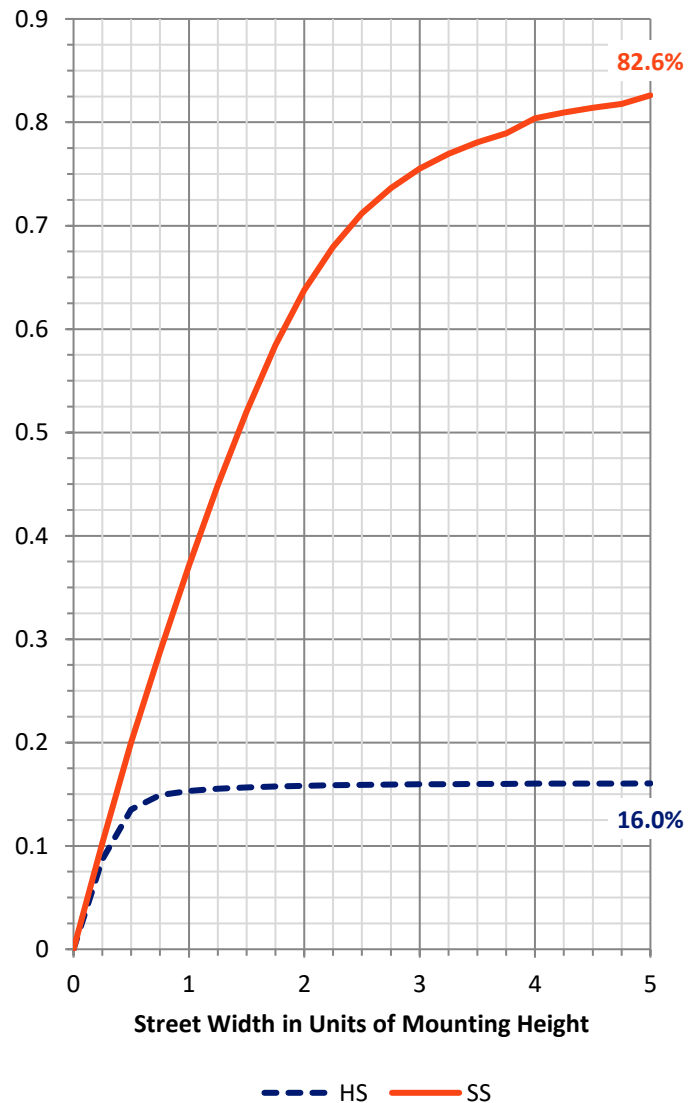
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1570.8	0.0	1570.8
	% Fixture	16.2	0.0	16.2
Street Side	Lumens	8112.2	0.0	8112.2
	% Fixture	83.8	0.0	83.8
Total	Lumens	9683.0	0.0	9683.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	1.1
10°-20°	305.7	3.2
20°-30°	513.1	5.3
30°-40°	760.0	7.8
40°-50°	1285.6	13.3
50°-60°	1962.1	20.3
60°-70°	2569.1	26.5
70°-80°	1847.1	19.1
80°-90°	338.1	3.5
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°	9683.0	100.0
0°-180°	9683.0	100.0



REPORT NUMBER: P233800

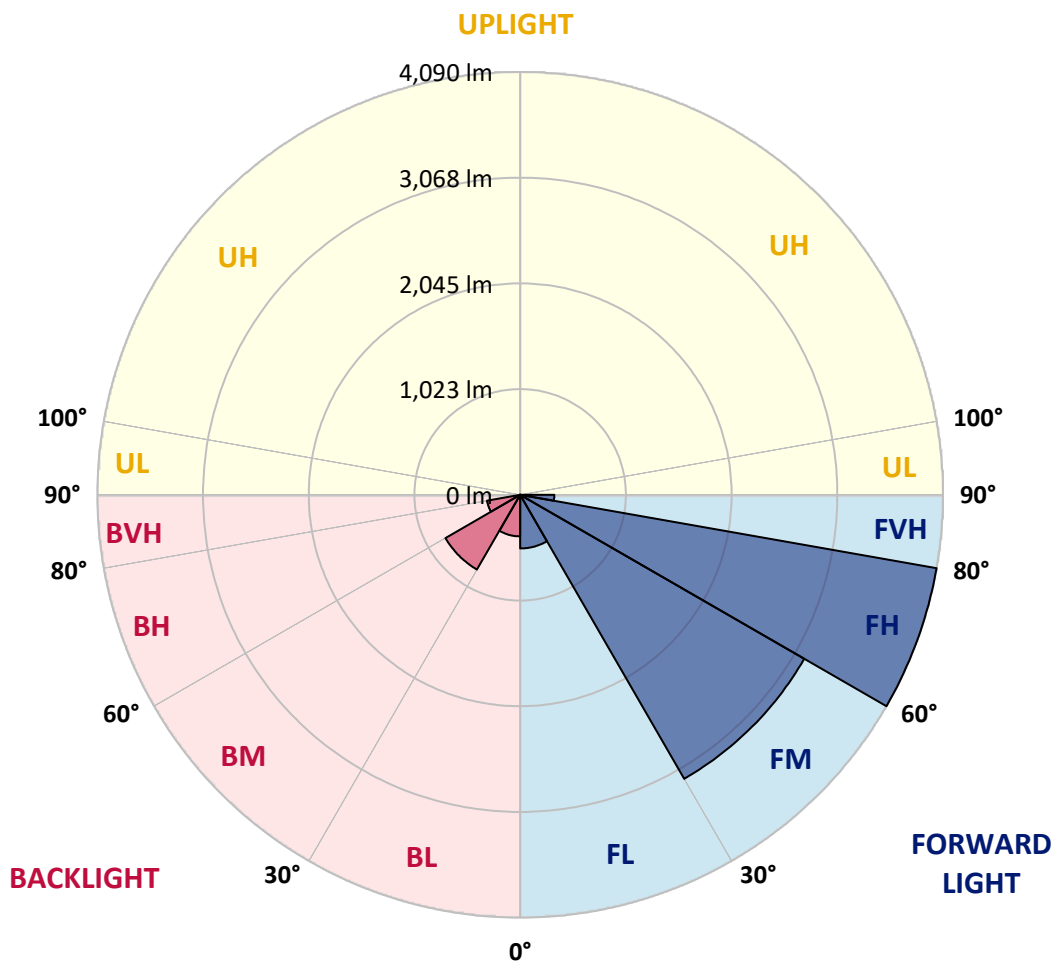
CATALOG NUMBER: VRDN-C02-D-UNV-T4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	519.1	5.4			
FM	(30°-60°)	3172.8	32.8			
FH	(60°-80°)	4090.2	42.2			G2/5000
FVH	(80°-90°)	330.1	3.4			G3/500
BL	(0°-30°)	401.9	4.2	B1/500		
BM	(30°-60°)	834.9	8.6	B1/1000		
BH	(60°-80°)	326.0	3.4	B1/500		G1/500
BVH	(80°-90°)	8.0	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





REPORT NUMBER: P233800

CATALOG NUMBER: VRDN-C02-D-UNV-T4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0
2.5°	1110.0	1112.5	1109.2	1101.1	1092.2	1087.3	1086.5	1085.7	1081.6	1076.0	1067.9
5°	1121.4	1122.2	1118.9	1112.5	1104.3	1102.7	1100.3	1101.1	1098.7	1093.0	1084.1
7.5°	1126.2	1127.9	1123.8	1117.3	1110.8	1110.8	1110.0	1112.5	1110.8	1108.4	1097.9
10°	1124.6	1127.1	1124.6	1122.2	1119.8	1122.2	1120.6	1126.2	1127.1	1127.1	1114.9
12.5°	1122.2	1125.4	1126.2	1128.7	1132.7	1135.2	1138.4	1150.6	1156.2	1160.3	1150.6
15°	1124.6	1126.2	1132.7	1136.8	1144.9	1150.6	1157.9	1178.1	1187.9	1199.2	1194.3
17.5°	1135.2	1139.2	1148.9	1153.0	1161.1	1165.2	1174.1	1199.2	1218.7	1238.9	1242.2
20°	1157.9	1160.3	1176.5	1178.1	1182.2	1186.2	1196.0	1223.5	1252.7	1281.9	1290.0
22.5°	1183.0	1188.7	1204.1	1201.6	1209.8	1211.4	1220.3	1250.3	1290.8	1326.5	1344.4
25°	1208.9	1213.8	1229.2	1230.8	1240.6	1247.1	1257.6	1286.8	1338.7	1384.1	1415.7
27.5°	1230.8	1240.6	1255.2	1256.8	1275.4	1283.5	1298.9	1332.2	1394.6	1450.6	1502.5
30°	1271.4	1273.8	1287.6	1292.5	1317.6	1324.9	1342.7	1384.9	1461.1	1530.8	1611.9
32.5°	1321.6	1320.8	1333.8	1341.9	1372.7	1385.7	1408.4	1457.1	1541.4	1628.1	1743.3
35°	1414.1	1406.0	1414.1	1422.2	1457.9	1471.7	1496.0	1569.0	1667.9	1815.4	1957.3
37.5°	1626.5	1614.4	1597.3	1556.8	1565.7	1583.5	1619.2	1718.1	1864.1	2138.2	2275.2
40°	1994.6	1967.9	1896.5	1789.5	1726.3	1727.9	1761.1	1890.9	2104.9	2507.9	2610.9
42.5°	2327.9	2309.2	2223.3	2076.5	1930.6	1922.5	1933.8	2085.4	2367.6	2850.9	2904.4
45°	2641.7	2650.6	2525.7	2410.6	2236.3	2182.7	2169.0	2293.0	2658.7	3156.6	3161.4
47.5°	2932.0	2946.5	2795.7	2687.1	2515.2	2469.0	2426.0	2511.1	2933.6	3416.8	3377.1
50°	3244.1	3255.5	3046.3	2957.1	2812.8	2769.8	2737.4	2774.7	3214.9	3658.5	3569.3
52.5°	3675.5	3612.2	3349.5	3202.0	3073.8	3070.6	3045.5	3069.0	3535.2	3875.8	3715.2
55°	4184.7	4019.3	3740.3	3504.4	3339.8	3348.7	3318.7	3357.6	3852.2	4062.2	3850.6
57.5°	4364.7	4360.6	4230.9	4004.7	3670.6	3650.3	3598.5	3642.2	4126.3	4236.6	3946.3
60°	4614.4	4636.3	4650.9	4514.7	4321.7	4137.7	3964.1	3960.1	4381.7	4395.5	3993.3
62.5°	4775.8	4796.0	4909.6	4891.7	5010.9	4950.1	4752.3	4313.6	4577.1	4498.5	4011.2
65°	4474.1	4524.4	4810.6	5028.8	5435.0	5520.1	5491.7	4856.9	4710.1	4528.5	3977.9
67.5°	3928.5	3994.1	4307.9	4817.9	5697.7	5792.6	5740.7	5404.2	4767.7	4515.5	3886.3
68°	3826.3	3883.1	4191.2	4747.4	5724.4	5807.1	5760.1	5444.7	4770.1	4513.9	3851.4
70°	3334.9	3381.2	3682.0	4385.8	5649.8	5726.9	5720.4	5482.8	4749.0	4463.6	3617.1
72.5°	2587.4	2633.6	2900.3	3637.4	5305.2	5446.3	5440.7	5330.4	4710.1	4207.4	3032.5
75°	1870.6	1921.7	2164.9	2794.9	4590.9	4901.5	4963.9	5069.3	4305.5	3540.9	2157.6
77.5°	1350.8	1388.1	1598.1	2111.4	3750.1	4105.2	4231.7	4337.9	3523.9	2580.9	1026.5
80°	900.8	927.6	1130.3	1569.8	2824.9	3034.1	3170.3	2992.8	2005.2	933.3	111.1
82.5°	554.6	571.6	731.4	1101.1	1954.1	2019.8	2020.6	1596.5	646.2	89.2	60.0
85°	297.6	303.2	397.3	600.8	1032.2	1081.6	1062.2	670.6	130.5	47.8	32.4
87.5°	47.8	51.9	124.9	225.4	318.7	245.7	157.3	49.5	13.0	7.3	4.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P233800

CATALOG NUMBER: VRDN-C02-D-UNV-T4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0	1076.0
2.5°	1071.9	1069.5	1063.0	1059.8	1051.6	1054.1	1054.1	1047.6	1050.8	1063.8	1062.2
5°	1081.6	1082.5	1067.0	1058.9	1041.1	1036.2	1028.9	1019.2	1018.4	1027.3	1028.1
7.5°	1089.8	1093.8	1071.9	1055.7	1031.4	1014.3	999.8	982.7	978.7	984.3	984.3
10°	1102.7	1106.8	1079.2	1056.5	1020.8	993.3	968.1	946.2	937.3	937.3	938.1
12.5°	1136.8	1134.3	1102.7	1067.9	1025.7	981.9	942.2	913.0	891.9	891.1	887.9
15°	1183.8	1174.9	1144.1	1091.4	1037.0	981.1	926.0	880.6	844.1	834.3	830.3
17.5°	1234.1	1222.7	1185.4	1121.4	1054.9	980.3	907.3	844.1	783.3	759.7	752.4
20°	1288.4	1274.6	1236.5	1156.2	1072.7	974.6	879.7	791.4	708.7	664.1	652.7
22.5°	1348.4	1337.1	1290.8	1191.9	1084.9	962.5	836.8	724.9	619.5	555.4	550.6
25°	1426.2	1415.7	1347.6	1223.5	1085.7	939.7	780.0	639.7	507.6	432.2	416.8
27.5°	1519.5	1500.8	1393.0	1243.0	1072.7	900.0	706.2	526.2	377.0	313.8	312.2
30°	1620.8	1586.8	1429.5	1247.9	1043.5	836.8	604.9	386.8	267.6	224.6	224.6
32.5°	1740.0	1677.6	1466.8	1239.8	995.7	749.2	463.0	268.4	184.1	163.8	163.8
35°	1914.4	1817.9	1514.6	1219.5	928.4	628.4	329.2	177.6	145.1	142.7	142.7
37.5°	2190.0	2029.5	1579.5	1185.4	836.0	479.2	214.1	137.0	138.7	138.7	137.8
40°	2483.6	2274.4	1668.7	1131.1	720.0	330.8	140.3	129.7	132.2	133.8	133.0
42.5°	2748.7	2507.1	1766.0	1058.1	583.0	208.4	128.1	124.9	123.2	124.9	125.7
45°	2978.2	2709.0	1864.1	963.3	430.5	136.2	124.9	117.6	112.7	113.5	114.3
47.5°	3174.4	2867.9	1930.6	863.5	285.4	120.8	120.8	107.8	103.0	103.0	103.0
50°	3346.3	3009.0	1971.1	744.3	170.3	119.2	113.5	98.9	94.1	93.2	94.1
52.5°	3471.2	3107.9	1966.3	599.2	114.3	115.1	103.8	90.8	85.1	86.8	87.6
55°	3570.1	3170.3	1923.3	438.7	107.0	107.8	96.5	81.9	77.8	78.7	78.7
57.5°	3632.5	3185.7	1835.7	285.4	104.6	96.5	86.8	73.0	68.1	68.1	68.1
60°	3652.8	3177.6	1716.5	182.4	103.8	86.8	78.7	65.7	60.8	60.8	60.8
62.5°	3635.8	3130.6	1514.6	131.4	96.5	81.1	71.4	58.4	53.5	51.9	51.9
65°	3574.9	3004.9	1167.6	108.7	86.8	74.6	64.9	52.7	46.2	43.8	43.0
67.5°	3397.4	2732.5	679.5	102.2	78.7	68.1	60.0	47.8	40.5	36.5	35.7
68°	3351.2	2651.4	558.7	101.4	78.7	67.3	59.2	46.2	38.9	34.9	34.1
70°	3020.3	2139.0	160.5	96.5	77.0	64.9	54.3	42.2	34.9	30.0	29.2
72.5°	2274.4	1253.5	100.5	85.9	76.2	57.6	52.7	42.2	30.8	25.9	24.3
75°	1269.8	285.4	85.1	64.1	71.4	56.8	51.9	38.1	27.6	21.1	20.3
77.5°	261.1	82.7	73.0	44.6	54.3	49.5	43.8	32.4	25.1	16.2	15.4
80°	73.8	61.6	64.9	32.4	30.8	34.9	32.4	28.4	18.6	12.2	12.2
82.5°	47.8	45.4	58.4	21.9	16.2	16.2	21.1	17.0	16.2	9.7	9.7
85°	29.2	38.1	28.4	9.7	8.1	6.5	7.3	7.3	9.7	6.5	6.5
87.5°	4.1	4.1	4.1	4.1	4.1	3.2	2.4	2.4	2.4	3.2	3.2
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)