

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: P233787

Luminaire Tested: **VRDN-C02-D-UNV-T4-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P233787
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-C02-D-UNV-T4-7030-HSS
Description: VERDEON ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1140mA LEDS AND TYPE IV OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9423 lumens
Efficiency: N/A
Efficacy: 104.7 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

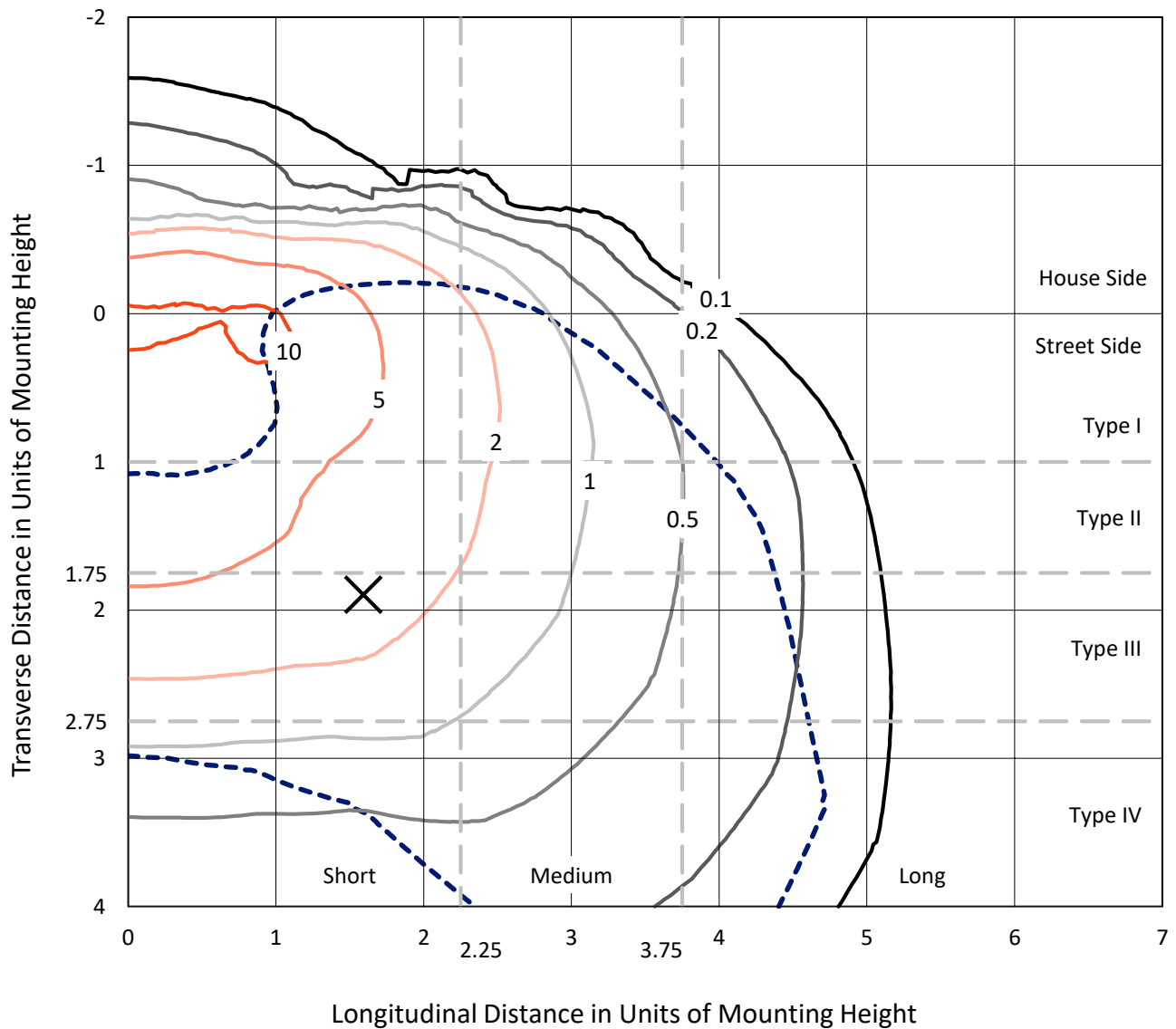
Input Watts (W): 90
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

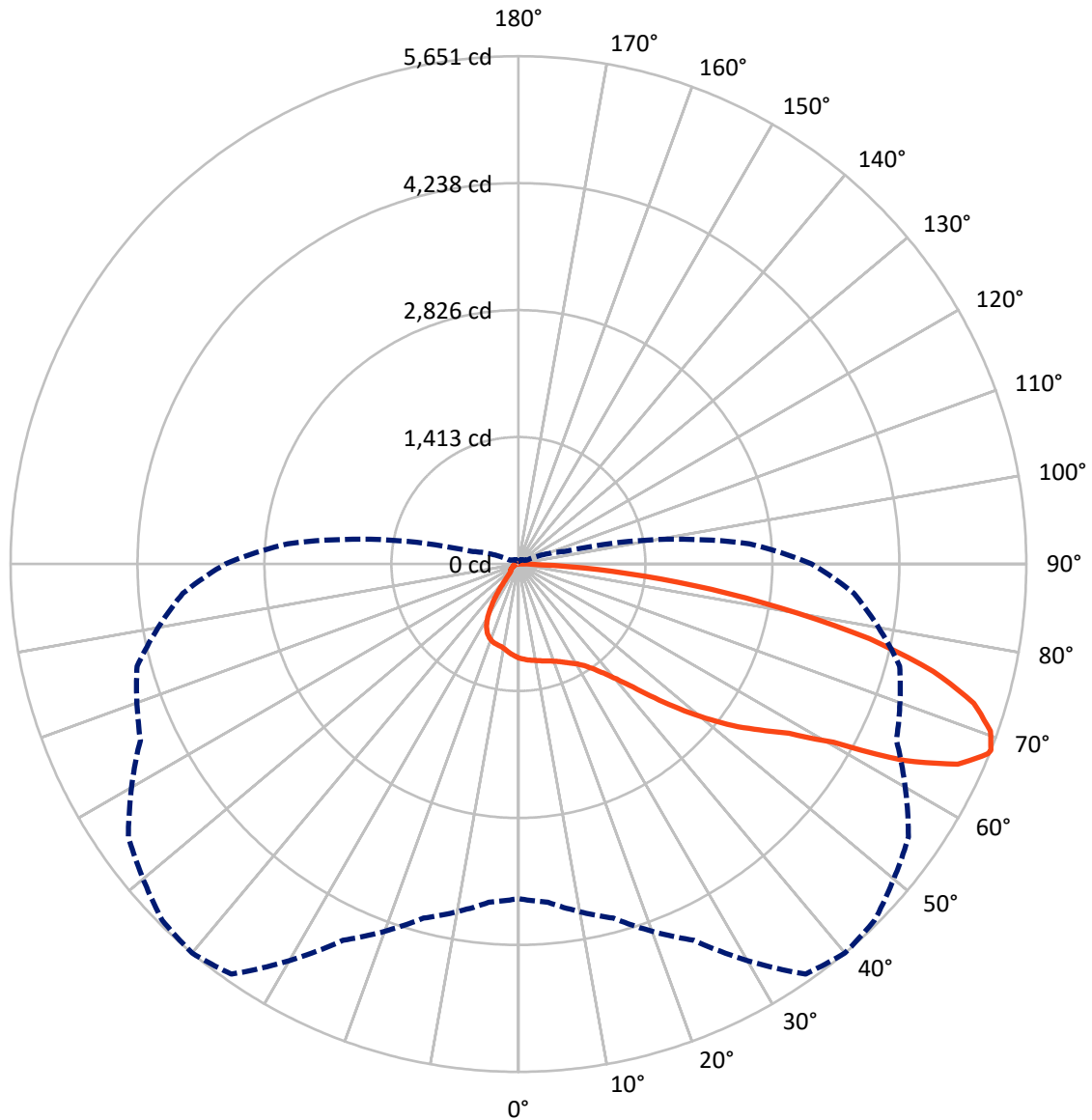
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.3 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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

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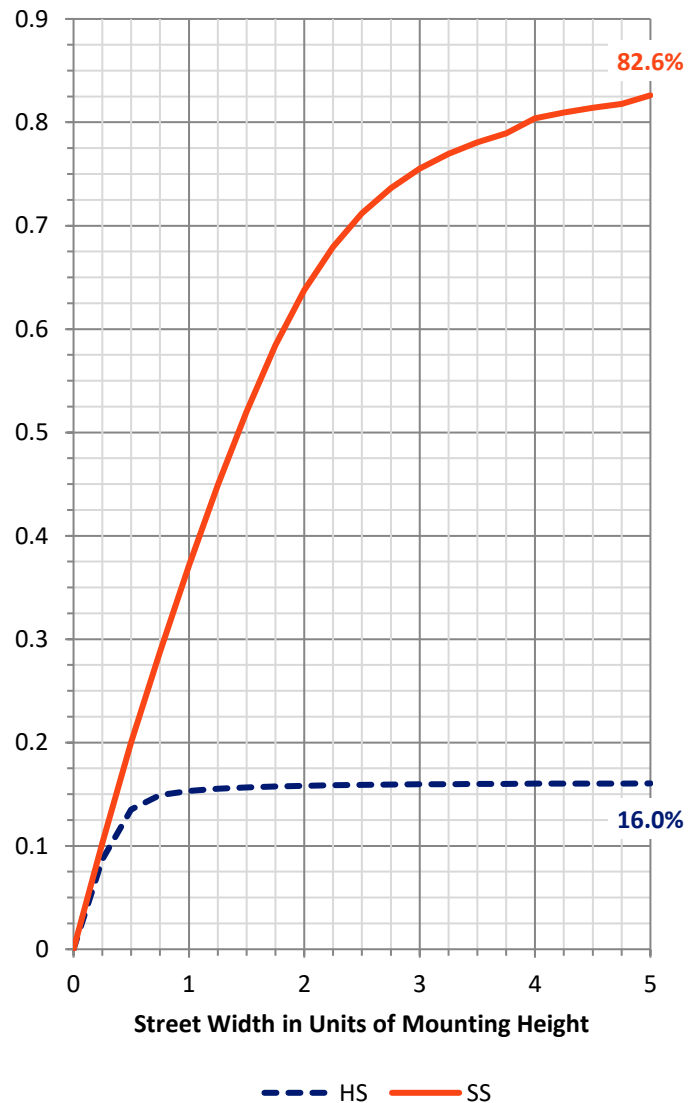
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1528.6	0.0	1528.6
	% Fixture	16.2	0.0	16.2
Street Side	Lumens	7894.4	0.0	7894.4
	% Fixture	83.8	0.0	83.8
Total	Lumens	9423.0	0.0	9423.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.3	1.1
10°-20°	297.5	3.2
20°-30°	499.4	5.3
30°-40°	739.5	7.8
40°-50°	1251.1	13.3
50°-60°	1909.4	20.3
60°-70°	2500.2	26.5
70°-80°	1797.5	19.1
80°-90°	329.0	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°	9423.0	100.0
0°-180°	9423.0	100.0



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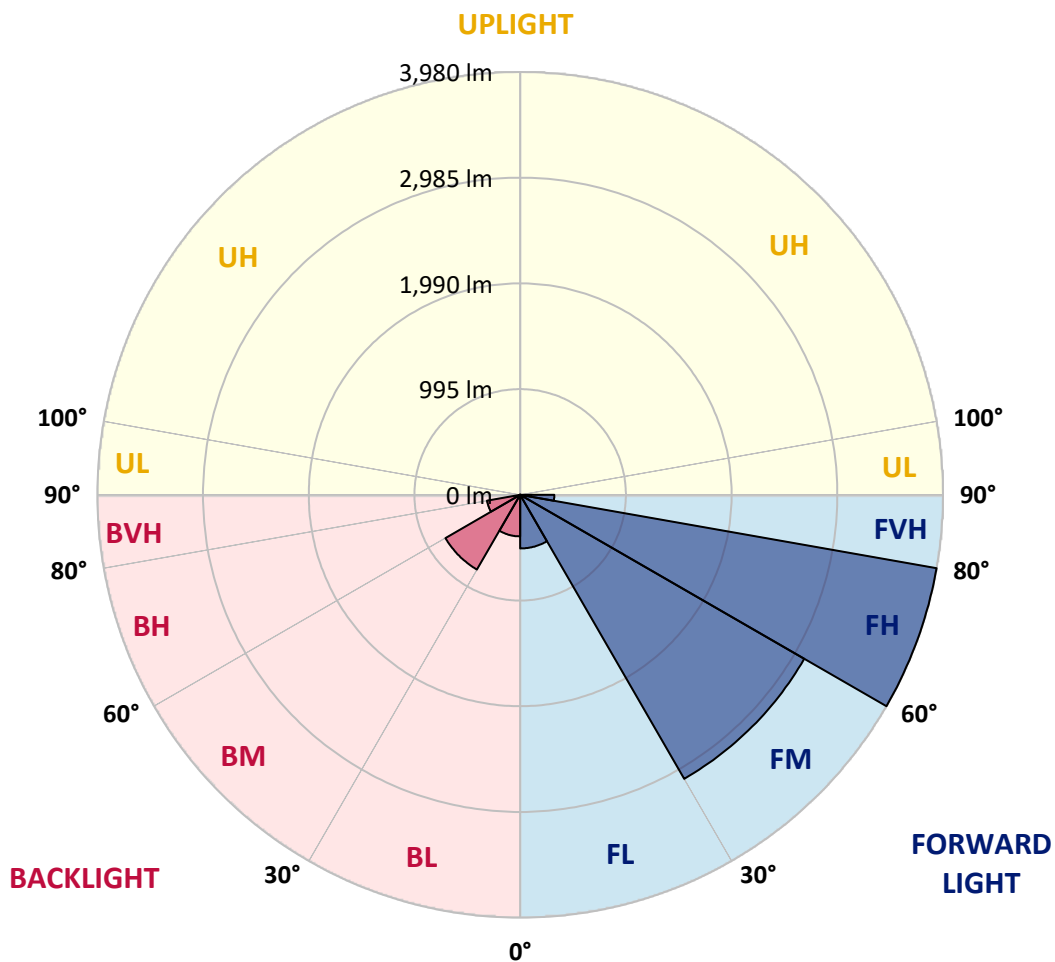
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	505.1	5.4			
FM	(30°-60°)	3087.6	32.8			
FH	(60°-80°)	3980.4	42.2			G2/5000
FVH	(80°-90°)	321.2	3.4			G3/500
BL	(0°-30°)	391.1	4.2	B1/500		
BM	(30°-60°)	812.5	8.6	B1/1000		
BH	(60°-80°)	317.2	3.4	B1/500		G1/500
BVH	(80°-90°)	7.8	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1080.2	1082.6	1079.4	1071.5	1062.9	1058.1	1057.3	1056.5	1052.6	1047.1	1039.2
5°	1091.3	1092.1	1088.9	1082.6	1074.7	1073.1	1070.7	1071.5	1069.2	1063.6	1055.0
7.5°	1096.0	1097.6	1093.6	1087.3	1081.0	1081.0	1080.2	1082.6	1081.0	1078.6	1068.4
10°	1094.4	1096.8	1094.4	1092.1	1089.7	1092.1	1090.5	1096.0	1096.8	1096.8	1085.0
12.5°	1092.1	1095.2	1096.0	1098.4	1102.3	1104.7	1107.8	1119.7	1125.2	1129.1	1119.7
15°	1094.4	1096.0	1102.3	1106.3	1114.1	1119.7	1126.8	1146.5	1156.0	1167.0	1162.3
17.5°	1104.7	1108.6	1118.1	1122.0	1129.9	1133.9	1142.6	1167.0	1186.0	1205.7	1208.8
20°	1126.8	1129.1	1144.9	1146.5	1150.4	1154.4	1163.9	1190.7	1219.1	1247.5	1255.4
22.5°	1151.2	1156.8	1171.7	1169.4	1177.3	1178.8	1187.5	1216.7	1256.2	1290.9	1308.3
25°	1176.5	1181.2	1196.2	1197.8	1207.3	1213.6	1223.8	1252.2	1302.7	1346.9	1377.7
27.5°	1197.8	1207.3	1221.5	1223.0	1241.2	1249.1	1264.1	1296.4	1357.2	1411.6	1462.1
30°	1237.2	1239.6	1253.0	1257.8	1282.2	1289.3	1306.7	1347.7	1421.9	1489.7	1568.6
32.5°	1286.2	1285.4	1298.0	1305.9	1335.9	1348.5	1370.6	1417.9	1500.0	1584.4	1696.5
35°	1376.1	1368.2	1376.1	1384.0	1418.7	1432.1	1455.8	1526.8	1623.1	1766.7	1904.8
37.5°	1582.8	1571.0	1554.4	1515.0	1523.7	1541.0	1575.7	1672.0	1814.0	2080.7	2214.1
40°	1941.1	1915.0	1845.6	1741.4	1679.9	1681.5	1713.8	1840.1	2048.4	2440.6	2540.8
42.5°	2265.4	2247.2	2163.6	2020.8	1878.7	1870.9	1881.9	2029.5	2304.0	2774.3	2826.4
45°	2570.7	2579.4	2457.9	2345.9	2176.2	2124.1	2110.7	2231.5	2587.3	3071.8	3076.5
47.5°	2853.2	2867.4	2720.7	2614.9	2447.7	2402.7	2360.9	2443.7	2854.8	3325.1	3286.4
50°	3157.0	3168.1	2964.5	2877.7	2737.2	2695.4	2663.9	2700.1	3128.6	3560.2	3473.4
52.5°	3576.8	3515.2	3259.6	3116.0	2991.3	2988.2	2963.7	2986.6	3440.3	3771.7	3615.5
55°	4072.3	3911.4	3639.9	3410.3	3250.1	3258.8	3229.6	3267.5	3748.8	3953.2	3747.2
57.5°	4247.5	4243.5	4117.3	3897.1	3572.1	3552.3	3501.8	3544.4	4015.5	4122.8	3840.3
60°	4490.5	4511.8	4526.0	4393.5	4205.7	4026.6	3857.7	3853.7	4264.1	4277.5	3886.1
62.5°	4647.5	4667.3	4777.7	4760.4	4876.4	4817.2	4624.7	4197.8	4454.2	4377.7	3903.5
65°	4354.0	4402.9	4681.5	4893.7	5289.0	5371.9	5344.3	4726.4	4583.6	4406.9	3871.1
67.5°	3823.0	3886.9	4192.3	4688.6	5544.7	5637.0	5586.5	5259.1	4639.6	4394.3	3781.9
68°	3723.6	3778.8	4078.6	4619.9	5570.7	5651.2	5605.5	5298.5	4642.0	4392.7	3748.0
70°	3245.4	3290.4	3583.1	4268.0	5498.1	5573.1	5566.8	5335.6	4621.5	4343.8	3520.0
72.5°	2517.9	2562.9	2822.5	3539.7	5162.8	5300.1	5294.6	5187.3	4583.6	4094.4	2951.1
75°	1820.4	1870.1	2106.8	2719.9	4467.6	4769.8	4830.6	4933.2	4189.9	3445.8	2099.7
77.5°	1314.6	1350.9	1555.2	2054.7	3649.4	3995.0	4118.1	4221.4	3429.2	2511.6	998.9
80°	876.6	902.7	1099.9	1527.6	2749.1	2952.6	3085.2	2912.4	1951.3	908.2	108.1
82.5°	539.7	556.3	711.7	1071.5	1901.6	1965.5	1966.3	1553.7	628.9	86.8	58.4
85°	289.6	295.1	386.6	584.7	1004.5	1052.6	1033.7	652.5	127.0	46.6	31.6
87.5°	46.6	50.5	121.5	219.4	310.1	239.1	153.1	48.1	12.6	7.1	4.7
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°	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1
2.5°	1043.1	1040.8	1034.5	1031.3	1023.4	1025.8	1025.8	1019.5	1022.6	1035.2	1033.7
5°	1052.6	1053.4	1038.4	1030.5	1013.1	1008.4	1001.3	991.8	991.1	999.7	1000.5
7.5°	1060.5	1064.4	1043.1	1027.4	1003.7	987.1	972.9	956.3	952.4	957.9	957.9
10°	1073.1	1077.1	1050.2	1028.1	993.4	966.6	942.1	920.8	912.1	912.1	912.9
12.5°	1106.3	1103.9	1073.1	1039.2	998.2	955.5	916.9	888.5	868.0	867.2	864.0
15°	1152.0	1143.3	1113.4	1062.1	1009.2	954.8	901.1	856.9	821.4	811.9	808.0
17.5°	1200.9	1189.9	1153.6	1091.3	1026.6	954.0	883.0	821.4	762.2	739.3	732.2
20°	1253.8	1240.4	1203.3	1125.2	1043.9	948.4	856.1	770.1	689.6	646.2	635.2
22.5°	1312.2	1301.2	1256.2	1159.9	1055.8	936.6	814.3	705.4	602.8	540.5	535.8
25°	1387.9	1377.7	1311.4	1190.7	1056.5	914.5	759.1	622.6	493.9	420.6	405.6
27.5°	1478.7	1460.5	1355.6	1209.6	1043.9	875.9	687.3	512.1	366.9	305.4	303.8
30°	1577.3	1544.2	1391.1	1214.4	1015.5	814.3	588.6	376.4	260.4	218.6	218.6
32.5°	1693.3	1632.6	1427.4	1206.5	969.0	729.1	450.6	261.2	179.1	159.4	159.4
35°	1863.0	1769.1	1474.0	1186.7	903.5	611.5	320.4	172.8	141.2	138.9	138.9
37.5°	2131.2	1975.0	1537.1	1153.6	813.5	466.3	208.3	133.4	134.9	134.9	134.1
40°	2416.9	2213.3	1623.9	1100.7	700.7	321.9	136.5	126.2	128.6	130.2	129.4
42.5°	2674.9	2439.8	1718.6	1029.7	567.3	202.8	124.7	121.5	119.9	121.5	122.3
45°	2898.2	2636.2	1814.0	937.4	419.0	132.6	121.5	114.4	109.7	110.5	111.3
47.5°	3089.2	2790.9	1878.7	840.3	277.7	117.6	117.6	104.9	100.2	100.2	100.2
50°	3256.4	2928.2	1918.2	724.4	165.7	116.0	110.5	96.3	91.5	90.7	91.5
52.5°	3377.9	3024.5	1913.5	583.1	111.3	112.0	101.0	88.4	82.9	84.4	85.2
55°	3474.2	3085.2	1871.6	426.9	104.2	104.9	93.9	79.7	75.7	76.5	76.5
57.5°	3535.0	3100.2	1786.4	277.7	101.8	93.9	84.4	71.0	66.3	66.3	66.3
60°	3554.7	3092.3	1670.4	177.5	101.0	84.4	76.5	63.9	59.2	59.2	59.2
62.5°	3538.1	3046.5	1474.0	127.8	93.9	78.9	69.4	56.8	52.1	50.5	50.5
65°	3478.9	2924.2	1136.2	105.7	84.4	72.6	63.1	51.3	45.0	42.6	41.8
67.5°	3306.1	2659.1	661.2	99.4	76.5	66.3	58.4	46.6	39.5	35.5	34.7
68°	3261.2	2580.2	543.7	98.6	76.5	65.5	57.6	45.0	37.9	33.9	33.1
70°	2939.2	2081.5	156.2	93.9	75.0	63.1	52.9	41.0	33.9	29.2	28.4
72.5°	2213.3	1219.9	97.8	83.6	74.2	56.0	51.3	41.0	30.0	25.2	23.7
75°	1235.7	277.7	82.9	62.3	69.4	55.2	50.5	37.1	26.8	20.5	19.7
77.5°	254.1	80.5	71.0	43.4	52.9	48.1	42.6	31.6	24.5	15.8	15.0
80°	71.8	60.0	63.1	31.6	30.0	33.9	31.6	27.6	18.1	11.8	11.8
82.5°	46.6	44.2	56.8	21.3	15.8	15.8	20.5	16.6	15.8	9.5	9.5
85°	28.4	37.1	27.6	9.5	7.9	6.3	7.1	7.1	9.5	6.3	6.3
87.5°	3.9	3.9	3.9	3.9	3.9	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)