

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: P143931

Luminaire Tested: **LDRL-5WQ-E02-E-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143931  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33698)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-5WQ-E02-E-7050  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE  
Light Source: (42) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6291.2 lumens  
Efficiency: N/A  
Efficacy: 120.8 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G1

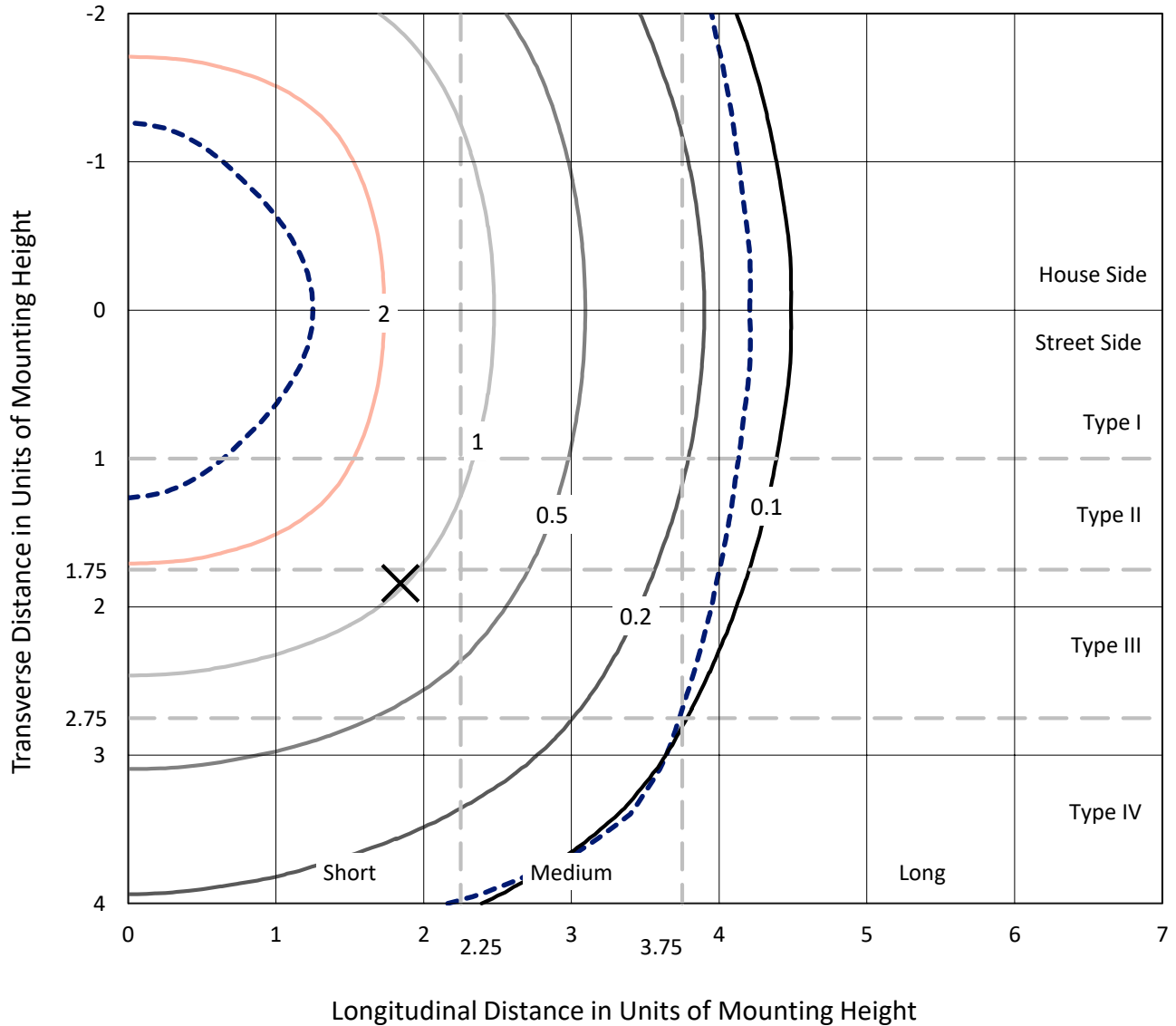
Input Watts (W): 52.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

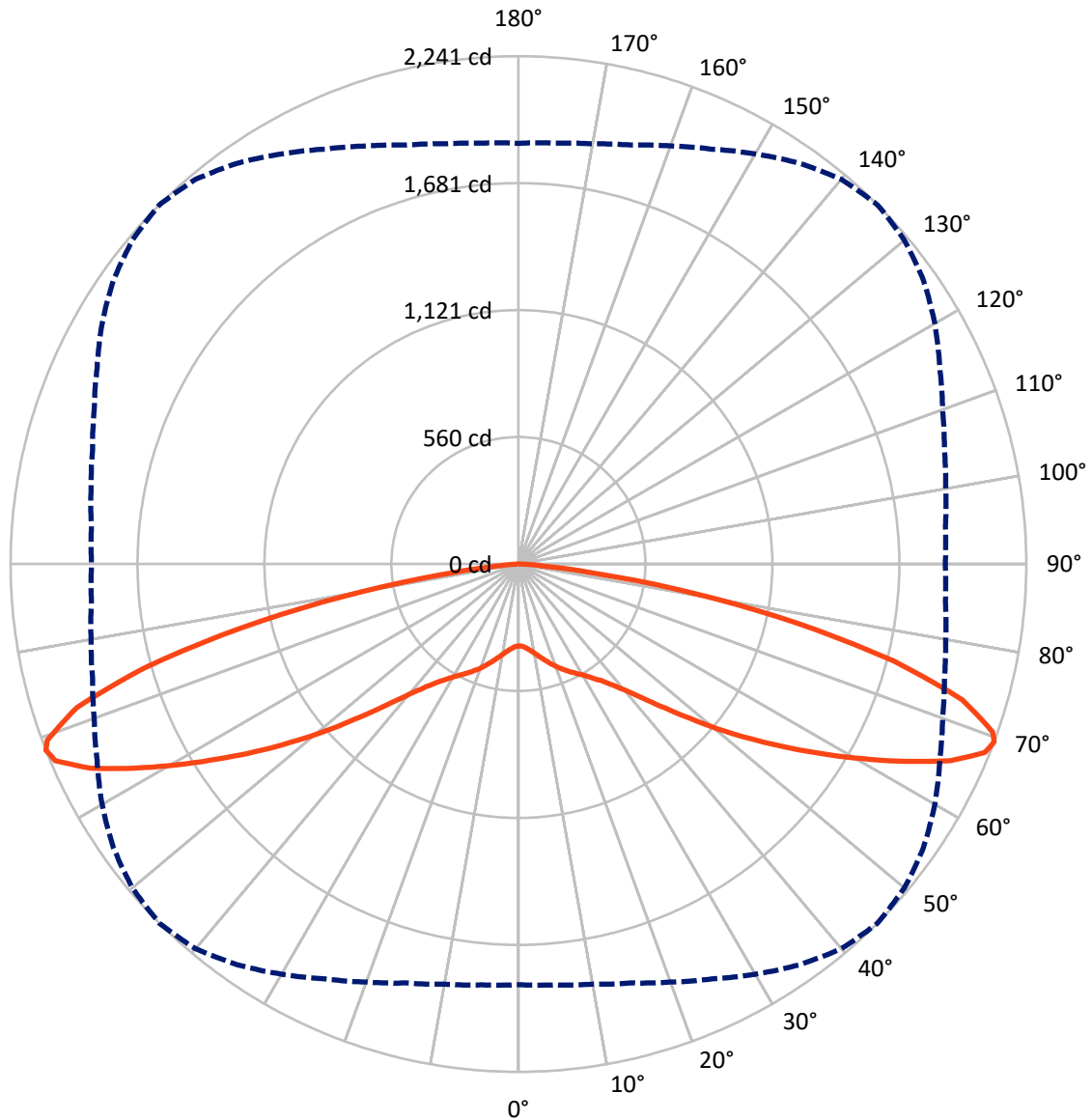
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 69-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3145.6	0.0	3145.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3145.6	0.0	3145.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	6291.2	0.0	6291.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.5	0.6
10°-20°	125.7	2.0
20°-30°	242.3	3.9
30°-40°	397.1	6.3
40°-50°	690.5	11.0
50°-60°	1226.6	19.5
60°-70°	1904.3	30.3
70°-80°	1517.3	24.1
80°-90°	150.9	2.4
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°	6291.2	100.0
0°-180°	6291.2	100.0



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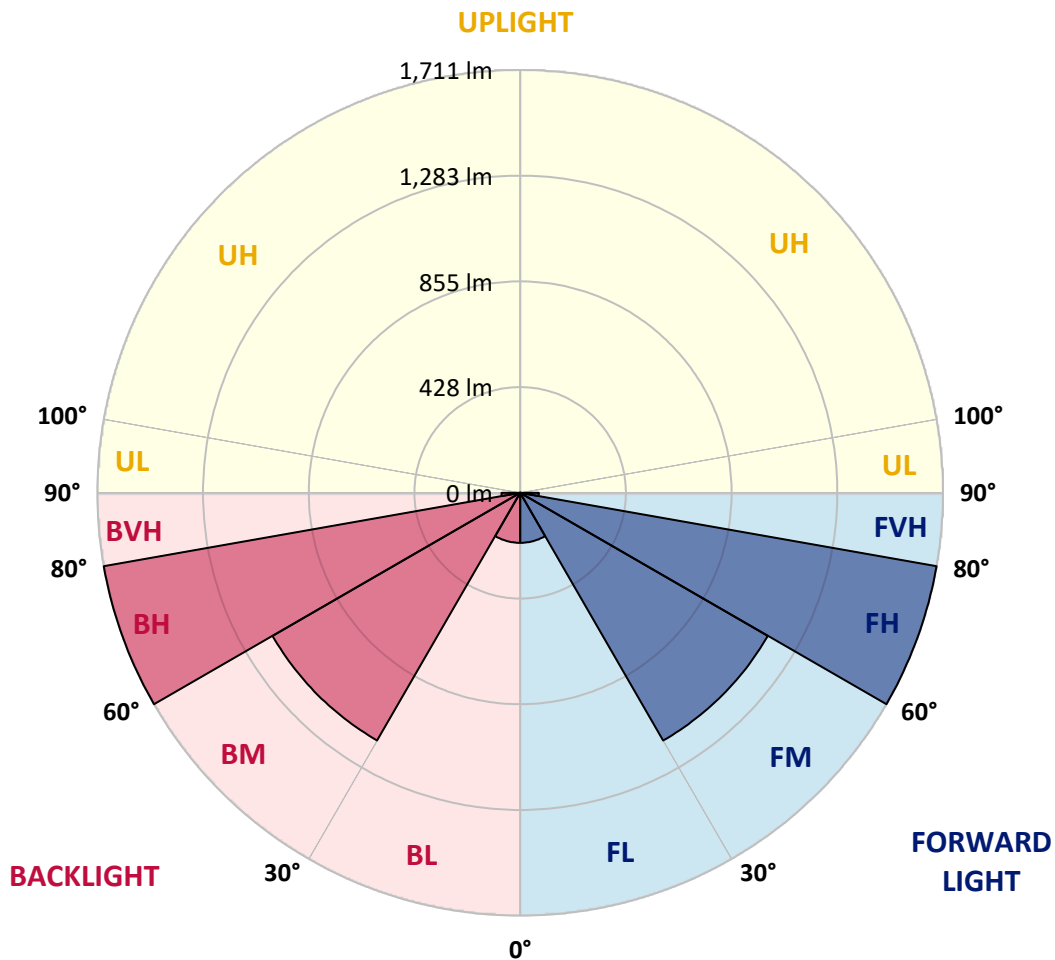
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	202.3	3.2			
FM	(30°-60°)	1157.1	18.4			
FH	(60°-80°)	1710.8	27.2			G1/1800
FVH	(80°-90°)	75.4	1.2			G1/100
BL	(0°-30°)	202.3	3.2	B1/500		
BM	(30°-60°)	1157.1	18.4	B2/2500		
BH	(60°-80°)	1710.8	27.2	B3/2500		G1/1800
BVH	(80°-90°)	75.4	1.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	361.6	361.6	361.6	361.6	361.6	361.6	361.6	361.6	361.6	361.6	361.6
2.5°	364.5	364.5	364.5	364.1	364.1	363.7	364.1	363.7	363.7	363.7	363.7
5°	373.9	373.1	373.1	372.7	373.5	373.5	372.7	373.1	372.7	373.1	373.1
7.5°	385.8	385.8	385.8	385.4	386.2	385.8	385.4	385.8	385.8	385.4	385.4
10°	400.6	401.0	400.6	400.6	401.8	401.4	401.8	401.8	402.2	401.8	401.8
12.5°	417.8	417.8	418.2	418.7	419.1	419.5	420.7	420.3	421.1	420.3	420.3
15°	437.9	438.8	437.9	437.9	439.2	440.0	440.4	440.4	441.2	440.8	440.0
17.5°	459.3	459.7	459.3	458.9	460.1	461.3	461.7	461.7	463.0	462.2	462.2
20°	481.0	481.4	480.6	480.2	481.9	481.9	482.7	483.1	484.3	484.7	483.5
22.5°	501.1	501.6	501.1	500.7	502.4	502.4	503.6	504.0	505.7	505.3	505.3
25°	520.9	520.9	520.4	520.4	522.1	522.5	523.7	524.5	526.2	526.2	526.2
27.5°	538.9	539.3	538.5	538.1	541.4	542.6	543.4	545.1	546.3	547.1	546.7
30°	559.4	559.4	559.0	560.3	562.3	563.9	565.6	568.1	570.5	569.7	569.7
32.5°	583.6	584.5	584.1	585.7	588.2	590.6	592.7	595.6	596.8	598.8	597.2
35°	616.1	617.7	616.9	618.5	620.6	622.2	626.7	629.6	631.7	632.9	632.1
37.5°	656.7	655.9	657.5	657.9	662.0	664.1	669.4	673.5	676.8	678.1	677.2
40°	707.2	706.0	708.0	710.1	715.4	717.5	723.6	729.8	734.3	735.9	735.1
42.5°	767.5	769.2	772.5	775.3	782.7	788.5	795.4	804.5	809.4	811.4	808.6
45°	846.7	843.9	850.0	857.4	861.5	874.2	885.7	895.2	903.4	906.7	903.4
47.5°	937.0	936.6	944.0	953.0	963.7	975.6	989.2	1001.5	1015.8	1016.7	1012.6
50°	1036.8	1045.0	1049.1	1058.1	1077.8	1092.6	1109.8	1128.3	1141.4	1145.5	1138.2
52.5°	1157.0	1163.2	1165.7	1180.8	1198.9	1217.0	1241.2	1263.3	1278.5	1280.2	1276.5
55°	1287.6	1292.5	1297.0	1315.5	1335.2	1351.2	1382.0	1403.7	1418.9	1424.6	1422.2
57.5°	1422.6	1427.1	1432.9	1453.0	1473.1	1495.7	1524.8	1550.2	1567.9	1578.6	1575.7
60°	1572.4	1572.4	1585.5	1605.6	1622.1	1648.7	1679.1	1708.7	1728.0	1744.8	1740.3
62.5°	1730.0	1734.5	1747.3	1763.7	1780.9	1805.5	1840.0	1875.3	1904.9	1917.6	1917.2
65°	1849.5	1857.7	1874.5	1893.4	1922.1	1951.2	1994.7	2038.7	2074.4	2092.8	2092.8
67.5°	1884.3	1889.7	1910.6	1939.3	1980.8	2027.2	2086.3	2147.4	2196.3	2220.5	2205.3
69°	1856.4	1864.2	1882.7	1913.9	1963.1	2019.8	2090.0	2159.3	2216.0	2241.0	2223.4
70°	1824.0	1832.6	1851.1	1881.9	1932.8	1993.1	2063.3	2138.0	2198.7	2220.1	2200.0
72.5°	1691.8	1702.5	1715.6	1742.3	1788.3	1844.9	1908.1	1973.8	2032.1	2048.9	2023.9
75°	1466.5	1468.6	1475.1	1494.8	1511.2	1551.5	1605.2	1657.4	1701.3	1711.1	1684.5
77.5°	1038.0	1026.9	1015.8	1032.7	1045.8	1097.5	1155.8	1198.5	1244.5	1258.4	1231.3
80°	455.2	451.1	466.7	488.8	546.7	581.2	638.2	699.4	738.4	783.9	735.1
82.5°	89.9	94.8	109.6	135.4	167.0	210.1	247.5	289.8	327.9	345.2	327.5
85°	36.5	39.8	45.1	50.5	54.2	60.7	71.4	88.7	97.7	98.9	94.0
87.5°	15.2	17.6	23.8	28.3	28.7	27.5	28.3	29.1	23.8	19.3	24.2
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	361.6	361.6	361.6	361.6	361.6	361.6	361.6	361.6
2.5°	363.7	364.1	363.7	364.1	363.7	363.7	364.1	363.7
5°	372.7	373.1	372.7	372.3	371.9	372.3	372.3	372.3
7.5°	385.4	385.0	384.6	384.6	384.2	383.8	384.6	384.6
10°	401.0	400.6	399.8	399.8	399.4	399.4	399.4	399.4
12.5°	419.9	418.7	418.2	417.0	416.6	416.2	416.2	416.6
15°	439.6	438.4	437.9	435.9	435.9	435.5	435.5	435.5
17.5°	460.5	459.3	457.6	457.6	456.4	455.6	456.0	455.2
20°	481.9	480.2	479.4	479.0	477.3	477.3	477.3	476.9
22.5°	502.8	501.6	500.3	498.7	497.0	496.6	496.6	496.2
25°	524.1	522.1	519.6	518.0	516.3	515.1	515.1	515.1
27.5°	545.5	543.0	539.3	537.3	534.8	533.6	533.6	533.2
30°	568.1	565.2	561.9	559.0	555.7	554.5	554.1	553.3
32.5°	595.1	592.3	589.0	584.9	581.6	579.5	579.5	578.3
35°	629.6	626.3	623.9	618.5	614.4	611.1	611.6	612.4
37.5°	674.8	670.7	668.6	662.0	656.7	653.4	653.4	653.0
40°	732.2	728.1	723.6	717.5	710.9	706.4	705.1	705.1
42.5°	805.3	801.6	795.4	786.8	779.0	774.1	770.0	770.4
45°	896.8	892.3	883.7	873.0	863.6	856.6	850.8	850.8
47.5°	1008.0	998.6	986.7	977.3	961.3	950.6	946.5	945.7
50°	1134.9	1117.2	1102.4	1088.9	1072.1	1061.0	1054.8	1053.2
52.5°	1267.9	1249.4	1230.9	1213.3	1192.7	1181.3	1171.4	1170.6
55°	1412.3	1388.9	1365.5	1348.3	1324.1	1312.2	1302.3	1296.6
57.5°	1559.7	1533.4	1516.6	1492.0	1466.5	1457.9	1448.5	1441.5
60°	1725.5	1696.8	1674.6	1648.7	1632.3	1613.9	1604.8	1599.5
62.5°	1895.0	1868.3	1840.0	1815.4	1792.4	1779.7	1767.4	1761.2
65°	2067.4	2023.5	1989.8	1955.8	1928.7	1905.7	1886.4	1883.9
67.5°	2173.3	2117.9	2061.7	2012.0	1972.2	1939.7	1920.0	1913.1
69°	2181.9	2121.6	2051.4	1991.9	1945.9	1914.7	1891.3	1883.9
70°	2158.1	2097.4	2023.5	1959.5	1911.8	1877.8	1858.5	1846.2
72.5°	1984.1	1930.7	1859.7	1796.5	1753.4	1713.6	1694.3	1689.4
75°	1636.8	1580.2	1514.9	1484.6	1454.6	1429.6	1416.4	1415.2
77.5°	1162.4	1104.5	1054.8	1015.0	982.6	966.6	970.3	956.7
80°	665.3	589.8	529.9	494.6	446.6	417.8	385.4	408.8
82.5°	286.1	231.1	176.1	143.2	109.2	86.6	71.4	66.5
85°	80.0	65.3	54.6	50.1	45.1	40.2	34.1	31.6
87.5°	27.1	25.9	23.0	23.0	20.9	17.6	12.3	11.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)