

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: P143636

Luminaire Tested: **LDRL-5MQ-F02-E-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143636  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33697)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: LDRL-5MQ-F02-E-7050  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (14) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5264.9 lumens  
Efficiency: N/A  
Efficacy: 95.7 lumens/watt  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

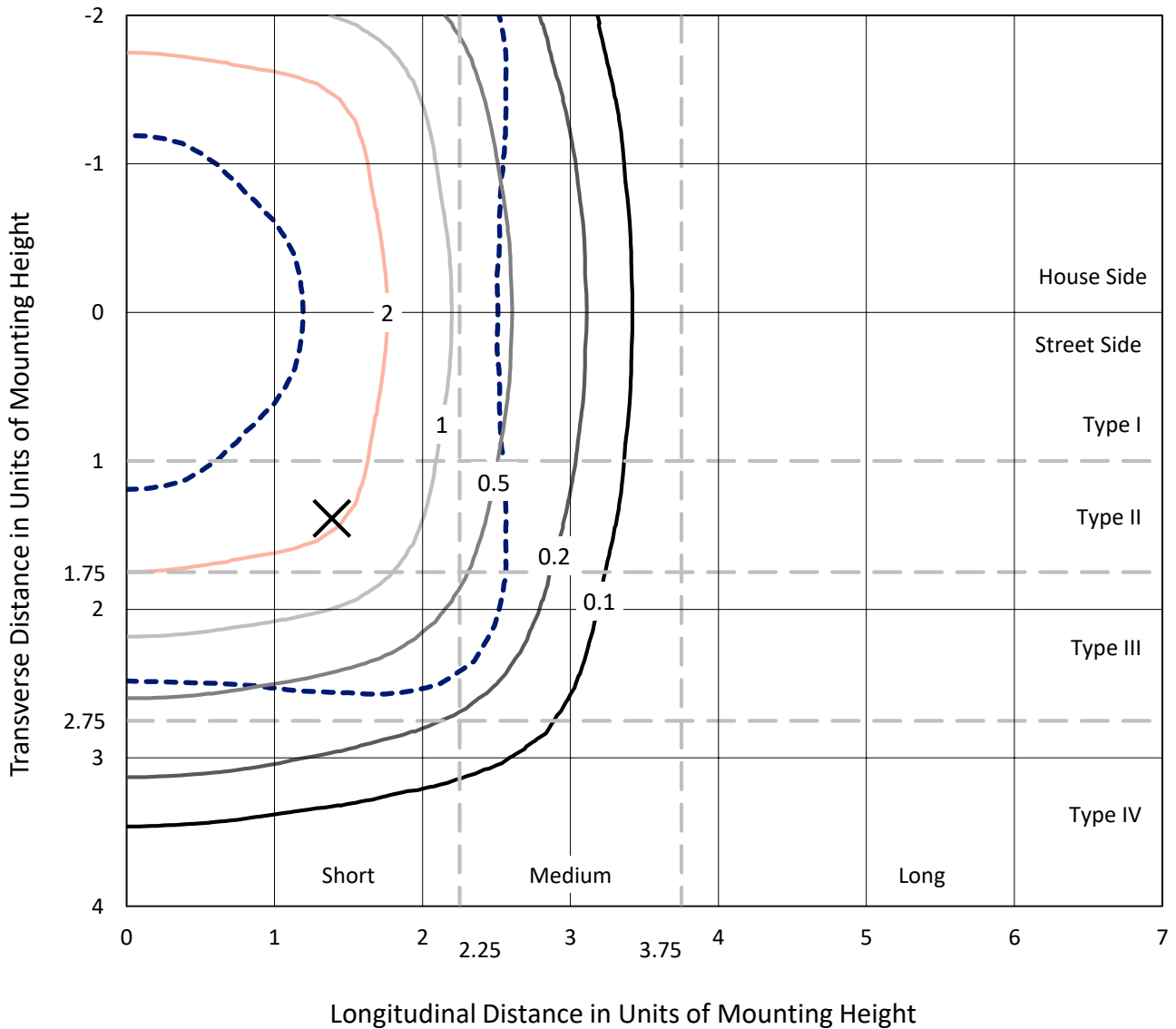
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

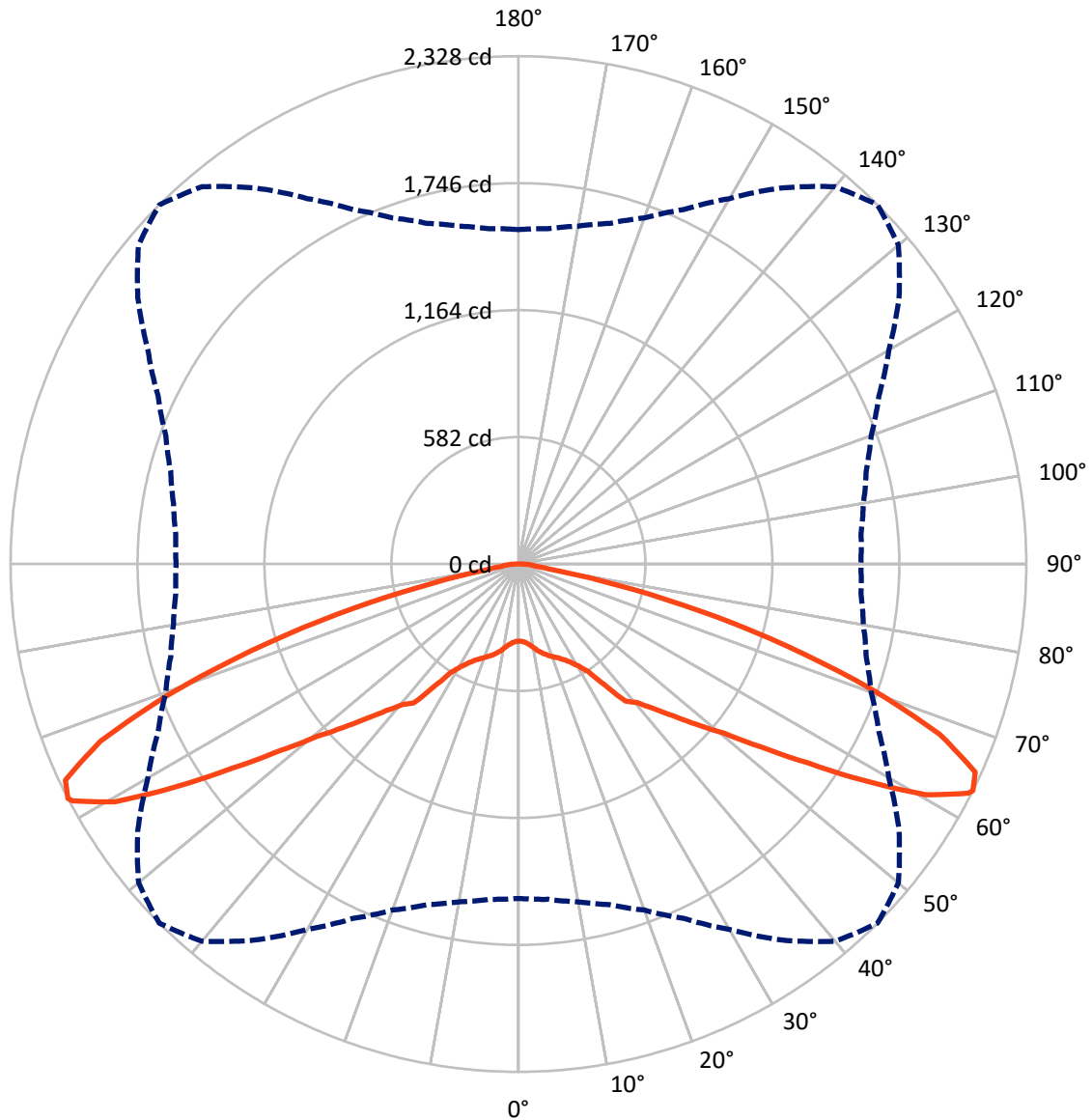
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.9 fc  
 Type V - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 63-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2632.4	0.0	2632.4
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2632.4	0.0	2632.4
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	5264.9	0.0	5264.9
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.6	0.7
10°-20°	121.5	2.3
20°-30°	232.2	4.4
30°-40°	442.3	8.4
40°-50°	761.6	14.5
50°-60°	1361.0	25.8
60°-70°	1657.7	31.5
70°-80°	590.5	11.2
80°-90°	62.6	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°	5264.9	100.0
0°-180°	5264.9	100.0



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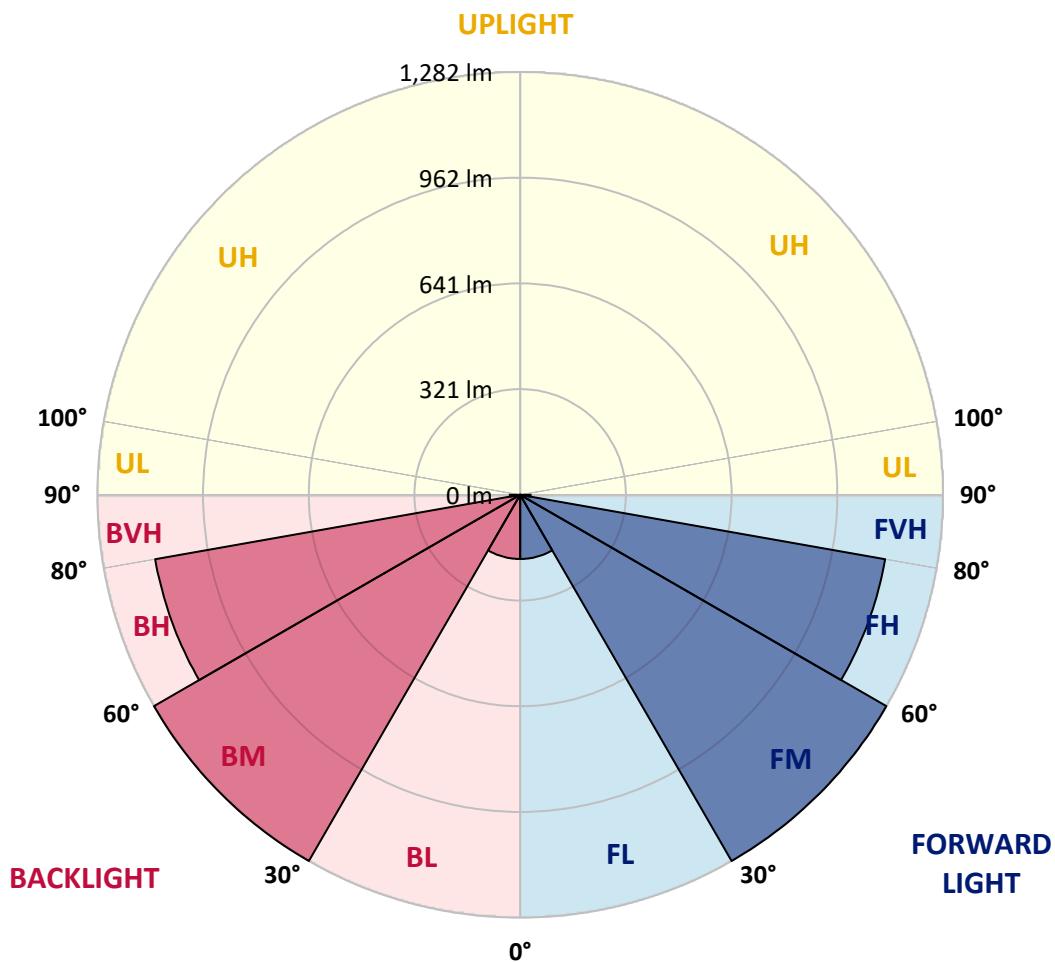
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	194.6	3.7			
FM	(30°-60°)	1282.4	24.4			
FH	(60°-80°)	1124.1	21.4			G1/1800
FVH	(80°-90°)	31.3	0.6			G1/100
BL	(0°-30°)	194.6	3.7	B1/500		
BM	(30°-60°)	1282.4	24.4	B2/2500		
BH	(60°-80°)	1124.1	21.4	B3/2500		G1/1800
BVH	(80°-90°)	31.3	0.6			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°	353.4	353.4	353.4	353.4	353.4	353.4	353.4	353.4	353.4	353.4	353.4
2.5°	356.1	355.8	356.1	355.4	355.4	355.1	355.1	355.1	354.4	355.1	354.4
5°	363.6	363.2	363.6	362.9	362.9	362.2	362.2	362.2	361.5	362.2	361.9
7.5°	376.4	377.1	376.4	375.8	375.8	375.1	374.7	374.7	374.4	374.1	374.7
10°	394.4	395.1	394.1	393.4	393.0	392.7	392.0	391.7	391.7	390.3	390.7
12.5°	413.4	413.4	412.4	412.0	412.0	411.3	410.0	409.6	409.6	409.0	408.3
15°	430.3	430.3	429.6	428.3	428.6	427.6	426.6	425.9	425.9	425.2	424.6
17.5°	445.9	445.9	444.9	443.5	442.9	442.5	441.2	440.5	440.5	439.8	439.1
20°	461.5	462.2	460.5	459.1	457.8	456.4	455.0	454.4	453.4	453.7	453.4
22.5°	480.1	480.5	477.8	476.1	473.3	471.7	469.6	468.9	467.6	467.6	468.3
25°	503.8	503.5	500.5	497.4	494.4	491.0	487.9	487.2	485.9	485.5	485.9
27.5°	535.0	534.7	530.9	526.9	522.8	517.7	514.0	512.0	511.0	509.6	510.3
30°	573.3	574.0	569.6	564.8	559.7	553.6	548.9	546.2	544.2	542.8	543.5
32.5°	651.2	650.6	643.8	633.6	622.8	608.5	597.0	592.3	588.5	587.2	588.2
35°	729.5	728.8	726.1	723.1	720.4	711.2	702.7	692.9	684.8	679.7	681.0
37.5°	766.4	766.4	764.4	763.7	763.7	769.1	775.9	788.1	797.6	798.3	795.2
40°	824.0	824.0	820.6	819.0	817.9	819.6	824.0	828.4	833.2	834.2	830.8
42.5°	891.8	888.8	886.4	883.0	882.7	884.3	889.1	894.5	899.3	903.3	896.2
45°	965.0	962.3	959.9	957.9	959.2	963.6	970.1	979.6	986.3	992.4	986.7
47.5°	1046.6	1040.9	1043.3	1041.2	1044.6	1053.4	1064.9	1079.2	1086.3	1097.1	1088.0
50°	1148.3	1149.7	1148.3	1148.3	1152.4	1163.9	1180.8	1200.1	1212.3	1218.4	1213.0
52.5°	1299.4	1295.3	1286.2	1288.9	1294.3	1312.6	1334.7	1361.8	1377.3	1391.9	1375.0
55°	1464.8	1465.4	1464.1	1467.8	1478.3	1497.0	1524.7	1565.7	1585.4	1610.8	1590.5
57.5°	1601.7	1606.4	1614.5	1625.7	1648.4	1679.6	1734.1	1796.8	1849.0	1876.4	1844.6
60°	1646.0	1650.8	1670.4	1701.6	1744.3	1808.0	1896.4	2003.8	2097.7	2146.5	2104.8
62.5°	1560.7	1569.5	1598.6	1641.6	1712.1	1811.7	1943.2	2102.1	2246.8	2313.5	2263.0
63°	1532.9	1542.7	1572.5	1616.2	1688.1	1792.1	1934.0	2104.1	2257.3	2327.8	2273.2
65°	1409.5	1416.0	1447.5	1497.3	1577.3	1685.7	1843.6	2044.8	2219.3	2301.0	2243.1
67.5°	1215.4	1223.9	1252.7	1295.7	1373.3	1488.1	1643.3	1843.9	2015.7	2081.1	2031.6
70°	974.8	984.3	1008.0	1048.0	1109.0	1215.4	1348.2	1535.6	1664.7	1715.8	1663.0
72.5°	685.1	689.2	706.5	748.5	794.2	878.9	984.3	1130.0	1254.0	1287.6	1236.7
75°	290.0	290.4	313.1	339.8	397.1	481.5	573.3	698.7	810.1	862.3	797.9
77.5°	92.8	93.9	100.3	110.1	129.1	166.7	234.5	303.3	405.6	455.0	394.7
80°	77.6	78.9	81.7	83.7	85.0	87.1	94.9	105.7	133.2	154.8	125.0
82.5°	66.7	69.1	75.2	77.6	78.9	79.6	80.6	80.3	78.6	77.9	78.3
85°	50.8	56.6	63.4	68.8	69.5	69.8	71.8	72.5	67.1	61.7	67.1
87.5°	22.0	28.5	43.7	48.5	47.4	44.0	47.1	49.8	45.4	33.2	44.4
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°	353.4	353.4	353.4	353.4	353.4	353.4	353.4	353.4
2.5°	354.8	355.4	355.4	355.4	355.4	355.8	356.1	355.8
5°	362.2	362.9	362.5	362.9	362.9	363.2	363.6	363.2
7.5°	375.1	375.1	375.1	375.8	375.8	376.4	376.4	376.4
10°	391.0	390.7	390.7	391.3	392.0	392.4	393.0	392.7
12.5°	408.3	407.6	408.0	408.6	409.3	409.6	410.3	410.0
15°	423.9	423.5	423.5	424.6	424.9	425.2	426.6	426.6
17.5°	438.8	438.8	438.8	440.1	440.5	441.8	442.9	442.9
20°	453.7	453.7	453.7	455.0	456.1	458.1	460.1	459.8
22.5°	468.9	469.3	470.0	471.3	473.7	476.7	478.4	478.4
25°	487.9	489.3	490.6	492.7	496.0	500.1	502.8	503.8
27.5°	512.3	515.4	518.7	521.8	525.5	530.6	534.3	535.0
30°	545.5	549.9	555.3	559.4	564.2	569.9	574.3	576.7
32.5°	592.6	603.5	610.6	625.1	634.0	643.8	651.9	655.3
35°	689.5	700.4	709.8	719.7	721.7	725.1	729.5	730.5
37.5°	785.4	776.6	768.1	767.8	765.4	766.1	767.5	769.1
40°	827.1	824.4	820.0	821.7	822.0	822.0	824.7	825.1
42.5°	894.2	887.7	882.7	886.7	887.4	888.1	890.8	893.8
45°	979.6	969.7	963.3	960.9	963.3	962.6	966.3	967.0
47.5°	1077.1	1064.3	1049.7	1045.0	1043.6	1040.5	1047.0	1046.3
50°	1196.7	1176.1	1158.5	1151.7	1148.3	1146.6	1148.3	1148.3
52.5°	1348.2	1327.5	1303.5	1295.7	1293.0	1296.7	1291.3	1297.0
55°	1556.6	1523.0	1490.2	1479.7	1478.0	1476.3	1477.0	1479.3
57.5°	1791.1	1731.4	1687.4	1661.6	1645.0	1636.9	1628.1	1626.7
60°	2017.4	1909.0	1825.3	1768.4	1728.0	1697.5	1682.0	1676.5
62.5°	2126.5	1967.9	1837.8	1740.9	1680.9	1631.1	1603.7	1596.6
63°	2129.5	1960.5	1822.6	1720.2	1650.4	1605.7	1576.6	1569.1
65°	2073.0	1880.5	1718.9	1606.4	1532.5	1485.8	1449.9	1442.1
67.5°	1867.0	1680.3	1514.9	1400.7	1320.8	1283.2	1243.5	1242.5
70°	1532.2	1365.5	1226.2	1121.2	1054.4	1017.2	976.8	977.9
72.5°	1120.2	972.1	876.2	794.2	723.7	688.5	650.6	654.3
75°	674.3	542.1	455.7	384.6	312.1	268.7	239.6	223.0
77.5°	288.3	197.2	141.6	112.5	94.9	87.8	84.4	83.4
80°	100.3	88.8	83.7	82.3	81.3	80.0	77.6	75.2
82.5°	81.3	81.3	78.6	78.3	75.2	72.8	66.7	63.7
85°	72.2	70.8	68.4	67.4	66.7	61.7	53.9	49.8
87.5°	47.8	44.4	42.4	43.4	42.0	37.6	23.0	18.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)