

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: P143631

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143631  
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-E02-E-7050  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (42) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6377.6 lumens  
Efficiency: N/A  
Efficacy: 122.4 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

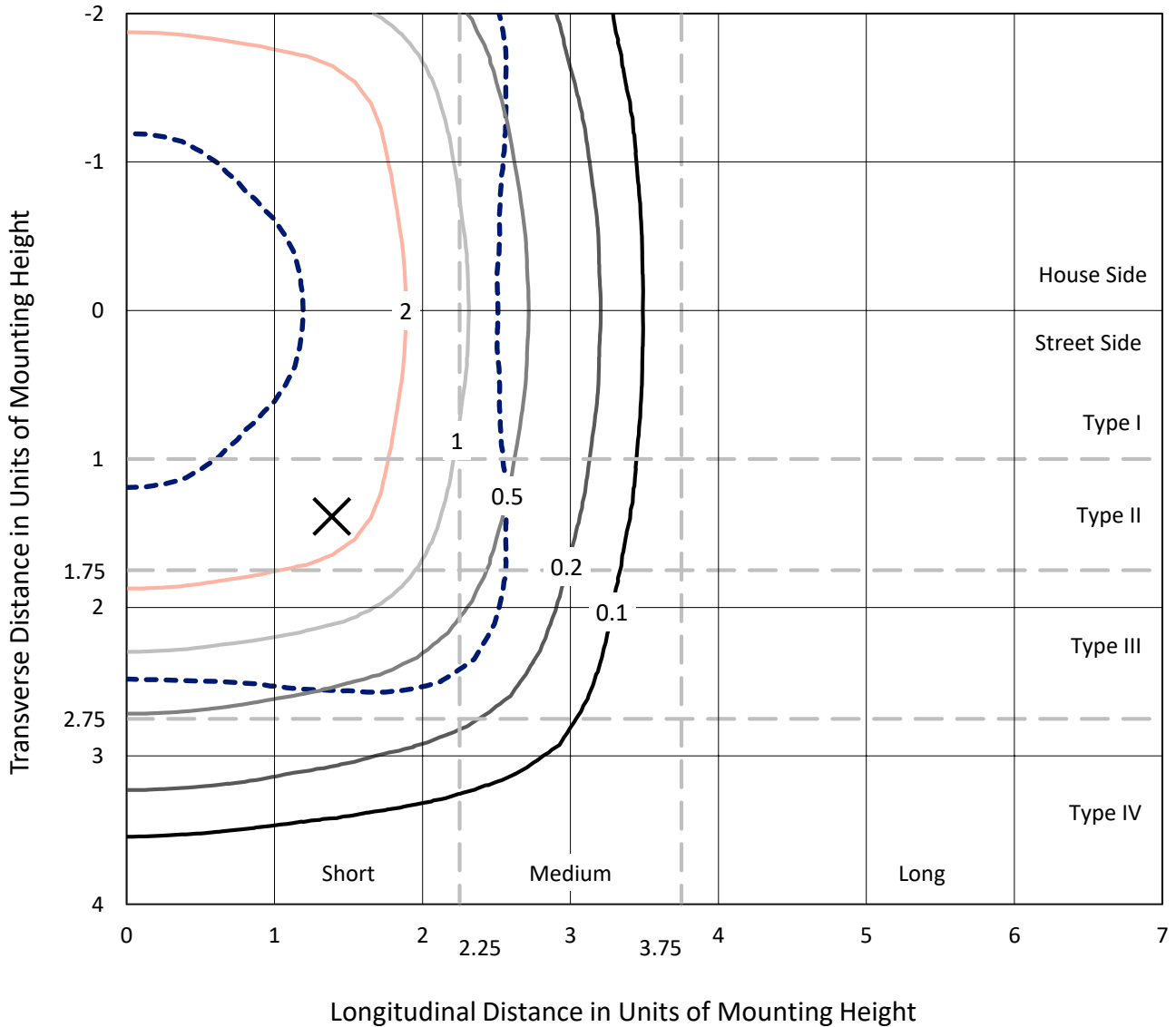
Input Watts (W): 52.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

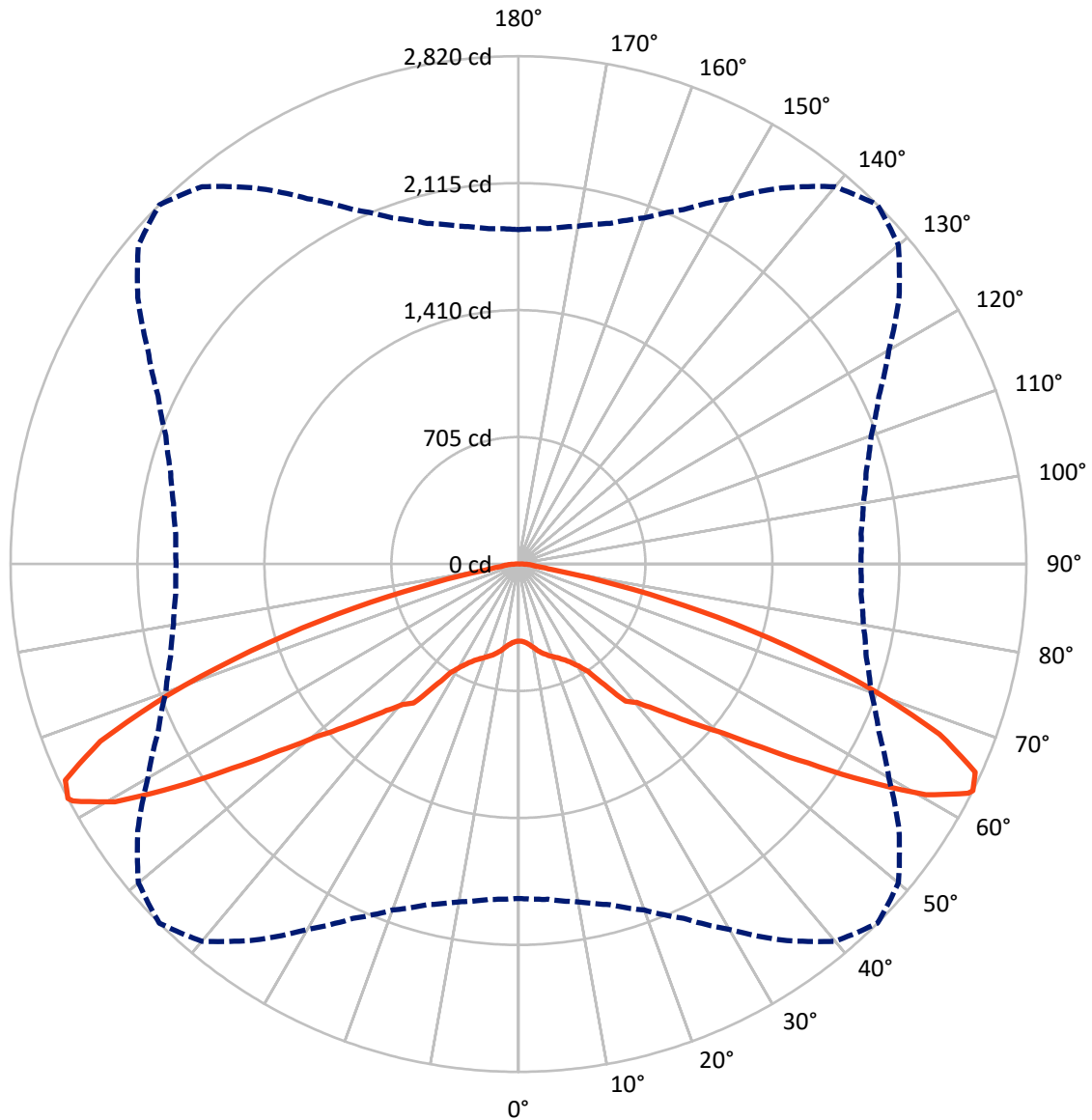
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 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	3188.8	0.0	3188.8
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3188.8	0.0	3188.8
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	6377.6	0.0	6377.6
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.1	0.7
10°-20°	147.2	2.3
20°-30°	281.2	4.4
30°-40°	535.8	8.4
40°-50°	922.6	14.5
50°-60°	1648.6	25.8
60°-70°	2008.0	31.5
70°-80°	715.3	11.2
80°-90°	75.8	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°	6377.6	100.0
0°-180°	6377.6	100.0



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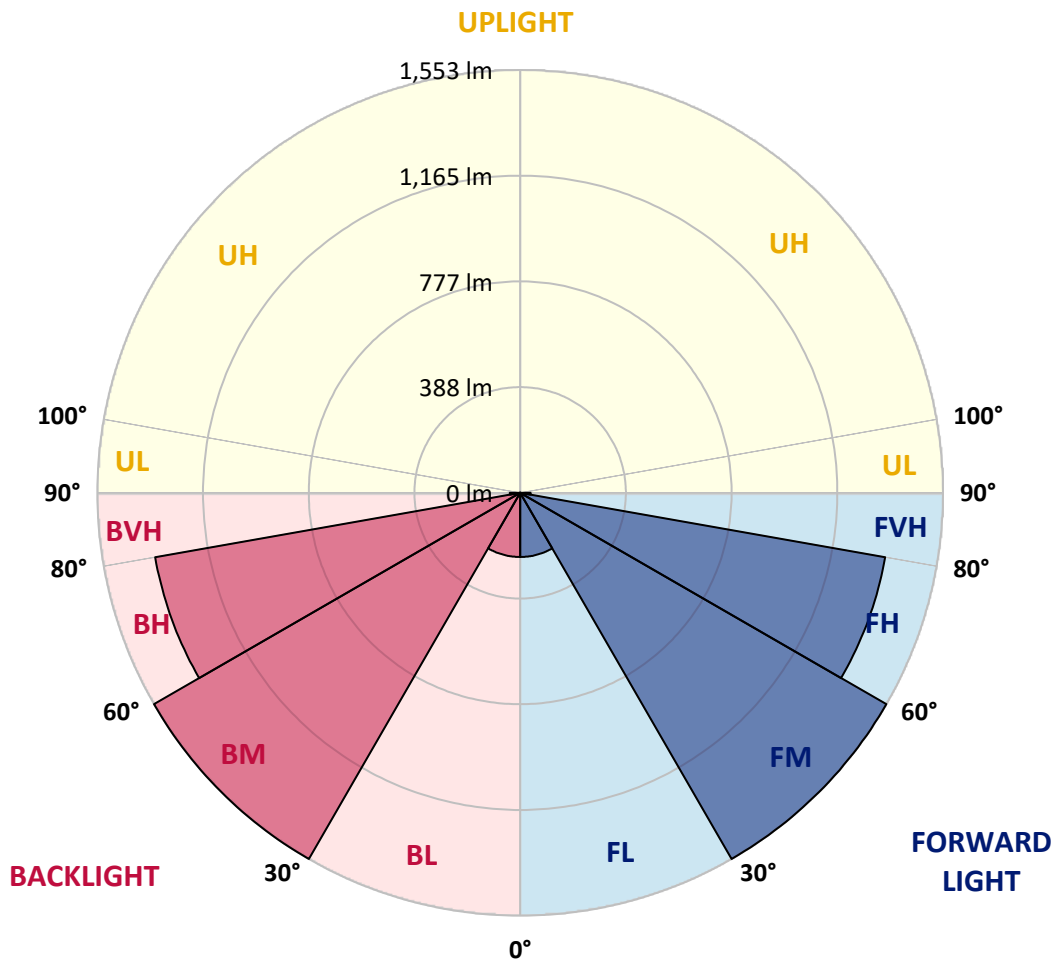
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	235.8	3.7			
FM	(30°-60°)	1553.5	24.4			
FH	(60°-80°)	1361.6	21.4			G1/1800
FVH	(80°-90°)	37.9	0.6			G1/100
BL	(0°-30°)	235.8	3.7	B1/500		
BM	(30°-60°)	1553.5	24.4	B2/2500		
BH	(60°-80°)	1361.6	21.4	B3/2500		G1/1800
BVH	(80°-90°)	37.9	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°	428.1	428.1	428.1	428.1	428.1	428.1	428.1	428.1	428.1	428.1	428.1
2.5°	431.4	431.0	431.4	430.6	430.6	430.1	430.1	430.1	429.3	430.1	429.3
5°	440.4	440.0	440.4	439.6	439.6	438.8	438.8	438.8	437.9	438.8	438.4
7.5°	456.0	456.8	456.0	455.2	455.2	454.4	453.9	453.9	453.5	453.1	453.9
10°	477.8	478.6	477.3	476.5	476.1	475.7	474.9	474.5	474.5	472.8	473.2
12.5°	500.7	500.7	499.5	499.1	499.1	498.3	496.6	496.2	496.2	495.4	494.6
15°	521.3	521.3	520.4	518.8	519.2	518.0	516.7	515.9	515.9	515.1	514.3
17.5°	540.1	540.1	538.9	537.3	536.4	536.0	534.4	533.6	533.6	532.8	531.9
20°	559.0	559.8	557.8	556.1	554.5	552.9	551.2	550.4	549.2	549.6	549.2
22.5°	581.6	582.0	578.7	576.7	573.4	571.3	568.9	568.1	566.4	566.4	567.2
25°	610.3	609.9	606.2	602.5	598.8	594.7	591.0	590.2	588.6	588.2	588.6
27.5°	648.1	647.7	643.2	638.2	633.3	627.2	622.6	620.2	618.9	617.3	618.1
30°	694.5	695.3	690.0	684.2	678.1	670.7	664.9	661.6	659.2	657.5	658.3
32.5°	788.9	788.0	779.8	767.5	754.4	737.2	723.2	717.5	712.9	711.3	712.5
35°	883.7	882.9	879.6	875.9	872.6	861.5	851.3	839.4	829.5	823.3	825.0
37.5°	928.4	928.4	926.0	925.1	925.1	931.7	939.9	954.7	966.2	967.0	963.3
40°	998.2	998.2	994.1	992.0	990.8	992.9	998.2	1003.5	1009.3	1010.5	1006.4
42.5°	1080.3	1076.6	1073.7	1069.6	1069.2	1071.3	1077.0	1083.6	1089.3	1094.2	1085.6
45°	1168.9	1165.7	1162.8	1160.3	1162.0	1167.3	1175.1	1186.6	1194.8	1202.2	1195.2
47.5°	1267.9	1260.9	1263.8	1261.3	1265.4	1276.1	1290.0	1307.3	1315.9	1329.0	1317.9
50°	1391.0	1392.6	1391.0	1391.0	1395.9	1409.9	1430.4	1453.8	1468.6	1476.0	1469.4
52.5°	1574.0	1569.1	1558.0	1561.3	1567.9	1590.1	1616.7	1649.6	1668.4	1686.1	1665.6
55°	1774.3	1775.2	1773.5	1778.0	1790.8	1813.3	1847.0	1896.7	1920.5	1951.2	1926.6
57.5°	1940.2	1945.9	1955.8	1969.3	1996.8	2034.6	2100.6	2176.6	2239.8	2273.0	2234.4
60°	1993.9	1999.7	2023.5	2061.2	2113.0	2190.1	2297.2	2427.4	2541.0	2600.2	2549.7
62.5°	1890.5	1901.2	1936.5	1988.6	2074.0	2194.6	2353.9	2546.4	2721.6	2802.5	2741.3
63°	1856.8	1868.7	1904.9	1957.8	2044.8	2170.8	2342.8	2548.8	2734.4	2819.7	2753.7
65°	1707.4	1715.2	1753.4	1813.7	1910.6	2041.9	2233.2	2477.0	2688.4	2787.3	2717.1
67.5°	1472.3	1482.5	1517.4	1569.5	1663.5	1802.7	1990.6	2233.6	2441.7	2520.9	2461.0
70°	1180.8	1192.3	1221.1	1269.5	1343.4	1472.3	1633.1	1860.1	2016.5	2078.5	2014.5
72.5°	829.9	834.8	855.8	906.7	962.1	1064.7	1192.3	1368.8	1519.0	1559.7	1498.1
75°	351.3	351.7	379.2	411.7	481.0	583.2	694.5	846.3	981.4	1044.6	966.6
77.5°	112.5	113.7	121.5	133.4	156.4	201.9	284.0	367.3	491.3	551.2	478.2
80°	94.0	95.6	98.9	101.4	103.0	105.5	114.9	128.1	161.3	187.6	151.5
82.5°	80.9	83.7	91.1	94.0	95.6	96.5	97.7	97.3	95.2	94.4	94.8
85°	61.6	68.5	76.8	83.3	84.1	84.6	87.0	87.8	81.3	74.7	81.3
87.5°	26.7	34.5	52.9	58.7	57.5	53.4	57.1	60.3	55.0	40.2	53.8
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°	428.1	428.1	428.1	428.1	428.1	428.1	428.1	428.1
2.5°	429.7	430.6	430.6	430.6	430.6	431.0	431.4	431.0
5°	438.8	439.6	439.2	439.6	439.6	440.0	440.4	440.0
7.5°	454.4	454.4	454.4	455.2	455.2	456.0	456.0	456.0
10°	473.7	473.2	473.2	474.1	474.9	475.3	476.1	475.7
12.5°	494.6	493.8	494.2	495.0	495.8	496.2	497.0	496.6
15°	513.5	513.1	513.1	514.3	514.7	515.1	516.7	516.7
17.5°	531.5	531.5	531.5	533.2	533.6	535.2	536.4	536.4
20°	549.6	549.6	549.6	551.2	552.5	554.9	557.4	557.0
22.5°	568.1	568.5	569.3	570.9	573.8	577.5	579.5	579.5
25°	591.0	592.7	594.3	596.8	600.9	605.8	609.1	610.3
27.5°	620.6	624.3	628.4	632.1	636.6	642.8	647.3	648.1
30°	660.8	666.1	672.7	677.6	683.4	690.4	695.7	698.6
32.5°	717.9	731.0	739.6	757.3	767.9	779.8	789.7	793.8
35°	835.2	848.4	859.9	871.8	874.2	878.3	883.7	884.9
37.5°	951.4	940.7	930.5	930.1	927.2	928.0	929.7	931.7
40°	1001.9	998.6	993.3	995.3	995.7	995.7	999.0	999.4
42.5°	1083.2	1075.4	1069.2	1074.1	1074.9	1075.8	1079.1	1082.7
45°	1186.6	1174.7	1166.9	1164.0	1166.9	1166.1	1170.6	1171.4
47.5°	1304.8	1289.2	1271.5	1265.8	1264.2	1260.5	1268.3	1267.4
50°	1449.7	1424.6	1403.3	1395.1	1391.0	1388.9	1391.0	1391.0
52.5°	1633.1	1608.1	1579.0	1569.5	1566.2	1570.8	1564.2	1571.2
55°	1885.6	1844.9	1805.1	1792.4	1790.3	1788.3	1789.1	1792.0
57.5°	2169.6	2097.4	2044.0	2012.8	1992.7	1982.8	1972.2	1970.5
60°	2443.8	2312.4	2211.1	2142.1	2093.3	2056.3	2037.4	2030.9
62.5°	2575.9	2383.8	2226.2	2108.9	2036.2	1975.9	1942.6	1934.0
63°	2579.6	2374.8	2207.8	2083.8	1999.3	1945.1	1909.8	1900.8
65°	2511.1	2278.0	2082.2	1945.9	1856.4	1799.8	1756.3	1746.8
67.5°	2261.5	2035.4	1835.1	1696.8	1599.9	1554.3	1506.3	1505.1
70°	1856.0	1654.1	1485.4	1358.2	1277.3	1232.1	1183.3	1184.5
72.5°	1356.9	1177.6	1061.4	962.1	876.7	834.0	788.0	792.6
75°	816.8	656.7	552.0	465.9	378.0	325.5	290.2	270.1
77.5°	349.3	238.9	171.6	136.3	114.9	106.3	102.2	101.0
80°	121.5	107.5	101.4	99.7	98.5	96.9	94.0	91.1
82.5°	98.5	98.5	95.2	94.8	91.1	88.2	80.9	77.2
85°	87.4	85.8	82.9	81.7	80.9	74.7	65.3	60.3
87.5°	57.9	53.8	51.3	52.5	50.9	45.6	27.9	22.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)