

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: P143647

Luminaire Tested: **LDRL-5MQ-F03-E-7060**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143647  
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-F03-E-7060  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM  
Light Source: (21) 5700K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7897.3 lumens  
Efficiency: N/A  
Efficacy: 100.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type V - Short - Full Cutoff  
BUG Rating: B3 - U0 - G1

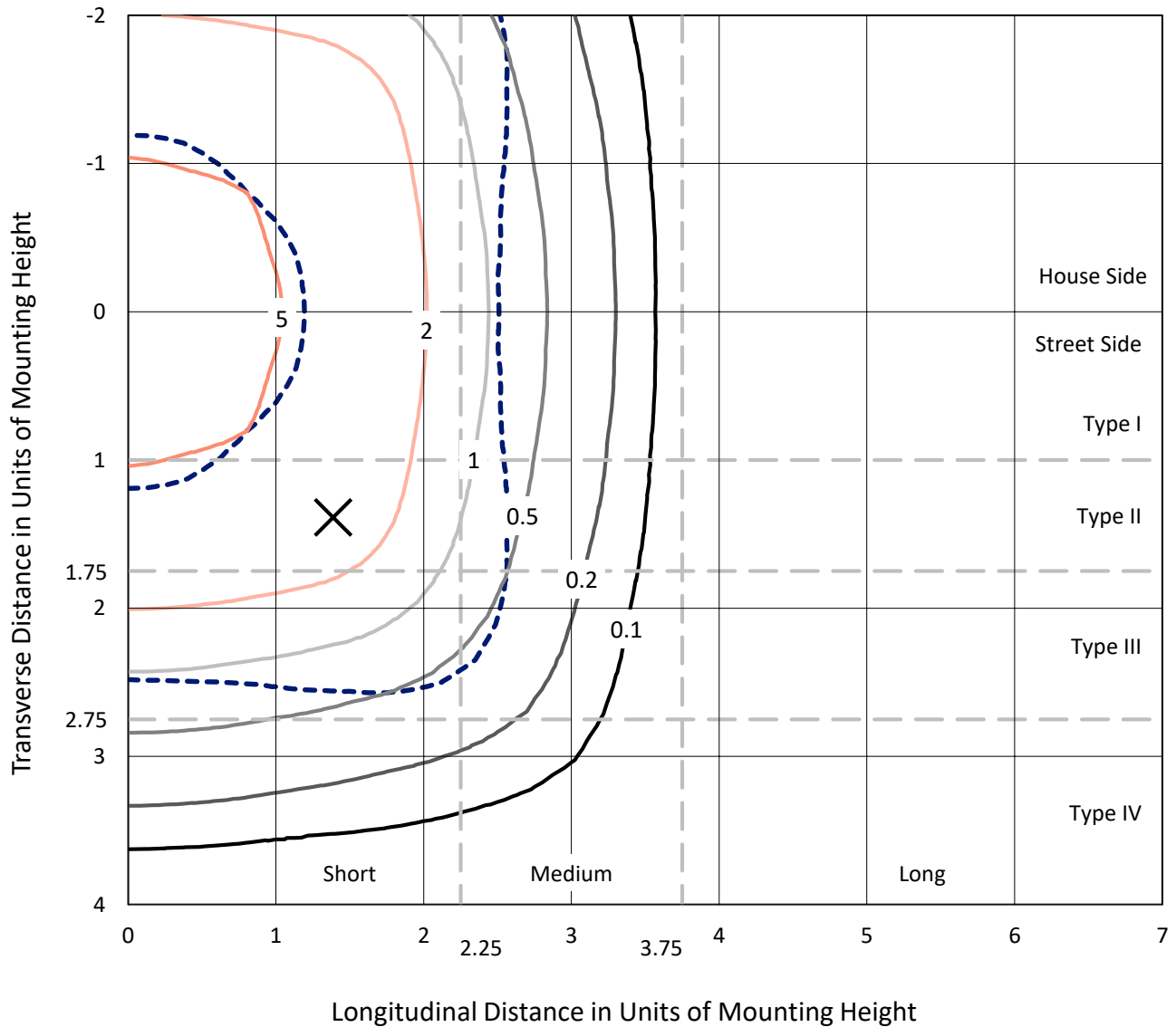
Input Watts (W): 78.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

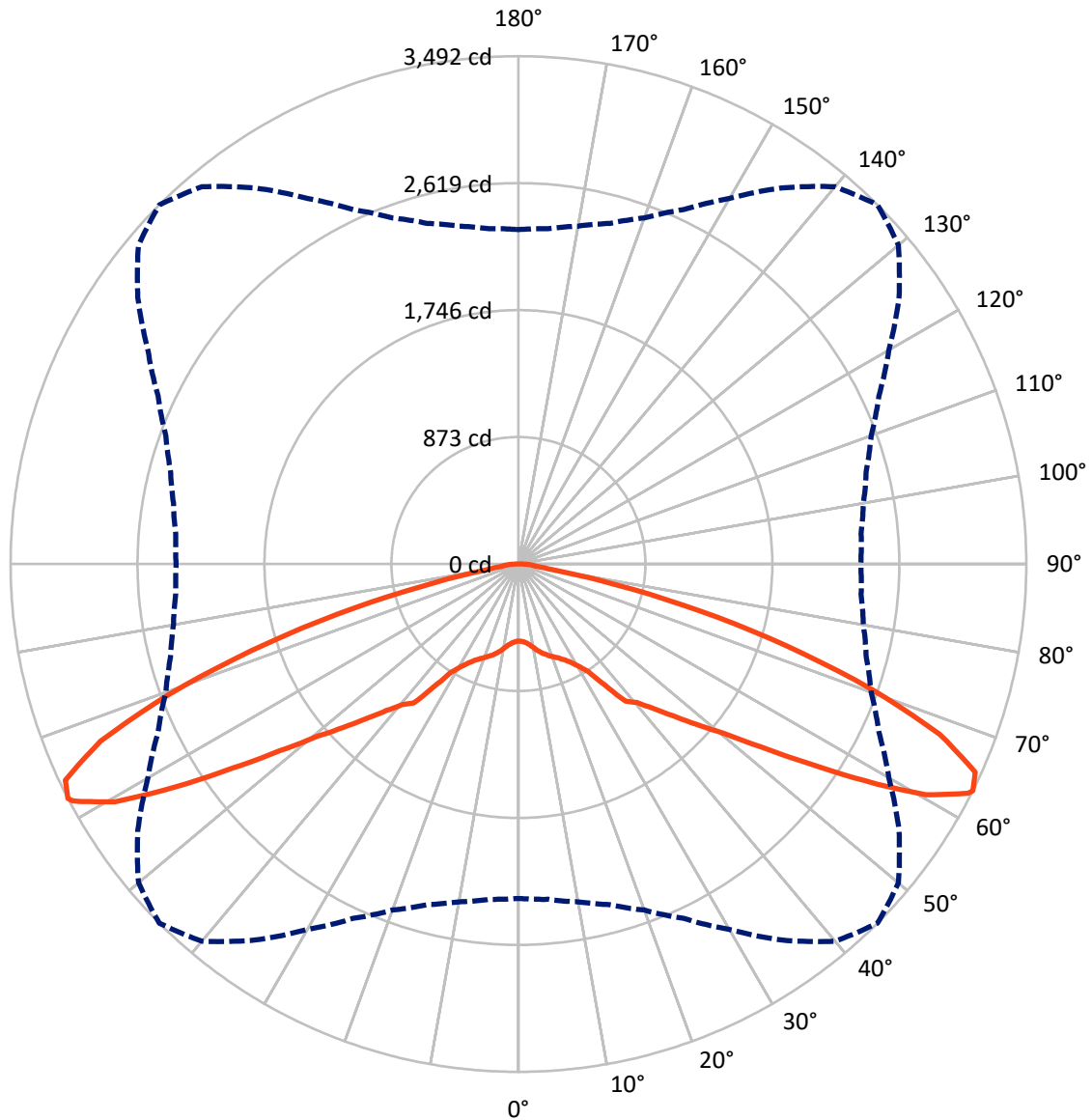
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 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	3948.6	0.0	3948.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	3948.6	0.0	3948.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	7897.3	0.0	7897.3
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.4	0.7
10°-20°	182.3	2.3
20°-30°	348.2	4.4
30°-40°	663.4	8.4
40°-50°	1142.4	14.5
50°-60°	2041.4	25.8
60°-70°	2486.5	31.5
70°-80°	885.7	11.2
80°-90°	93.9	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°	7897.3	100.0
0°-180°	7897.3	100.0



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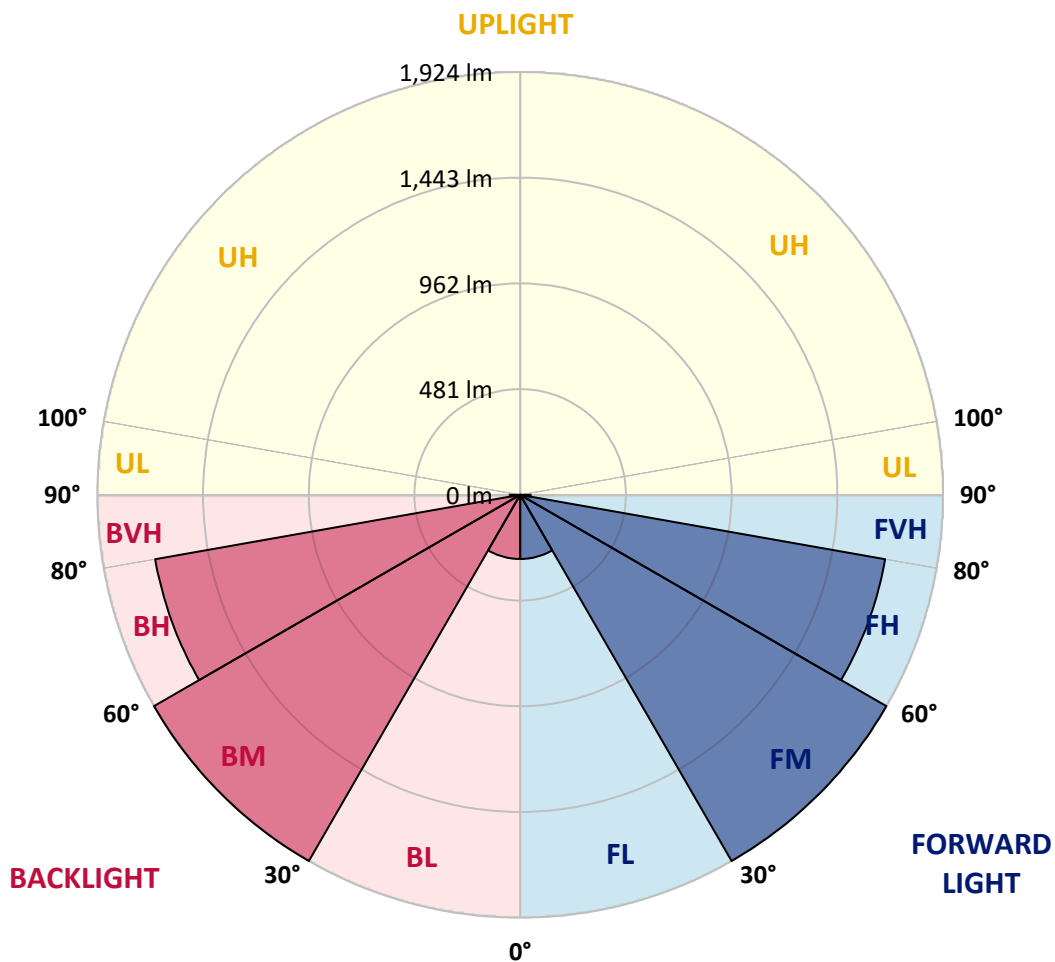
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	292.0	3.7			
FM	(30°-60°)	1923.6	24.4			
FH	(60°-80°)	1686.1	21.4			G1/1800
FVH	(80°-90°)	47.0	0.6			G1/100
BL	(0°-30°)	292.0	3.7	B1/500		
BM	(30°-60°)	1923.6	24.4	B2/2500		
BH	(60°-80°)	1686.1	21.4	B3/2500		G1/1800
BVH	(80°-90°)	47.0	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°	530.1	530.1	530.1	530.1	530.1	530.1	530.1	530.1	530.1	530.1	530.1
2.5°	534.2	533.7	534.2	533.1	533.1	532.6	532.6	532.6	531.6	532.6	531.6
5°	545.3	544.8	545.3	544.3	544.3	543.3	543.3	543.3	542.3	543.3	542.8
7.5°	564.7	565.7	564.7	563.6	563.6	562.6	562.1	562.1	561.6	561.1	562.1
10°	591.6	592.6	591.1	590.1	589.6	589.1	588.0	587.5	587.5	585.5	586.0
12.5°	620.1	620.1	618.5	618.0	618.0	617.0	615.0	614.5	614.5	613.5	612.4
15°	645.5	645.5	644.5	642.4	642.9	641.4	639.9	638.9	638.9	637.8	636.8
17.5°	668.9	668.9	667.3	665.3	664.3	663.8	661.7	660.7	660.7	659.7	658.7
20°	692.2	693.2	690.7	688.7	686.6	684.6	682.6	681.6	680.0	680.5	680.0
22.5°	720.2	720.7	716.6	714.1	710.0	707.5	704.4	703.4	701.4	701.4	702.4
25°	755.8	755.3	750.7	746.1	741.5	736.4	731.9	730.9	728.8	728.3	728.8
27.5°	802.5	802.0	796.4	790.3	784.2	776.6	771.0	768.0	766.4	764.4	765.4
30°	860.0	861.0	854.4	847.2	839.6	830.5	823.4	819.3	816.2	814.2	815.2
32.5°	976.8	975.8	965.7	950.4	934.2	912.8	895.5	888.4	882.8	880.8	882.3
35°	1094.3	1093.2	1089.2	1084.6	1080.5	1066.8	1054.1	1039.4	1027.2	1019.5	1021.6
37.5°	1149.7	1149.7	1146.6	1145.6	1145.6	1153.7	1163.9	1182.2	1196.4	1197.4	1192.9
40°	1236.1	1236.1	1231.0	1228.4	1226.9	1229.4	1236.1	1242.7	1249.8	1251.3	1246.2
42.5°	1337.7	1333.1	1329.6	1324.5	1324.0	1326.5	1333.6	1341.8	1348.9	1355.0	1344.3
45°	1447.5	1443.4	1439.9	1436.8	1438.8	1445.4	1455.1	1469.3	1479.5	1488.7	1480.0
47.5°	1570.0	1561.3	1564.9	1561.8	1566.9	1580.1	1597.4	1618.8	1629.4	1645.7	1632.0
50°	1722.4	1724.5	1722.4	1722.4	1728.5	1745.8	1771.2	1800.2	1818.5	1827.7	1819.5
52.5°	1949.1	1943.0	1929.3	1933.4	1941.5	1968.9	2002.0	2042.6	2066.0	2087.9	2062.5
55°	2197.1	2198.2	2196.1	2201.7	2217.5	2245.4	2287.1	2348.6	2378.1	2416.2	2385.7
57.5°	2402.5	2409.6	2421.8	2438.6	2472.6	2519.4	2601.2	2695.2	2773.5	2814.7	2766.9
60°	2469.1	2476.2	2505.6	2552.4	2616.4	2712.0	2844.6	3005.8	3146.5	3219.7	3157.2
62.5°	2341.0	2354.2	2397.9	2462.4	2568.2	2717.6	2914.8	3153.2	3370.2	3470.3	3394.6
63°	2299.3	2314.0	2358.8	2424.3	2532.1	2688.1	2901.1	3156.2	3385.9	3491.6	3409.8
65°	2114.3	2124.0	2171.2	2245.9	2365.9	2528.5	2765.4	3067.3	3329.0	3451.5	3364.6
67.5°	1823.1	1835.8	1879.0	1943.5	2059.9	2232.2	2465.0	2765.9	3023.6	3121.6	3047.4
70°	1462.2	1476.5	1512.0	1572.0	1663.5	1823.1	2022.3	2303.4	2497.0	2573.8	2494.5
72.5°	1027.7	1033.8	1059.7	1122.7	1191.3	1318.4	1476.5	1695.0	1881.0	1931.3	1855.1
75°	435.1	435.6	469.6	509.8	595.7	722.2	860.0	1048.0	1215.2	1293.5	1196.9
77.5°	139.3	140.8	150.4	165.2	193.6	250.1	351.7	454.9	608.4	682.6	592.1
80°	116.4	118.4	122.5	125.5	127.6	130.6	142.3	158.6	199.7	232.3	187.5
82.5°	100.1	103.7	112.8	116.4	118.4	119.4	121.0	120.5	117.9	116.9	117.4
85°	76.2	84.9	95.0	103.2	104.2	104.7	107.7	108.8	100.6	92.5	100.6
87.5°	33.0	42.7	65.6	72.7	71.2	66.1	70.6	74.7	68.1	49.8	66.6
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°	530.1	530.1	530.1	530.1	530.1	530.1	530.1	530.1
2.5°	532.1	533.1	533.1	533.1	533.1	533.7	534.2	533.7
5°	543.3	544.3	543.8	544.3	544.3	544.8	545.3	544.8
7.5°	562.6	562.6	562.6	563.6	563.6	564.7	564.7	564.7
10°	586.5	586.0	586.0	587.0	588.0	588.5	589.6	589.1
12.5°	612.4	611.4	611.9	612.9	614.0	614.5	615.5	615.0
15°	635.8	635.3	635.3	636.8	637.3	637.8	639.9	639.9
17.5°	658.2	658.2	658.2	660.2	660.7	662.8	664.3	664.3
20°	680.5	680.5	680.5	682.6	684.1	687.1	690.2	689.7
22.5°	703.4	703.9	704.9	707.0	710.5	715.1	717.6	717.6
25°	731.9	733.9	735.9	739.0	744.1	750.2	754.2	755.8
27.5°	768.5	773.0	778.1	782.7	788.3	795.9	801.5	802.5
30°	818.3	824.9	833.0	839.1	846.2	854.9	861.5	865.0
32.5°	888.9	905.2	915.9	937.7	950.9	965.7	977.9	982.9
35°	1034.3	1050.5	1064.8	1079.5	1082.6	1087.6	1094.3	1095.8
37.5°	1178.1	1164.9	1152.2	1151.7	1148.1	1149.1	1151.2	1153.7
40°	1240.6	1236.6	1230.0	1232.5	1233.0	1233.0	1237.1	1237.6
42.5°	1341.3	1331.6	1324.0	1330.1	1331.1	1332.1	1336.2	1340.8
45°	1469.3	1454.6	1444.9	1441.4	1444.9	1443.9	1449.5	1450.5
47.5°	1615.7	1596.4	1574.5	1567.4	1565.4	1560.8	1570.5	1569.5
50°	1795.1	1764.1	1737.7	1727.5	1722.4	1719.9	1722.4	1722.4
52.5°	2022.3	1991.3	1955.2	1943.5	1939.5	1945.1	1936.9	1945.6
55°	2334.9	2284.6	2235.3	2219.5	2217.0	2214.4	2215.4	2219.0
57.5°	2686.6	2597.1	2531.1	2492.4	2467.5	2455.3	2442.1	2440.1
60°	3026.1	2863.5	2737.9	2652.5	2592.1	2546.3	2522.9	2514.8
62.5°	3189.7	2951.9	2756.7	2611.4	2521.4	2446.7	2405.5	2394.9
63°	3194.3	2940.7	2733.9	2580.4	2475.7	2408.6	2364.9	2353.7
65°	3109.4	2820.8	2578.3	2409.6	2298.8	2228.7	2174.8	2163.1
67.5°	2800.4	2520.4	2272.4	2101.1	1981.1	1924.7	1865.3	1863.7
70°	2298.3	2048.2	1839.3	1681.8	1581.7	1525.8	1465.3	1466.8
72.5°	1680.3	1458.2	1314.3	1191.3	1085.6	1032.8	975.8	981.4
75°	1011.4	813.2	683.6	576.9	468.1	403.0	359.3	334.4
77.5°	432.5	295.8	212.4	168.7	142.3	131.6	126.6	125.0
80°	150.4	133.2	125.5	123.5	122.0	119.9	116.4	112.8
82.5°	122.0	122.0	117.9	117.4	112.8	109.3	100.1	95.6
85°	108.3	106.2	102.7	101.1	100.1	92.5	80.8	74.7
87.5°	71.7	66.6	63.5	65.1	63.0	56.4	34.6	27.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)