

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: P143656

Luminaire Tested: **LDRL-5MQ-F04-E-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P143656
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-F04-E-7050
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10529.7 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B3 - U0 - G2

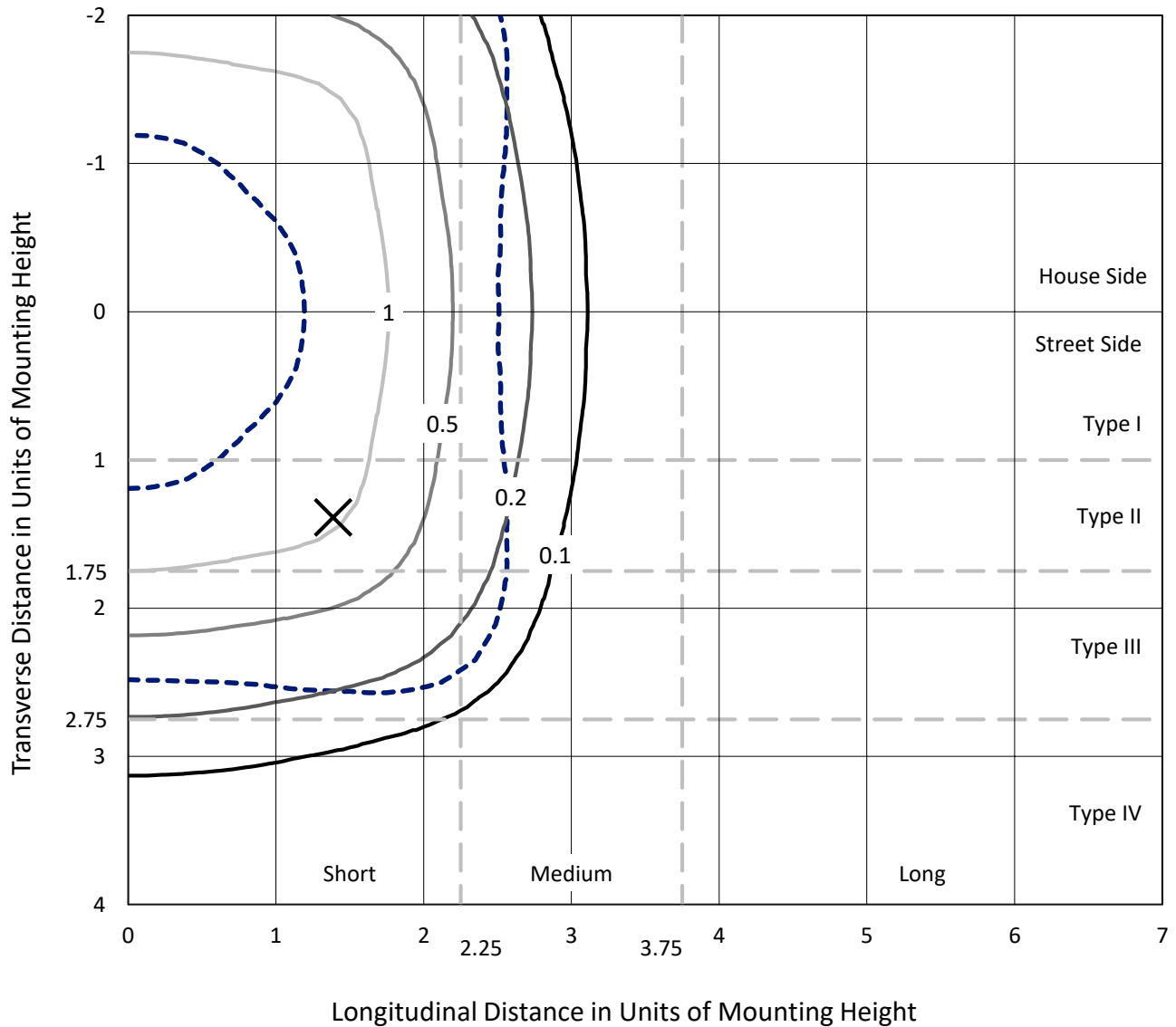
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

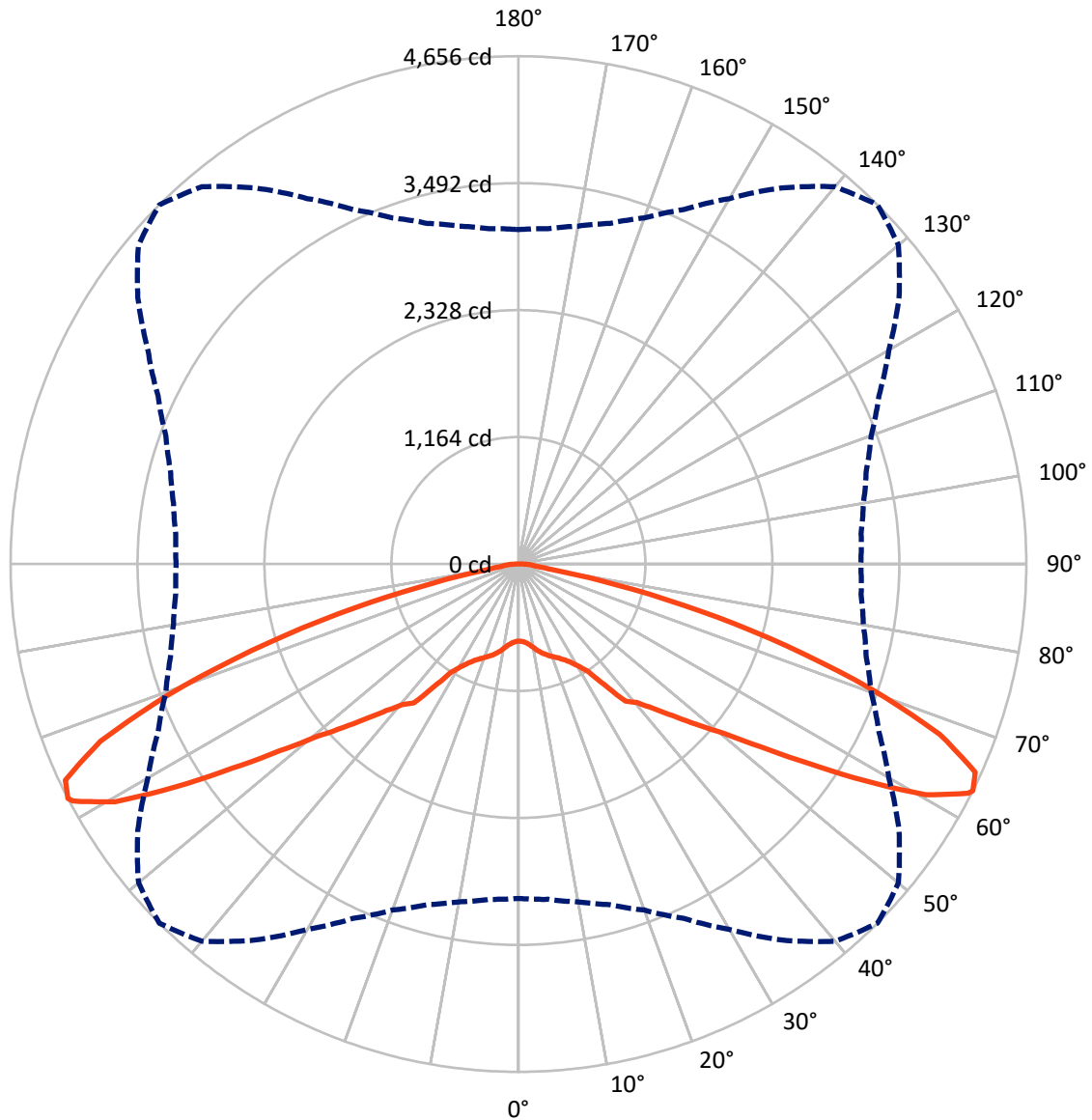
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2 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
House Side	Lumens	5264.9	0.0	5264.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5264.9	0.0	5264.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	10529.7	0.0	10529.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.2	0.7
10°-20°	243.1	2.3
20°-30°	464.3	4.4
30°-40°	884.6	8.4
40°-50°	1523.2	14.5
50°-60°	2721.9	25.8
60°-70°	3315.3	31.5
70°-80°	1180.9	11.2
80°-90°	125.2	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°	10529.7	100.0
0°-180°	10529.7	100.0



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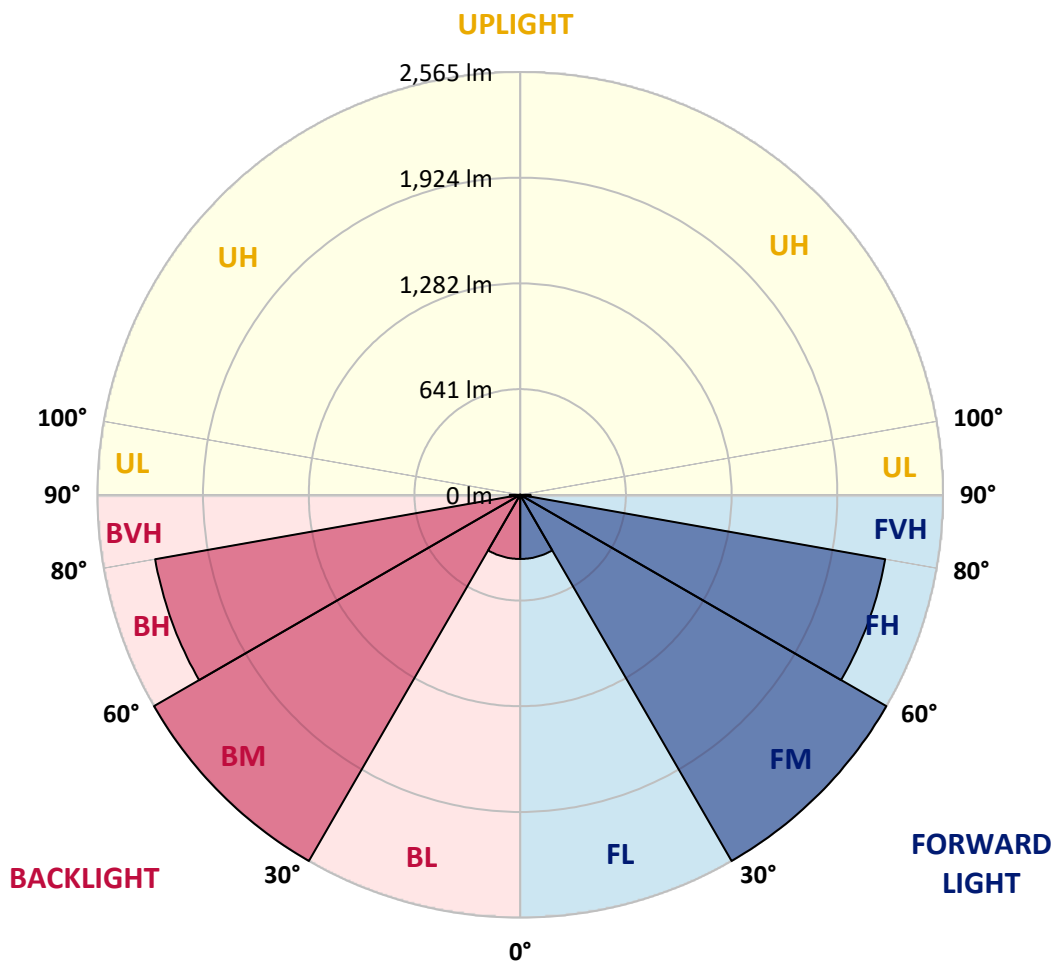
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	389.3	3.7			
FM	(30°-60°)	2564.8	24.4			
FH	(60°-80°)	2248.1	21.4			G2/5000
FVH	(80°-90°)	62.6	0.6			G1/100
BL	(0°-30°)	389.3	3.7	B1/500		
BM	(30°-60°)	2564.8	24.4	B3/5000		
BH	(60°-80°)	2248.1	21.4	B3/2500		G2/5000
BVH	(80°-90°)	62.6	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-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	706.8	706.8	706.8	706.8	706.8	706.8	706.8	706.8	706.8	706.8	706.8
2.5°	712.2	711.5	712.2	710.9	710.9	710.2	710.2	710.2	708.8	710.2	708.8
5°	727.1	726.5	727.1	725.8	725.8	724.4	724.4	724.4	723.1	724.4	723.7
7.5°	752.9	754.2	752.9	751.5	751.5	750.2	749.5	749.5	748.8	748.1	749.5
10°	788.8	790.2	788.1	786.8	786.1	785.4	784.1	783.4	783.4	780.7	781.3
12.5°	826.7	826.7	824.7	824.0	824.0	822.7	820.0	819.3	819.3	817.9	816.6
15°	860.6	860.6	859.3	856.6	857.2	855.2	853.2	851.8	851.8	850.5	849.1
17.5°	891.8	891.8	889.8	887.1	885.7	885.0	882.3	881.0	881.0	879.6	878.2
20°	923.0	924.3	920.9	918.2	915.5	912.8	910.1	908.7	906.7	907.4	906.7
22.5°	960.2	960.9	955.5	952.1	946.7	943.3	939.2	937.9	935.2	935.2	936.5
25°	1007.7	1007.0	1000.9	994.8	988.7	981.9	975.8	974.5	971.8	971.1	971.8
27.5°	1070.0	1069.3	1061.9	1053.8	1045.6	1035.5	1028.0	1023.9	1021.9	1019.2	1020.6
30°	1146.6	1148.0	1139.1	1129.7	1119.5	1107.3	1097.8	1092.4	1088.3	1085.6	1087.0
32.5°	1302.5	1301.1	1287.6	1267.2	1245.5	1217.1	1194.0	1184.6	1177.1	1174.4	1176.4
35°	1459.0	1457.6	1452.2	1446.1	1440.7	1422.4	1405.5	1385.8	1369.6	1359.4	1362.1
37.5°	1532.9	1532.9	1528.8	1527.4	1527.4	1538.3	1551.8	1576.2	1595.2	1596.6	1590.5
40°	1648.1	1648.1	1641.3	1637.9	1635.9	1639.3	1648.1	1656.9	1666.4	1668.4	1661.6
42.5°	1783.6	1777.5	1772.8	1766.0	1765.3	1768.7	1778.2	1789.0	1798.5	1806.6	1792.4
45°	1930.0	1924.6	1919.8	1915.7	1918.5	1927.3	1940.1	1959.1	1972.7	1984.9	1973.3
47.5°	2093.3	2081.8	2086.5	2082.5	2089.2	2106.8	2129.9	2158.3	2172.6	2194.3	2176.0
50°	2296.6	2299.3	2296.6	2296.6	2304.7	2327.8	2361.6	2400.3	2424.7	2436.9	2426.0
52.5°	2598.8	2590.7	2572.4	2577.8	2588.7	2625.3	2669.3	2723.5	2754.7	2783.8	2749.9
55°	2929.5	2930.9	2928.2	2935.6	2956.6	2993.9	3049.5	3131.5	3170.8	3221.6	3180.9
57.5°	3203.3	3212.8	3229.1	3251.4	3296.8	3359.2	3468.3	3593.6	3698.0	3752.9	3689.2
60°	3292.1	3301.6	3340.9	3403.2	3488.6	3616.0	3792.9	4007.7	4195.4	4293.0	4209.6
62.5°	3121.3	3138.9	3197.2	3283.3	3424.2	3623.5	3886.4	4204.2	4493.6	4627.1	4526.1
63°	3065.7	3085.4	3145.0	3232.4	3376.1	3584.1	3868.1	4208.3	4514.6	4655.5	4546.4
65°	2819.1	2831.9	2895.0	2994.6	3154.5	3371.4	3687.2	4089.7	4438.7	4602.0	4486.1
67.5°	2430.8	2447.7	2505.3	2591.4	2746.6	2976.3	3286.7	3687.8	4031.4	4162.2	4063.3
70°	1949.6	1968.6	2016.0	2096.0	2218.0	2430.8	2696.4	3071.2	3329.3	3431.7	3326.0
72.5°	1370.2	1378.4	1412.9	1497.0	1588.4	1757.9	1968.6	2260.0	2508.0	2575.1	2473.5
75°	580.1	580.8	626.2	679.7	794.2	963.0	1146.6	1397.3	1620.3	1724.6	1595.9
77.5°	185.7	187.7	200.6	220.2	258.2	333.4	468.9	606.5	811.2	910.1	789.5
80°	155.2	157.9	163.3	167.4	170.1	174.2	189.7	211.4	266.3	309.7	250.1
82.5°	133.5	138.2	150.4	155.2	157.9	159.3	161.3	160.6	157.2	155.9	156.5
85°	101.6	113.2	126.7	137.6	138.9	139.6	143.7	145.0	134.2	123.3	134.2
87.5°	44.0	56.9	87.4	96.9	94.9	88.1	94.2	99.6	90.8	66.4	88.8
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°	706.8	706.8	706.8	706.8	706.8	706.8	706.8	706.8
2.5°	709.5	710.9	710.9	710.9	710.9	711.5	712.2	711.5
5°	724.4	725.8	725.1	725.8	725.8	726.5	727.1	726.5
7.5°	750.2	750.2	750.2	751.5	751.5	752.9	752.9	752.9
10°	782.0	781.3	781.3	782.7	784.1	784.7	786.1	785.4
12.5°	816.6	815.2	815.9	817.3	818.6	819.3	820.6	820.0
15°	847.8	847.1	847.1	849.1	849.8	850.5	853.2	853.2
17.5°	877.6	877.6	877.6	880.3	881.0	883.7	885.7	885.7
20°	907.4	907.4	907.4	910.1	912.1	916.2	920.3	919.6
22.5°	937.9	938.6	939.9	942.6	947.4	953.5	956.9	956.9
25°	975.8	978.5	981.3	985.3	992.1	1000.2	1005.6	1007.7
27.5°	1024.6	1030.7	1037.5	1043.6	1051.1	1061.2	1068.7	1070.0
30°	1091.0	1099.8	1110.7	1118.8	1128.3	1139.8	1148.6	1153.4
32.5°	1185.2	1206.9	1221.1	1250.3	1267.9	1287.6	1303.8	1310.6
35°	1379.0	1400.7	1419.7	1439.4	1443.4	1450.2	1459.0	1461.0
37.5°	1570.8	1553.2	1536.3	1535.6	1530.8	1532.2	1534.9	1538.3
40°	1654.2	1648.7	1639.9	1643.3	1644.0	1644.0	1649.4	1650.1
42.5°	1788.3	1775.5	1765.3	1773.4	1774.8	1776.1	1781.6	1787.7
45°	1959.1	1939.5	1926.6	1921.8	1926.6	1925.2	1932.7	1934.0
47.5°	2154.3	2128.5	2099.4	2089.9	2087.2	2081.1	2094.0	2092.6
50°	2393.5	2352.2	2316.9	2303.4	2296.6	2293.2	2296.6	2296.6
52.5°	2696.4	2655.1	2607.0	2591.4	2586.0	2593.4	2582.6	2594.1
55°	3113.2	3046.1	2980.4	2959.3	2956.0	2952.6	2953.9	2958.7
57.5°	3582.1	3462.8	3374.7	3323.2	3290.0	3273.8	3256.2	3253.4
60°	4034.8	3817.9	3650.6	3536.7	3456.1	3395.1	3363.9	3353.1
62.5°	4253.0	3935.9	3675.6	3481.8	3361.9	3262.3	3207.4	3193.1
63°	4259.1	3920.9	3645.1	3440.5	3300.9	3211.4	3153.2	3138.2
65°	4145.9	3761.0	3437.8	3212.8	3065.1	2971.5	2899.7	2884.1
67.5°	3733.9	3360.5	3029.8	2801.4	2641.5	2566.3	2487.0	2485.0
70°	3064.4	2731.0	2452.5	2242.4	2108.9	2034.3	1953.7	1955.7
72.5°	2240.3	1944.2	1752.4	1588.4	1447.5	1377.0	1301.1	1308.6
75°	1348.5	1084.3	911.5	769.1	624.1	537.4	479.1	445.9
77.5°	576.7	394.4	283.3	225.0	189.7	175.5	168.7	166.7
80°	200.6	177.5	167.4	164.7	162.6	159.9	155.2	150.4
82.5°	162.6	162.6	157.2	156.5	150.4	145.7	133.5	127.4
85°	144.3	141.6	136.9	134.9	133.5	123.3	107.7	99.6
87.5°	95.6	88.8	84.7	86.7	84.0	75.2	46.1	36.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)