

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: P143949

Luminaire Tested: **LDRL-5WQ-E04-E-7030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143949  
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-E04-E-7030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE  
Light Source: (84) 3000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11199.7 lumens  
Efficiency: N/A  
Efficacy: 115.2 lumens/watt  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B4 - U0 - G2

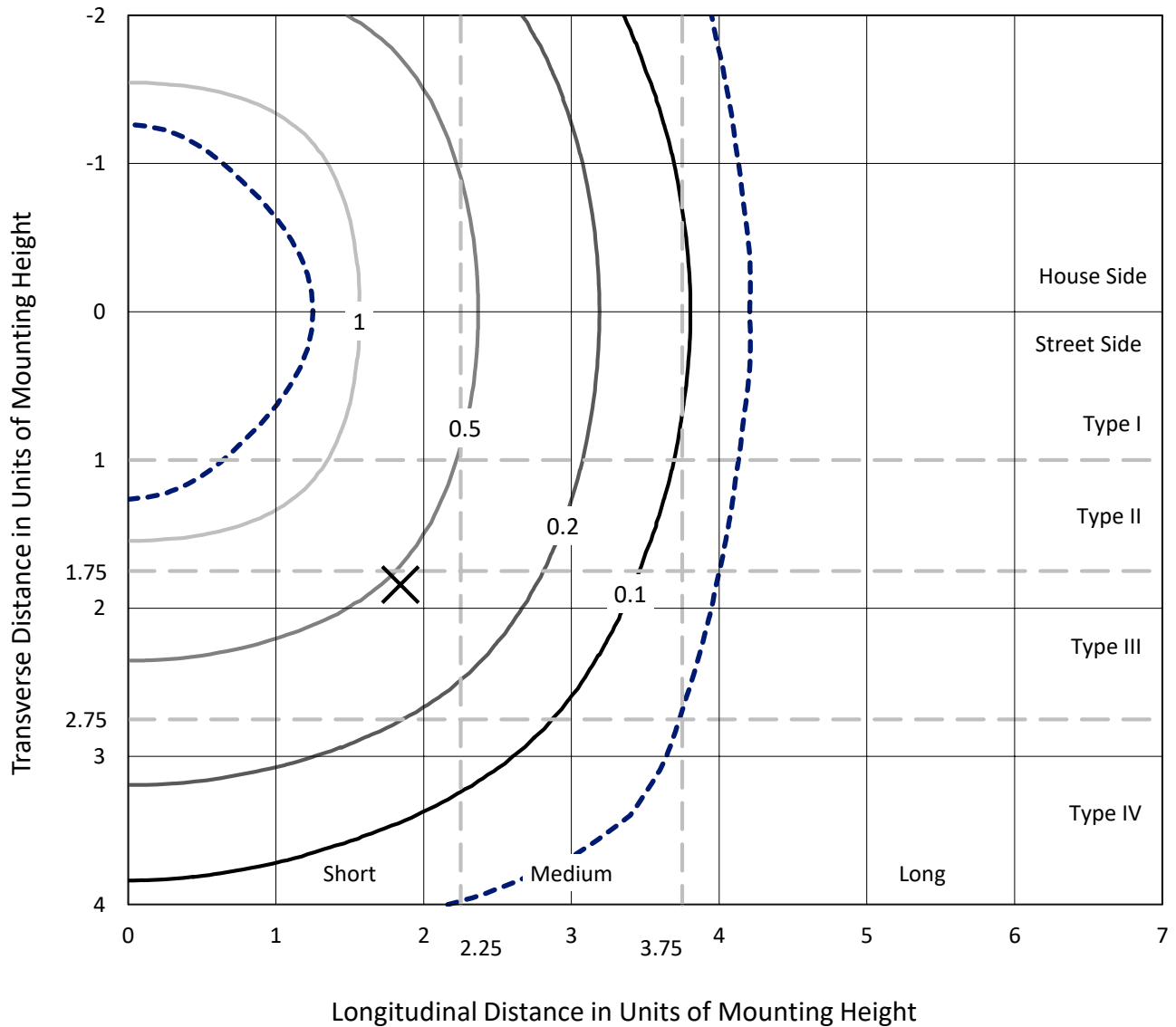
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

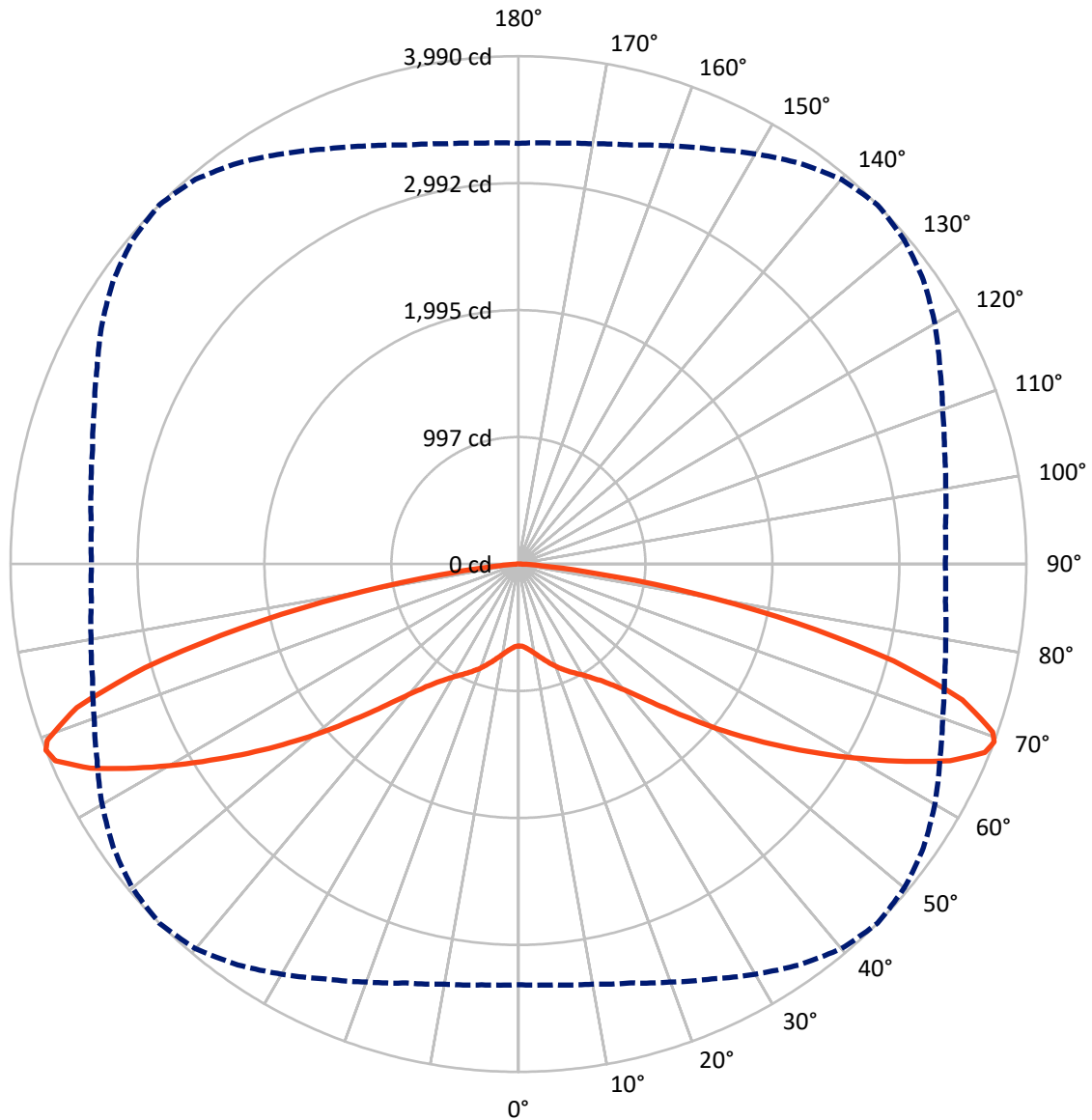
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.8 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	5599.9	0.0	5599.9
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5599.9	0.0	5599.9
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	11199.7	0.0	11199.7
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.9	0.6
10°-20°	223.8	2.0
20°-30°	431.4	3.9
30°-40°	706.9	6.3
40°-50°	1229.2	11.0
50°-60°	2183.6	19.5
60°-70°	3390.2	30.3
70°-80°	2701.1	24.1
80°-90°	268.6	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°	11199.7	100.0
0°-180°	11199.7	100.0



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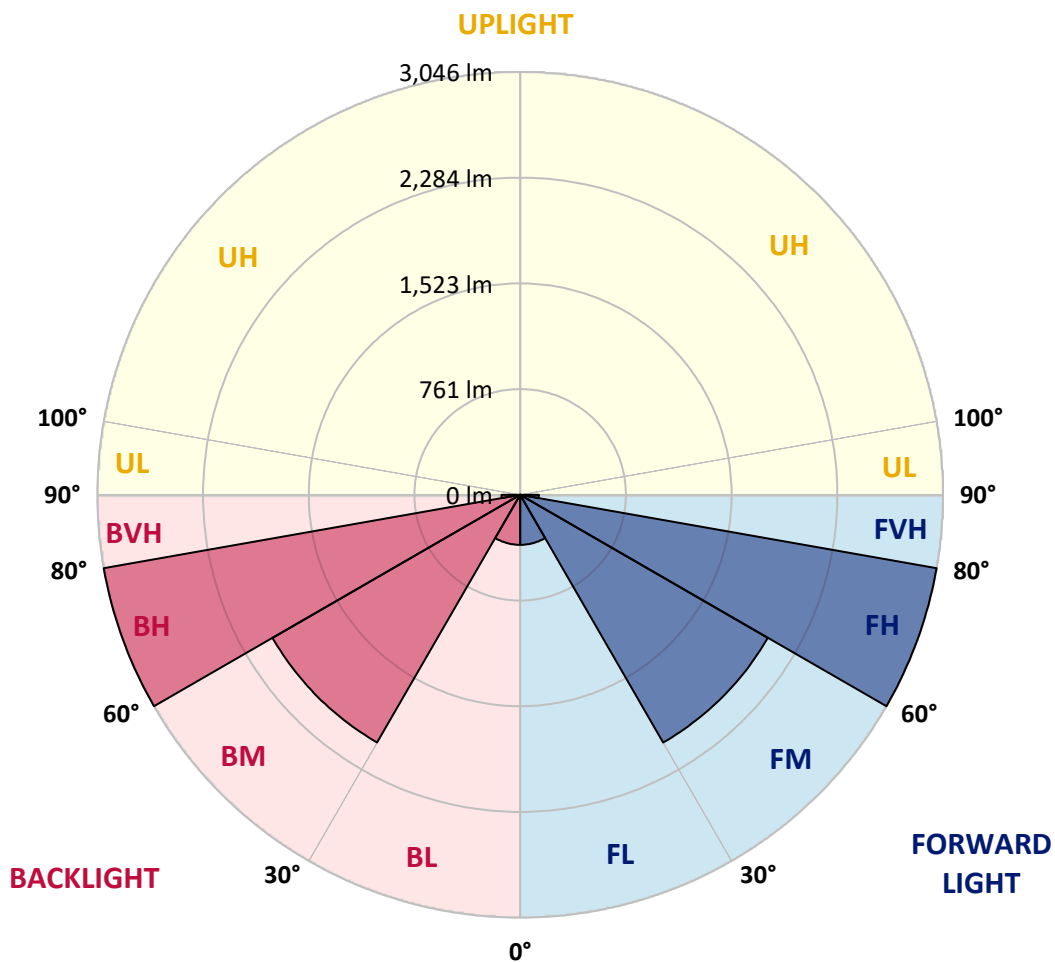
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	360.1	3.2			
FM	(30°-60°)	2059.9	18.4			
FH	(60°-80°)	3045.6	27.2			G2/5000
FVH	(80°-90°)	134.3	1.2			G2/225
BL	(0°-30°)	360.1	3.2	B1/500		
BM	(30°-60°)	2059.9	18.4	B2/2500		
BH	(60°-80°)	3045.6	27.2	B4/5000		G2/5000
BVH	(80°-90°)	134.3	1.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B4-U0-G2**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7
2.5°	648.8	648.8	648.8	648.1	648.1	647.4	648.1	647.4	647.4	647.4	647.4
5°	665.6	664.2	664.2	663.5	664.9	664.9	663.5	664.2	663.5	664.2	664.2
7.5°	686.8	686.8	686.8	686.1	687.6	686.8	686.1	686.8	686.8	686.1	686.1
10°	713.1	713.9	713.1	713.1	715.3	714.6	715.3	715.3	716.1	715.3	715.3
12.5°	743.8	743.8	744.6	745.3	746.0	746.8	748.9	748.2	749.7	748.2	748.2
15°	779.6	781.1	779.6	779.6	781.8	783.3	784.0	784.0	785.5	784.8	783.3
17.5°	817.6	818.4	817.6	816.9	819.1	821.3	822.0	822.0	824.2	822.7	822.7
20°	856.4	857.1	855.6	854.9	857.8	857.8	859.3	860.0	862.2	862.9	860.7
22.5°	892.2	892.9	892.2	891.4	894.4	894.4	896.5	897.3	900.2	899.5	899.5
25°	927.2	927.2	926.5	926.5	929.4	930.2	932.3	933.8	936.7	936.7	936.7
27.5°	959.4	960.1	958.7	957.9	963.8	966.0	967.4	970.3	972.5	974.0	973.3
30°	995.9	995.9	995.2	997.4	1001.0	1004.0	1006.9	1011.3	1015.6	1014.2	1014.2
32.5°	1039.0	1040.5	1039.8	1042.7	1047.1	1051.4	1055.1	1060.2	1062.4	1066.1	1063.1
35°	1096.8	1099.7	1098.2	1101.1	1104.8	1107.7	1115.7	1120.9	1124.5	1126.7	1125.2
37.5°	1169.1	1167.6	1170.5	1171.3	1178.6	1182.2	1191.7	1199.0	1204.9	1207.1	1205.6
40°	1259.0	1256.8	1260.4	1264.1	1273.6	1277.2	1288.2	1299.1	1307.2	1310.1	1308.6
42.5°	1366.4	1369.3	1375.1	1380.3	1393.4	1403.6	1416.1	1432.1	1440.9	1444.6	1439.4
45°	1507.4	1502.3	1513.2	1526.4	1533.7	1556.3	1576.8	1593.6	1608.2	1614.1	1608.2
47.5°	1668.1	1667.4	1680.6	1696.6	1715.6	1736.8	1760.9	1782.9	1808.4	1809.9	1802.6
50°	1845.7	1860.3	1867.6	1883.7	1918.8	1945.1	1975.8	2008.6	2032.0	2039.3	2026.2
52.5°	2059.8	2070.7	2075.1	2102.2	2134.3	2166.5	2209.6	2249.0	2276.1	2279.0	2272.4
55°	2292.1	2300.9	2308.9	2341.8	2376.9	2405.4	2460.2	2498.9	2526.0	2536.2	2531.8
57.5°	2532.5	2540.6	2550.8	2586.6	2622.4	2662.6	2714.5	2759.8	2791.2	2810.2	2805.1
60°	2799.2	2799.2	2822.6	2858.4	2887.6	2935.1	2989.2	3041.8	3076.2	3106.1	3098.1
62.5°	3079.8	3087.9	3110.5	3139.7	3170.4	3214.3	3275.6	3338.5	3391.1	3413.7	3413.0
65°	3292.4	3307.1	3337.0	3370.6	3421.8	3473.7	3551.1	3629.3	3692.9	3725.7	3725.7
67.5°	3354.6	3364.1	3401.3	3452.5	3526.3	3608.8	3714.0	3822.9	3909.9	3953.0	3925.9
69°	3304.9	3318.7	3351.6	3407.2	3494.8	3595.7	3720.6	3844.1	3944.9	3989.5	3958.1
70°	3247.1	3262.5	3295.4	3350.2	3440.8	3548.2	3673.1	3806.1	3914.3	3952.2	3916.4
72.5°	3011.9	3030.9	3054.2	3101.7	3183.6	3284.4	3396.9	3513.8	3617.6	3647.6	3603.0
75°	2610.7	2614.4	2626.1	2661.1	2690.4	2762.0	2857.7	2950.5	3028.7	3046.2	2998.7
77.5°	1847.9	1828.2	1808.4	1838.4	1861.8	1953.8	2057.6	2133.6	2215.4	2240.3	2192.0
80°	810.3	803.0	830.8	870.2	973.3	1034.6	1136.2	1245.1	1314.5	1395.6	1308.6
82.5°	160.0	168.8	195.1	241.1	297.4	374.1	440.6	515.9	583.8	614.5	583.1
85°	65.0	70.9	80.4	89.9	96.4	108.1	127.1	157.8	173.9	176.1	167.3
87.5°	27.0	31.4	42.4	50.4	51.1	49.0	50.4	51.9	42.4	34.3	43.1
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°	643.7	643.7	643.7	643.7	643.7	643.7	643.7	643.7
2.5°	647.4	648.1	647.4	648.1	647.4	647.4	648.1	647.4
5°	663.5	664.2	663.5	662.7	662.0	662.7	662.7	662.7
7.5°	686.1	685.4	684.6	684.6	683.9	683.2	684.6	684.6
10°	713.9	713.1	711.7	711.7	711.0	711.0	711.0	711.0
12.5°	747.5	745.3	744.6	742.4	741.6	740.9	740.9	741.6
15°	782.6	780.4	779.6	776.0	776.0	775.3	775.3	775.3
17.5°	819.8	817.6	814.7	814.7	812.5	811.1	811.8	810.3
20°	857.8	854.9	853.4	852.7	849.8	849.8	849.8	849.1
22.5°	895.1	892.9	890.7	887.8	884.9	884.1	884.1	883.4
25°	933.1	929.4	925.0	922.1	919.2	917.0	917.0	917.0
27.5°	971.1	966.7	960.1	956.5	952.1	949.9	949.9	949.2
30°	1011.3	1006.1	1000.3	995.2	989.3	987.1	986.4	985.0
32.5°	1059.5	1054.4	1048.5	1041.2	1035.4	1031.7	1031.7	1029.5
35°	1120.9	1115.0	1110.6	1101.1	1093.8	1088.0	1088.7	1090.2
37.5°	1201.2	1193.9	1190.3	1178.6	1169.1	1163.2	1163.2	1162.5
40°	1303.5	1296.2	1288.2	1277.2	1265.5	1257.5	1255.3	1255.3
42.5°	1433.6	1427.0	1416.1	1400.7	1386.8	1378.1	1370.8	1371.5
45°	1596.5	1588.5	1573.2	1554.2	1537.4	1524.9	1514.7	1514.7
47.5°	1794.6	1777.7	1756.6	1739.7	1711.3	1692.3	1684.9	1683.5
50°	2020.3	1988.9	1962.6	1938.5	1908.5	1888.8	1877.8	1874.9
52.5°	2257.1	2224.2	2191.3	2159.9	2123.4	2102.9	2085.4	2083.9
55°	2514.3	2472.6	2431.0	2400.3	2357.2	2336.0	2318.4	2308.2
57.5°	2776.6	2729.8	2699.9	2656.0	2610.7	2595.4	2578.6	2566.1
60°	3071.8	3020.6	2981.2	2935.1	2905.9	2873.0	2857.0	2847.5
62.5°	3373.6	3326.1	3275.6	3231.8	3190.9	3168.2	3146.3	3135.3
65°	3680.4	3602.3	3542.3	3481.7	3433.5	3392.5	3358.2	3353.8
67.5°	3869.0	3770.3	3670.2	3581.8	3510.9	3453.2	3418.1	3405.7
69°	3884.3	3776.9	3651.9	3546.0	3464.2	3408.6	3367.0	3353.8
70°	3841.9	3733.8	3602.3	3488.3	3403.5	3342.9	3308.5	3286.6
72.5°	3532.1	3437.1	3310.7	3198.2	3121.5	3050.6	3016.2	3007.5
75°	2914.0	2813.1	2696.9	2642.9	2589.5	2545.0	2521.6	2519.4
77.5°	2069.3	1966.3	1877.8	1807.0	1749.2	1720.8	1727.3	1703.2
80°	1184.4	1050.0	943.3	880.5	795.0	743.8	686.1	727.8
82.5°	509.3	411.4	313.5	255.0	194.4	154.2	127.1	118.4
85°	142.5	116.2	97.2	89.1	80.4	71.6	60.6	56.3
87.5°	48.2	46.0	40.9	40.9	37.3	31.4	21.9	19.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)