

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: P143948

Luminaire Tested: **LDRL-5WQ-E04-E-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P143948  
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-8030  
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE  
Light Source: (84) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10349.2 lumens  
Efficiency: N/A  
Efficacy: 106.5 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

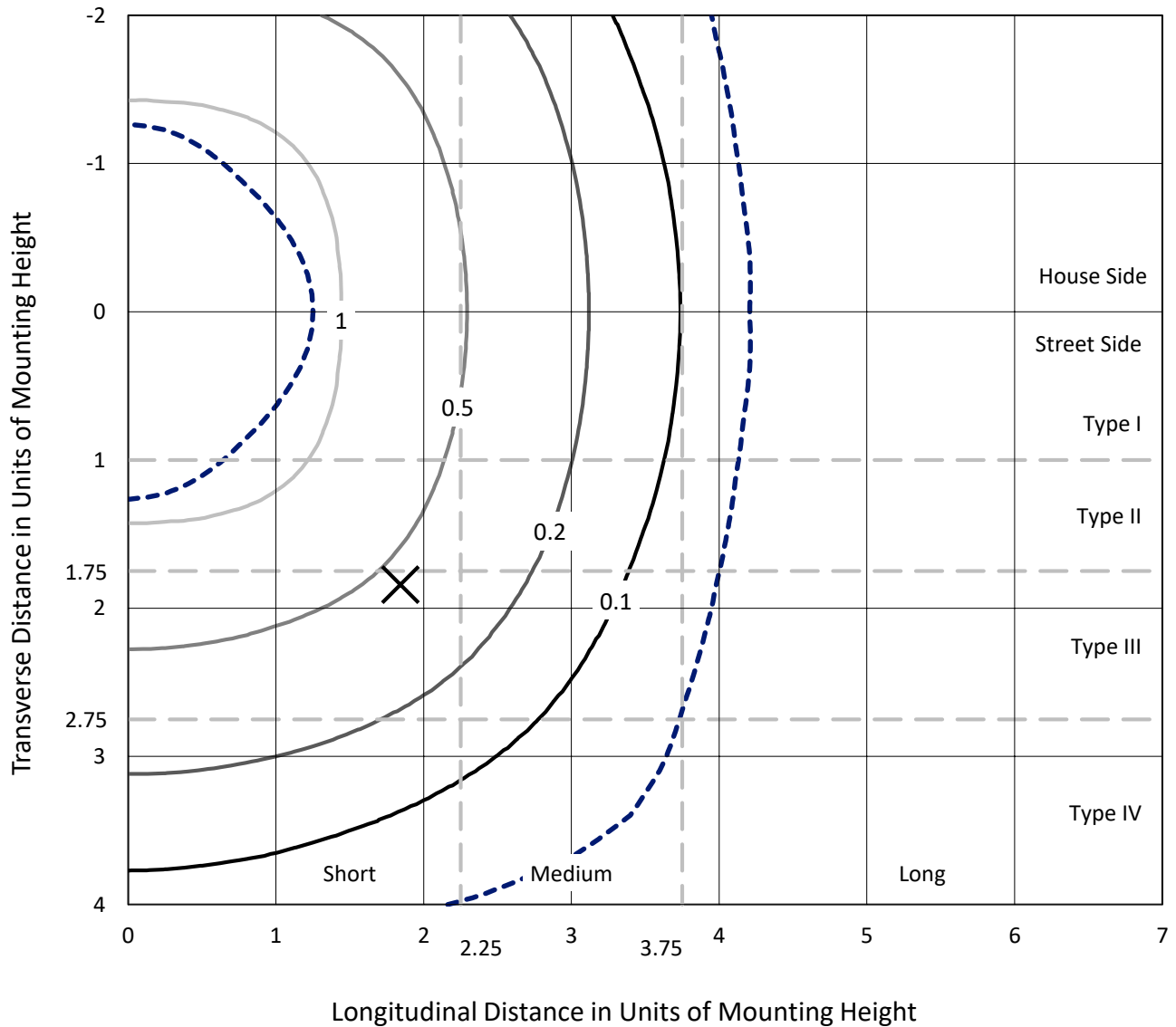
Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

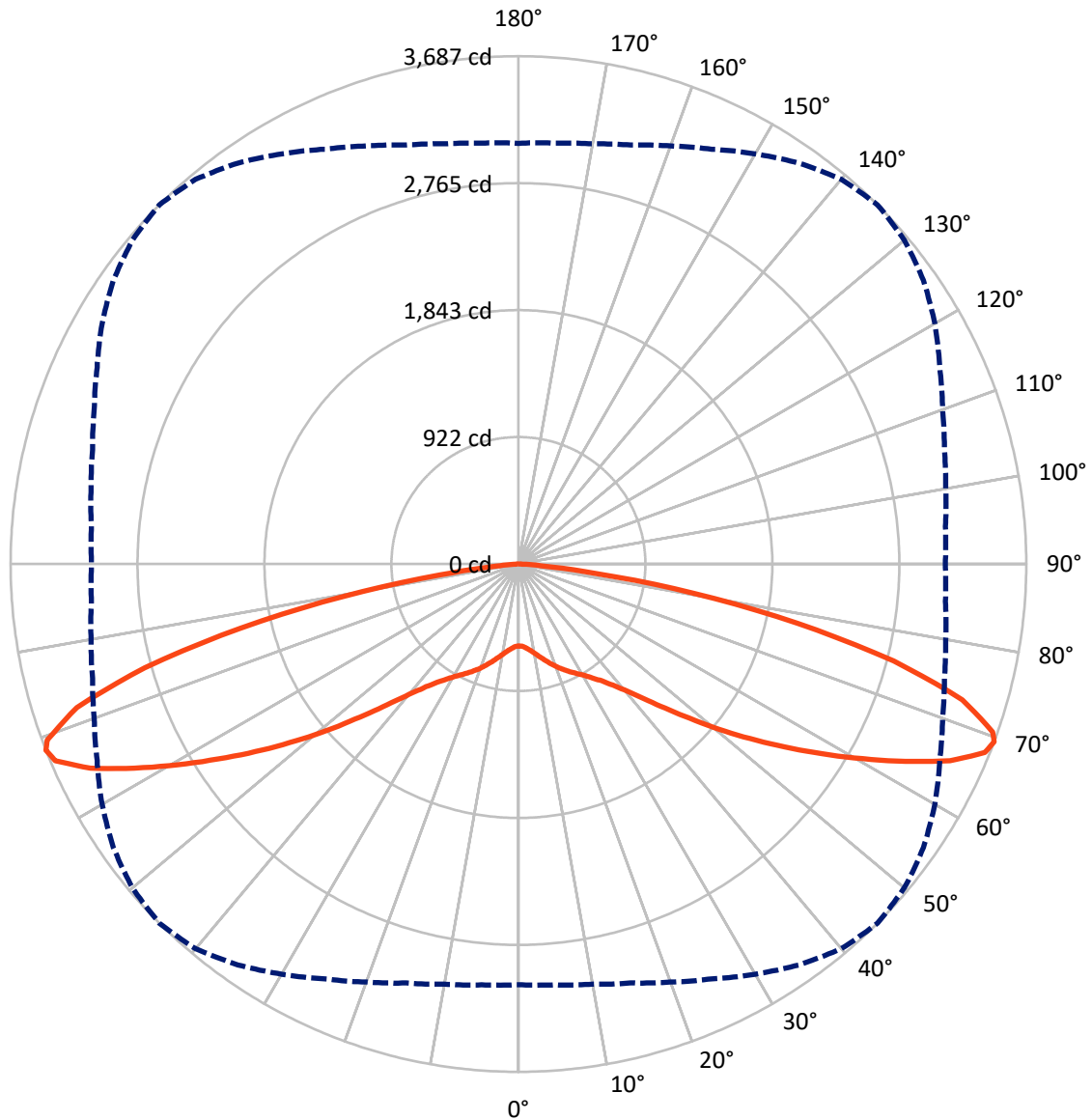
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.7 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	5174.6	0.0	5174.6
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	5174.6	0.0	5174.6
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	10349.2	0.0	10349.2
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.0	0.6
10°-20°	206.8	2.0
20°-30°	398.7	3.9
30°-40°	653.3	6.3
40°-50°	1135.9	11.0
50°-60°	2017.8	19.5
60°-70°	3132.7	30.3
70°-80°	2496.0	24.1
80°-90°	248.2	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°	10349.2	100.0
0°-180°	10349.2	100.0



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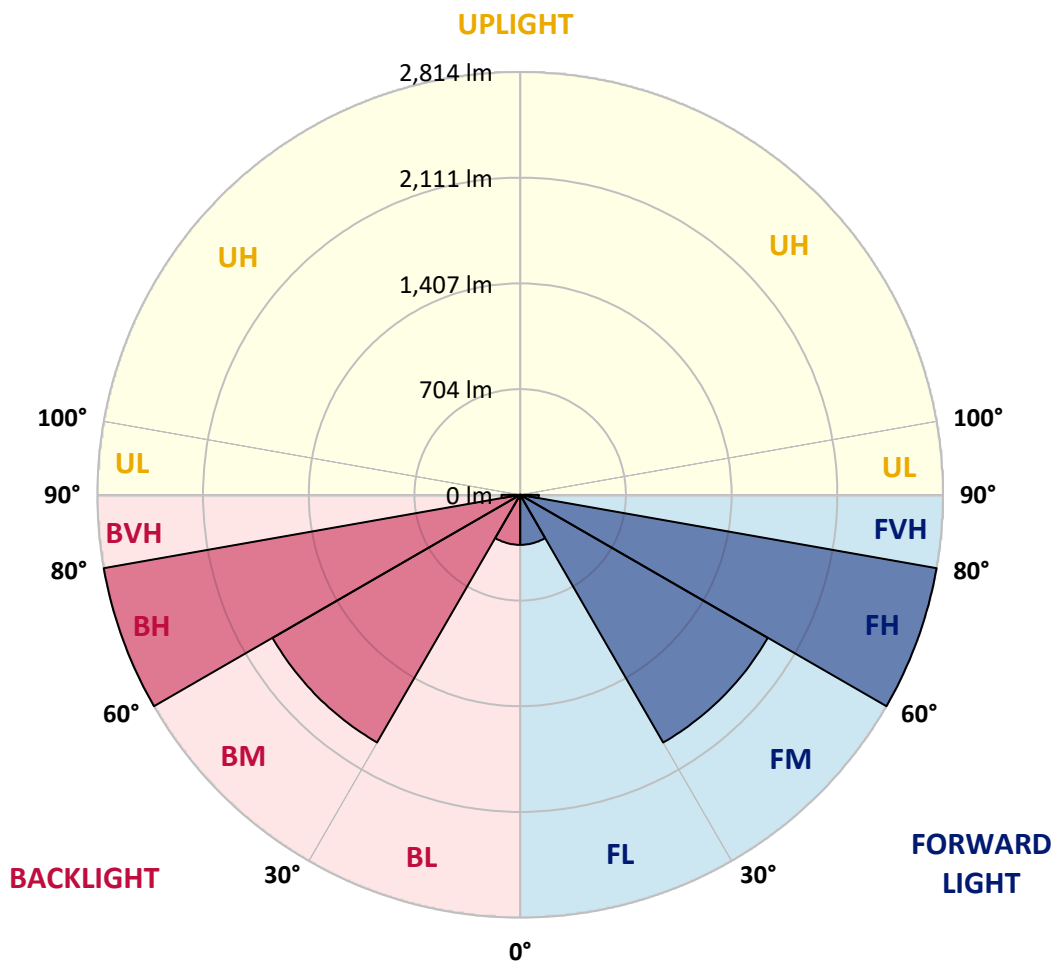
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	332.7	3.2			
FM	(30°-60°)	1903.5	18.4			
FH	(60°-80°)	2814.3	27.2			G2/5000
FVH	(80°-90°)	124.1	1.2			G2/225
BL	(0°-30°)	332.7	3.2	B1/500		
BM	(30°-60°)	1903.5	18.4	B2/2500		
BH	(60°-80°)	2814.3	27.2	B4/5000		G2/5000
BVH	(80°-90°)	124.1	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°	594.8	594.8	594.8	594.8	594.8	594.8	594.8	594.8	594.8	594.8	594.8
2.5°	599.6	599.6	599.6	598.9	598.9	598.2	598.9	598.2	598.2	598.2	598.2
5°	615.1	613.8	613.8	613.1	614.4	614.4	613.1	613.8	613.1	613.8	613.8
7.5°	634.7	634.7	634.7	634.0	635.4	634.7	634.0	634.7	634.7	634.0	634.0
10°	659.0	659.7	659.0	659.0	661.0	660.3	661.0	661.0	661.7	661.0	661.0
12.5°	687.3	687.3	688.0	688.7	689.4	690.0	692.1	691.4	692.7	691.4	691.4
15°	720.4	721.8	720.4	720.4	722.5	723.8	724.5	724.5	725.8	725.2	723.8
17.5°	755.5	756.2	755.5	754.9	756.9	758.9	759.6	759.6	761.6	760.3	760.3
20°	791.3	792.0	790.7	790.0	792.7	792.7	794.0	794.7	796.7	797.4	795.4
22.5°	824.4	825.1	824.4	823.7	826.4	826.4	828.5	829.1	831.8	831.2	831.2
25°	856.8	856.8	856.1	856.1	858.8	859.5	861.5	862.9	865.6	865.6	865.6
27.5°	886.5	887.2	885.9	885.2	890.6	892.6	894.0	896.7	898.7	900.0	899.4
30°	920.3	920.3	919.6	921.6	925.0	927.7	930.4	934.5	938.5	937.2	937.2
32.5°	960.1	961.5	960.8	963.5	967.6	971.6	975.0	979.7	981.7	985.1	982.4
35°	1013.5	1016.2	1014.8	1017.5	1020.9	1023.6	1031.0	1035.7	1039.1	1041.1	1039.8
37.5°	1080.3	1079.0	1081.7	1082.3	1089.1	1092.5	1101.2	1108.0	1113.4	1115.4	1114.1
40°	1163.4	1161.3	1164.7	1168.1	1176.9	1180.2	1190.4	1200.5	1207.9	1210.6	1209.3
42.5°	1262.6	1265.3	1270.7	1275.4	1287.6	1297.0	1308.5	1323.4	1331.5	1334.9	1330.1
45°	1392.9	1388.2	1398.3	1410.5	1417.2	1438.2	1457.1	1472.6	1486.1	1491.5	1486.1
47.5°	1541.5	1540.8	1552.9	1567.8	1585.4	1604.9	1627.2	1647.5	1671.1	1672.5	1665.7
50°	1705.5	1719.0	1725.8	1740.6	1773.1	1797.4	1825.7	1856.1	1877.7	1884.5	1872.3
52.5°	1903.4	1913.5	1917.5	1942.5	1972.2	2001.9	2041.8	2078.2	2103.2	2105.9	2099.8
55°	2118.1	2126.2	2133.6	2164.0	2196.4	2222.7	2273.4	2309.2	2334.1	2343.6	2339.5
57.5°	2340.2	2347.6	2357.1	2390.2	2423.3	2460.4	2508.3	2550.2	2579.2	2596.8	2592.1
60°	2586.7	2586.7	2608.3	2641.4	2668.4	2712.2	2762.2	2810.8	2842.6	2870.2	2862.8
62.5°	2845.9	2853.4	2874.3	2901.3	2929.7	2970.2	3026.9	3085.0	3133.6	3154.5	3153.8
65°	3042.4	3055.9	3083.6	3114.7	3161.9	3209.9	3281.4	3353.7	3412.4	3442.8	3442.8
67.5°	3099.8	3108.6	3143.0	3190.3	3258.5	3334.8	3432.0	3532.6	3613.0	3652.8	3627.8
69°	3053.9	3066.7	3097.1	3148.4	3229.4	3322.6	3438.1	3552.2	3645.4	3686.6	3657.5
70°	3000.6	3014.7	3045.1	3095.8	3179.5	3278.7	3394.2	3517.1	3617.0	3652.1	3619.0
72.5°	2783.1	2800.7	2822.3	2866.2	2941.8	3035.0	3139.0	3247.0	3342.9	3370.6	3329.4
75°	2412.5	2415.8	2426.6	2459.1	2486.1	2552.2	2640.7	2726.4	2798.7	2814.9	2771.0
77.5°	1707.6	1689.3	1671.1	1698.8	1720.4	1805.5	1901.3	1971.6	2047.2	2070.1	2025.6
80°	748.8	742.0	767.7	804.2	899.4	956.1	1049.9	1150.5	1214.7	1289.6	1209.3
82.5°	147.9	156.0	180.3	222.8	274.8	345.7	407.1	476.7	539.5	567.8	538.8
85°	60.1	65.5	74.3	83.0	89.1	99.9	117.5	145.8	160.7	162.7	154.6
87.5°	25.0	29.0	39.2	46.6	47.3	45.2	46.6	47.9	39.2	31.7	39.8
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°	594.8	594.8	594.8	594.8	594.8	594.8	594.8	594.8
2.5°	598.2	598.9	598.2	598.9	598.2	598.2	598.9	598.2
5°	613.1	613.8	613.1	612.4	611.7	612.4	612.4	612.4
7.5°	634.0	633.3	632.7	632.7	632.0	631.3	632.7	632.7
10°	659.7	659.0	657.6	657.6	657.0	657.0	657.0	657.0
12.5°	690.7	688.7	688.0	686.0	685.3	684.6	684.6	685.3
15°	723.1	721.1	720.4	717.1	717.1	716.4	716.4	716.4
17.5°	757.6	755.5	752.8	752.8	750.8	749.5	750.1	748.8
20°	792.7	790.0	788.6	787.9	785.2	785.2	785.2	784.6
22.5°	827.1	825.1	823.1	820.4	817.7	817.0	817.0	816.3
25°	862.2	858.8	854.8	852.1	849.4	847.4	847.4	847.4
27.5°	897.3	893.3	887.2	883.8	879.8	877.8	877.8	877.1
30°	934.5	929.7	924.3	919.6	914.2	912.2	911.5	910.2
32.5°	979.0	974.3	968.9	962.1	956.7	953.4	953.4	951.3
35°	1035.7	1030.3	1026.3	1017.5	1010.8	1005.4	1006.0	1007.4
37.5°	1110.0	1103.3	1099.9	1089.1	1080.3	1074.9	1074.9	1074.2
40°	1204.5	1197.8	1190.4	1180.2	1169.4	1162.0	1160.0	1160.0
42.5°	1324.7	1318.7	1308.5	1294.3	1281.5	1273.4	1266.7	1267.3
45°	1475.3	1467.9	1453.7	1436.1	1420.6	1409.1	1399.7	1399.7
47.5°	1658.3	1642.7	1623.2	1607.6	1581.3	1563.7	1557.0	1555.6
50°	1866.9	1837.9	1813.6	1791.3	1763.6	1745.4	1735.2	1732.5
52.5°	2085.7	2055.3	2024.9	1995.9	1962.1	1943.2	1927.0	1925.6
55°	2323.3	2284.9	2246.4	2218.0	2178.2	2158.6	2142.4	2132.9
57.5°	2565.7	2522.5	2494.8	2454.3	2412.5	2398.3	2382.8	2371.3
60°	2838.5	2791.2	2754.8	2712.2	2685.2	2654.9	2640.0	2631.2
62.5°	3117.4	3073.5	3026.9	2986.4	2948.6	2927.6	2907.4	2897.3
65°	3400.9	3328.7	3273.3	3217.3	3172.7	3134.9	3103.2	3099.1
67.5°	3575.1	3484.0	3391.5	3309.8	3244.3	3191.0	3158.6	3147.1
69°	3589.3	3490.1	3374.6	3276.7	3201.1	3149.8	3111.3	3099.1
70°	3550.2	3450.2	3328.7	3223.4	3145.0	3089.0	3057.3	3037.0
72.5°	3263.9	3176.1	3059.3	2955.3	2884.4	2818.9	2787.2	2779.1
75°	2692.7	2599.5	2492.1	2442.2	2392.9	2351.7	2330.1	2328.1
77.5°	1912.1	1816.9	1735.2	1669.8	1616.4	1590.1	1596.2	1573.9
80°	1094.5	970.3	871.7	813.6	734.6	687.3	634.0	672.5
82.5°	470.6	380.1	289.7	235.6	179.6	142.5	117.5	109.4
85°	131.7	107.4	89.8	82.4	74.3	66.2	56.0	52.0
87.5°	44.6	42.5	37.8	37.8	34.4	29.0	20.3	18.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)