

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: P143955

Luminaire Tested: **LDRL-5WQ-F04-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P143955
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-F04-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE WIDE
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10122.8 lumens
Efficiency: N/A
Efficacy: 99.0 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

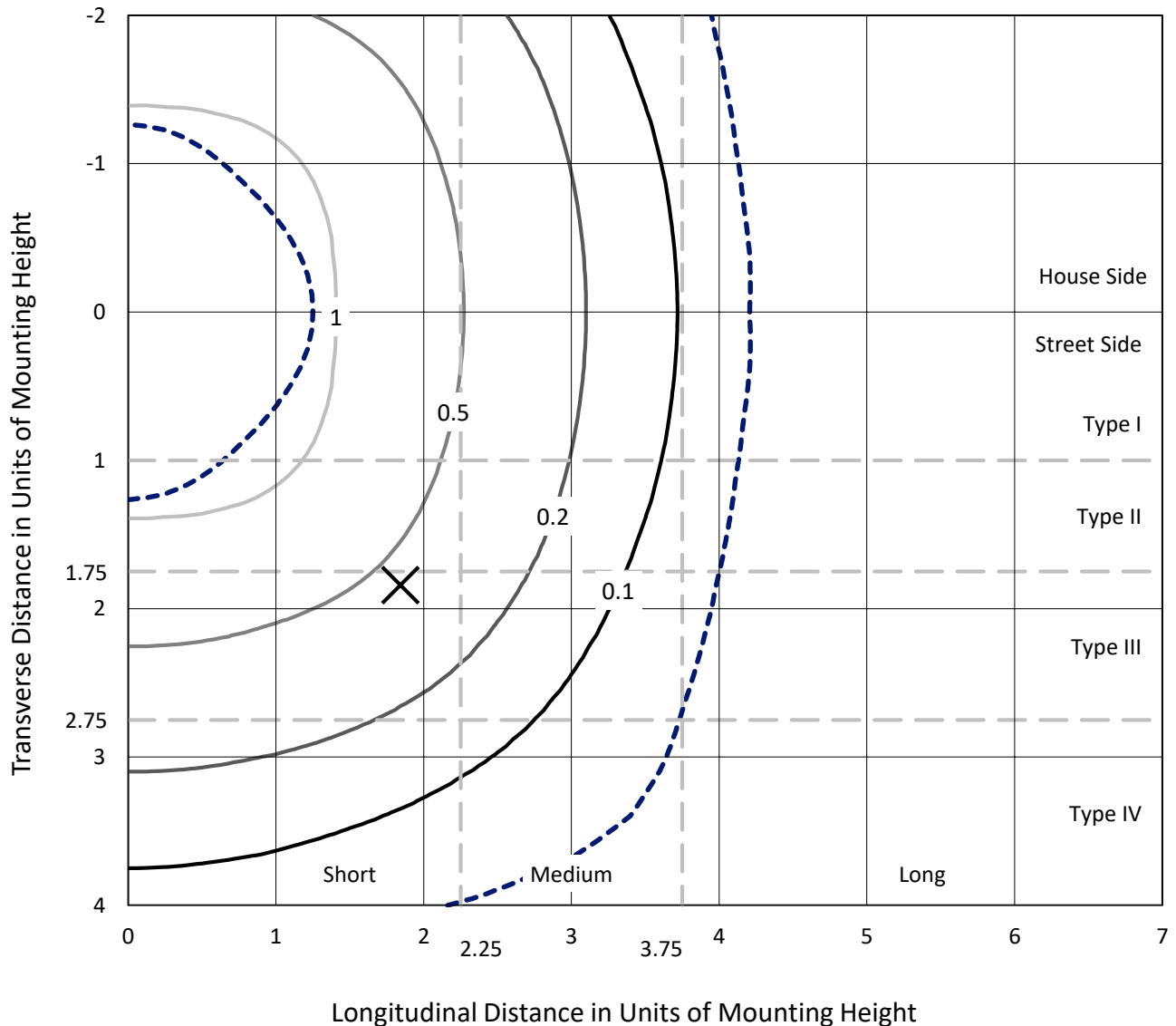
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

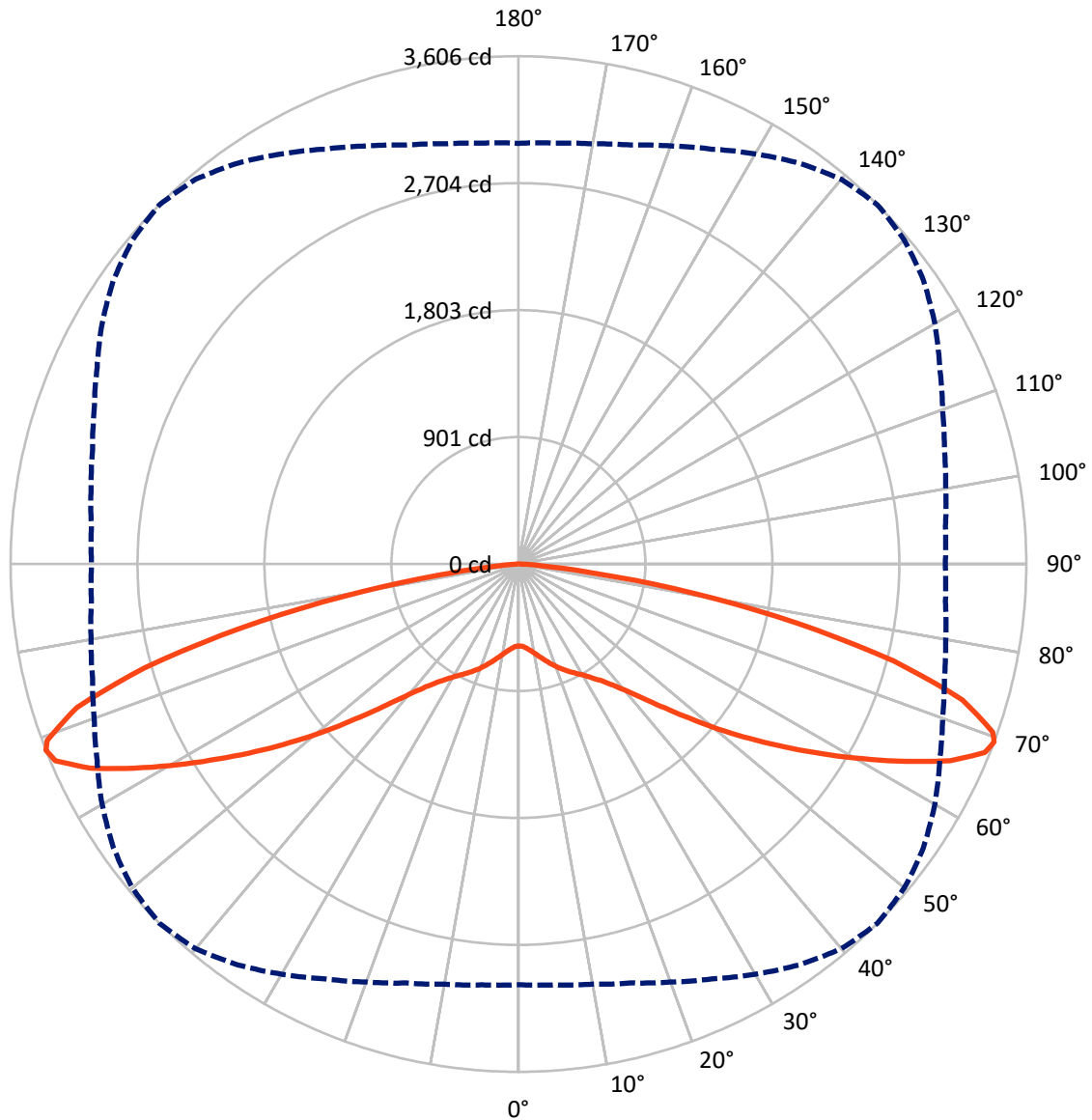
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.6 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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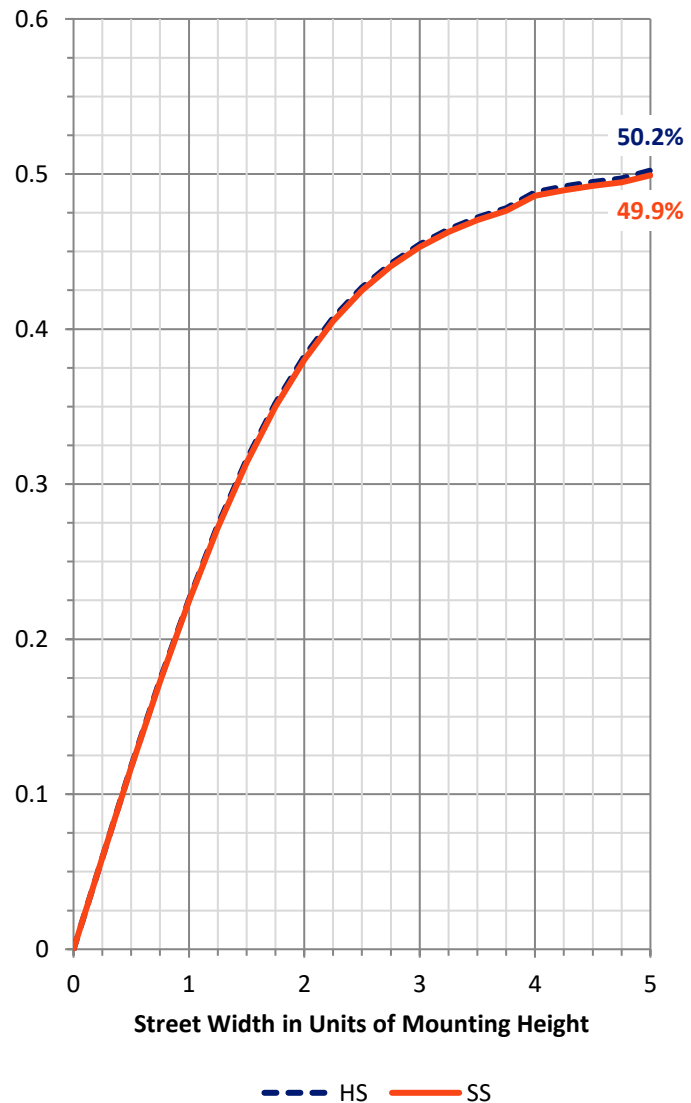
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5061.4	0.0	5061.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5061.4	0.0	5061.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	10122.8	0.0	10122.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	0.6
10°-20°	202.3	2.0
20°-30°	389.9	3.9
30°-40°	639.0	6.3
40°-50°	1111.0	11.0
50°-60°	1973.6	19.5
60°-70°	3064.2	30.3
70°-80°	2441.3	24.1
80°-90°	242.8	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°	10122.8	100.0
0°-180°	10122.8	100.0



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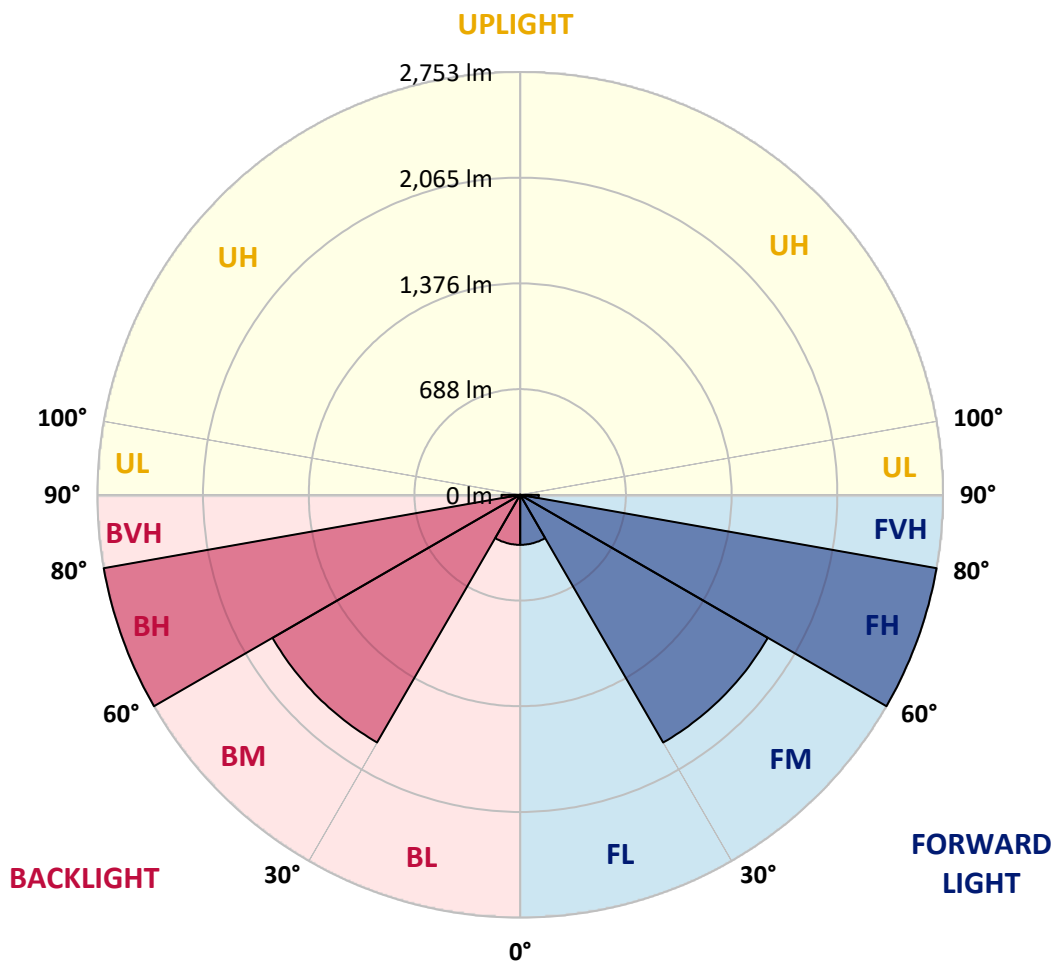
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	325.4	3.2			
FM	(30°-60°)	1861.8	18.4			
FH	(60°-80°)	2752.8	27.2			G2/5000
FVH	(80°-90°)	121.4	1.2			G2/225
BL	(0°-30°)	325.4	3.2	B1/500		
BM	(30°-60°)	1861.8	18.4	B2/2500		
BH	(60°-80°)	2752.8	27.2	B4/5000		G2/5000
BVH	(80°-90°)	121.4	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°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8
2.5°	586.5	586.5	586.5	585.8	585.8	585.1	585.8	585.1	585.1	585.1	585.1
5°	601.6	600.3	600.3	599.7	601.0	601.0	599.7	600.3	599.7	600.3	600.3
7.5°	620.8	620.8	620.8	620.1	621.5	620.8	620.1	620.8	620.8	620.1	620.1
10°	644.6	645.2	644.6	644.6	646.6	645.9	646.6	646.6	647.2	646.6	646.6
12.5°	672.3	672.3	673.0	673.6	674.3	674.9	676.9	676.3	677.6	676.3	676.3
15°	704.7	706.0	704.7	704.7	706.6	708.0	708.6	708.6	710.0	709.3	708.0
17.5°	739.0	739.7	739.0	738.3	740.3	742.3	743.0	743.0	745.0	743.6	743.6
20°	774.0	774.7	773.4	772.7	775.3	775.3	776.7	777.3	779.3	780.0	778.0
22.5°	806.4	807.0	806.4	805.7	808.4	808.4	810.3	811.0	813.6	813.0	813.0
25°	838.1	838.1	837.4	837.4	840.1	840.7	842.7	844.0	846.7	846.7	846.7
27.5°	867.1	867.8	866.5	865.8	871.1	873.1	874.4	877.0	879.0	880.3	879.7
30°	900.2	900.2	899.5	901.5	904.8	907.4	910.1	914.0	918.0	916.7	916.7
32.5°	939.1	940.4	939.8	942.4	946.4	950.3	953.6	958.3	960.3	963.6	960.9
35°	991.3	993.9	992.6	995.3	998.6	1001.2	1008.5	1013.1	1016.4	1018.4	1017.0
37.5°	1056.7	1055.4	1058.0	1058.7	1065.3	1068.6	1077.1	1083.7	1089.0	1091.0	1089.7
40°	1137.9	1135.9	1139.2	1142.5	1151.1	1154.4	1164.3	1174.2	1181.5	1184.1	1182.8
42.5°	1235.0	1237.6	1242.9	1247.5	1259.4	1268.7	1279.9	1294.4	1302.3	1305.7	1301.0
45°	1362.4	1357.8	1367.7	1379.6	1386.2	1406.7	1425.2	1440.4	1453.6	1458.9	1453.6
47.5°	1507.7	1507.1	1519.0	1533.5	1550.7	1569.8	1591.6	1611.4	1634.5	1635.9	1629.3
50°	1668.2	1681.4	1688.0	1702.6	1734.3	1758.0	1785.8	1815.5	1836.6	1843.2	1831.3
52.5°	1861.7	1871.6	1875.6	1900.0	1929.1	1958.1	1997.1	2032.8	2057.2	2059.8	2053.9
55°	2071.7	2079.7	2086.9	2116.6	2148.3	2174.1	2223.6	2258.6	2283.1	2292.3	2288.4
57.5°	2289.0	2296.3	2305.5	2337.9	2370.2	2406.6	2453.5	2494.4	2522.8	2540.0	2535.4
60°	2530.1	2530.1	2551.2	2583.6	2610.0	2652.9	2701.8	2749.3	2780.4	2807.4	2800.2
62.5°	2783.7	2790.9	2811.4	2837.8	2865.6	2905.2	2960.7	3017.5	3065.0	3085.5	3084.8
65°	2975.9	2989.1	3016.1	3046.5	3092.7	3139.6	3209.6	3280.3	3337.8	3367.5	3367.5
67.5°	3032.0	3040.6	3074.3	3120.5	3187.2	3261.8	3356.9	3455.3	3533.9	3572.9	3548.4
69°	2987.1	2999.6	3029.3	3079.5	3158.8	3249.9	3362.9	3474.5	3565.6	3605.9	3577.5
70°	2934.9	2948.8	2978.5	3028.0	3109.9	3207.0	3319.9	3440.1	3537.9	3572.2	3539.9
72.5°	2722.3	2739.4	2760.6	2803.5	2877.4	2968.6	3070.3	3176.0	3269.7	3296.8	3256.5
75°	2359.7	2363.0	2373.5	2405.2	2431.7	2496.4	2582.9	2666.8	2737.4	2753.3	2710.4
77.5°	1670.2	1652.4	1634.5	1661.6	1682.8	1766.0	1859.7	1928.4	2002.4	2024.8	1981.3
80°	732.4	725.8	750.9	786.6	879.7	935.2	1027.0	1125.4	1188.1	1261.4	1182.8
82.5°	144.6	152.6	176.3	217.9	268.8	338.1	398.2	466.3	527.7	555.4	527.0
85°	58.8	64.1	72.6	81.2	87.2	97.7	114.9	142.7	157.2	159.2	151.2
87.5°	24.4	28.4	38.3	45.6	46.2	44.2	45.6	46.9	38.3	31.0	39.0
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°	581.8	581.8	581.8	581.8	581.8	581.8	581.8	581.8
2.5°	585.1	585.8	585.1	585.8	585.1	585.1	585.8	585.1
5°	599.7	600.3	599.7	599.0	598.3	599.0	599.0	599.0
7.5°	620.1	619.5	618.8	618.8	618.2	617.5	618.8	618.8
10°	645.2	644.6	643.2	643.2	642.6	642.6	642.6	642.6
12.5°	675.6	673.6	673.0	671.0	670.3	669.7	669.7	670.3
15°	707.3	705.3	704.7	701.4	701.4	700.7	700.7	700.7
17.5°	741.0	739.0	736.4	736.4	734.4	733.1	733.7	732.4
20°	775.3	772.7	771.4	770.7	768.1	768.1	768.1	767.4
22.5°	809.0	807.0	805.1	802.4	799.8	799.1	799.1	798.4
25°	843.4	840.1	836.1	833.4	830.8	828.8	828.8	828.8
27.5°	877.7	873.7	867.8	864.5	860.5	858.5	858.5	857.9
30°	914.0	909.4	904.1	899.5	894.2	892.2	891.6	890.2
32.5°	957.6	953.0	947.7	941.1	935.8	932.5	932.5	930.5
35°	1013.1	1007.8	1003.8	995.3	988.6	983.4	984.0	985.3
37.5°	1085.7	1079.1	1075.8	1065.3	1056.7	1051.4	1051.4	1050.7
40°	1178.2	1171.6	1164.3	1154.4	1143.8	1136.6	1134.6	1134.6
42.5°	1295.7	1289.8	1279.9	1266.0	1253.5	1245.6	1238.9	1239.6
45°	1443.0	1435.8	1421.9	1404.7	1389.5	1378.3	1369.1	1369.1
47.5°	1622.0	1606.8	1587.6	1572.5	1546.7	1529.5	1522.9	1521.6
50°	1826.1	1797.7	1773.9	1752.1	1725.0	1707.2	1697.3	1694.6
52.5°	2040.0	2010.3	1980.6	1952.2	1919.2	1900.7	1884.8	1883.5
55°	2272.5	2234.9	2197.2	2169.5	2130.5	2111.4	2095.5	2086.3
57.5°	2509.6	2467.3	2440.3	2400.6	2359.7	2345.8	2330.6	2319.4
60°	2776.4	2730.2	2694.5	2652.9	2626.5	2596.8	2582.2	2573.7
62.5°	3049.2	3006.2	2960.7	2921.0	2884.1	2863.6	2843.8	2833.9
65°	3326.5	3255.9	3201.7	3146.9	3103.3	3066.3	3035.3	3031.3
67.5°	3496.9	3407.8	3317.3	3237.4	3173.3	3121.1	3089.4	3078.2
69°	3510.8	3413.7	3300.8	3205.0	3131.1	3080.9	3043.2	3031.3
70°	3472.5	3374.7	3255.9	3152.8	3076.2	3021.4	2990.4	2970.6
72.5°	3192.5	3106.6	2992.4	2890.7	2821.3	2757.3	2726.2	2718.3
75°	2633.8	2542.6	2437.6	2388.7	2340.5	2300.2	2279.1	2277.1
77.5°	1870.3	1777.2	1697.3	1633.2	1581.0	1555.3	1561.2	1539.4
80°	1070.5	949.0	852.6	795.8	718.5	672.3	620.1	657.8
82.5°	460.3	371.8	283.3	230.5	175.7	139.3	114.9	107.0
85°	128.8	105.0	87.8	80.6	72.6	64.7	54.8	50.9
87.5°	43.6	41.6	37.0	37.0	33.7	28.4	19.8	17.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)