

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: P143650

Luminaire Tested: **LDRL-5MQ-E04-E**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P143650
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-E04-E
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM
Light Source: (84) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12430.7 lumens
Efficiency: N/A
Efficacy: 127.9 lumens/watt
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B4 - U0 - G2

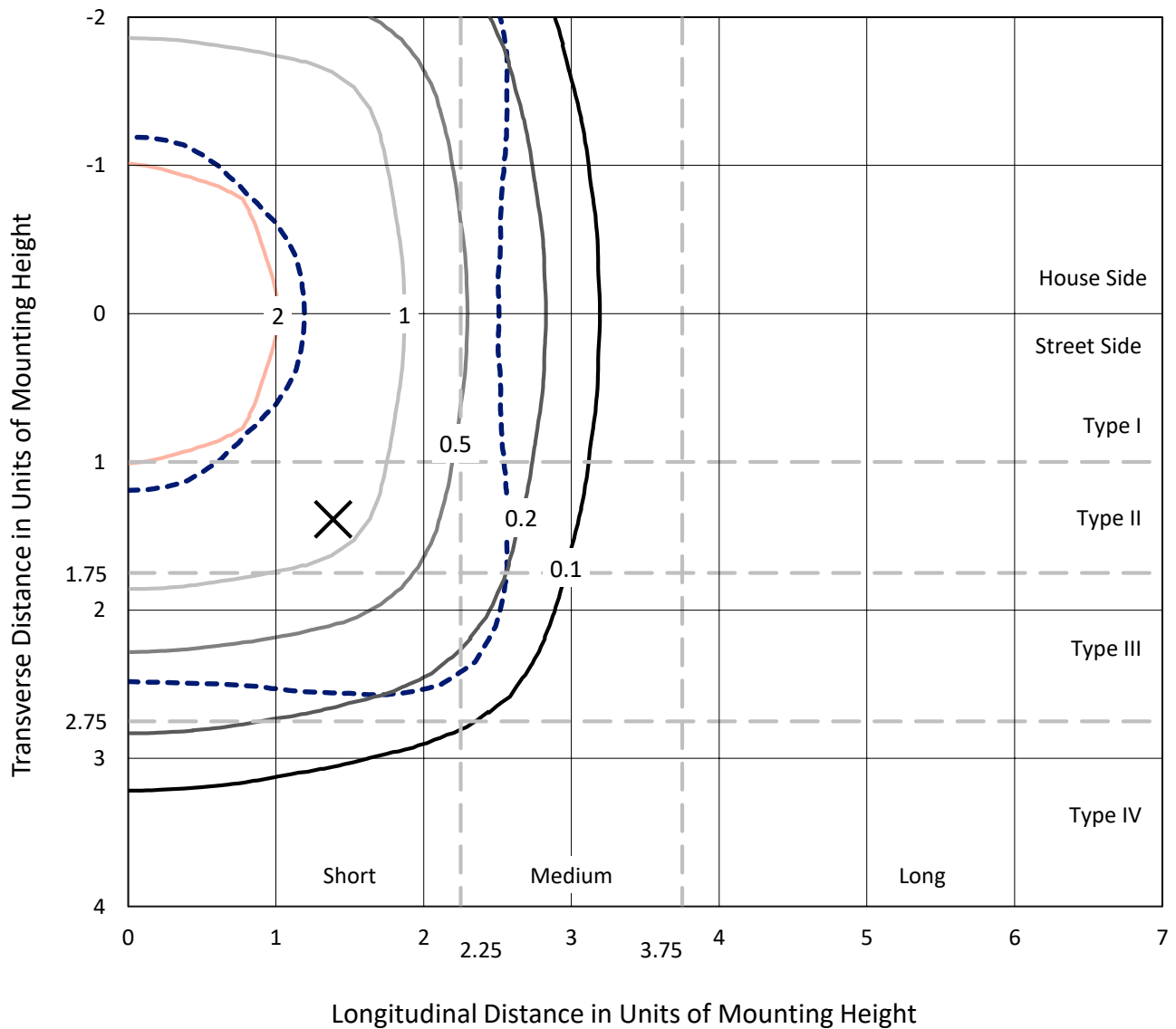
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

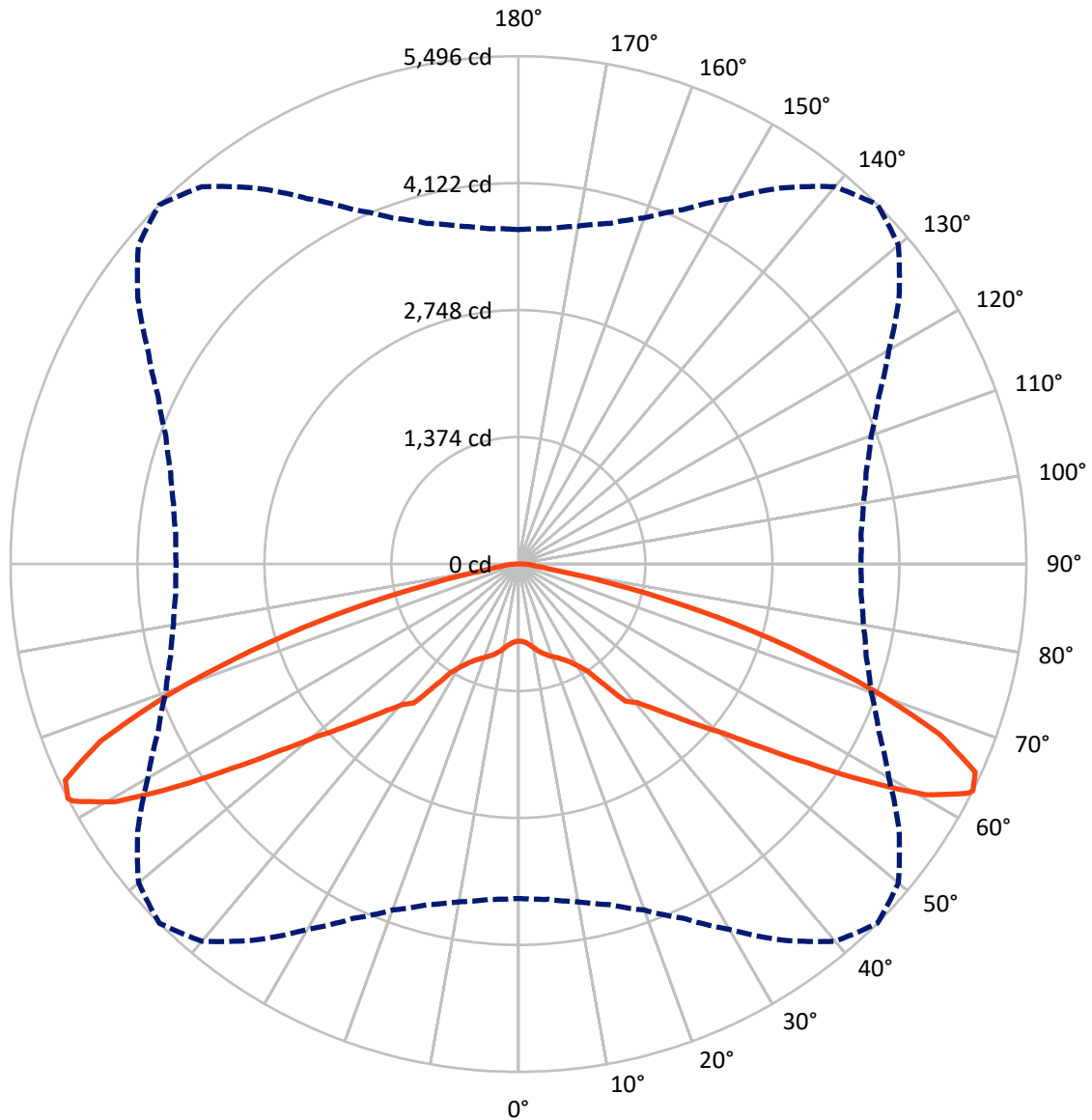
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 2.3 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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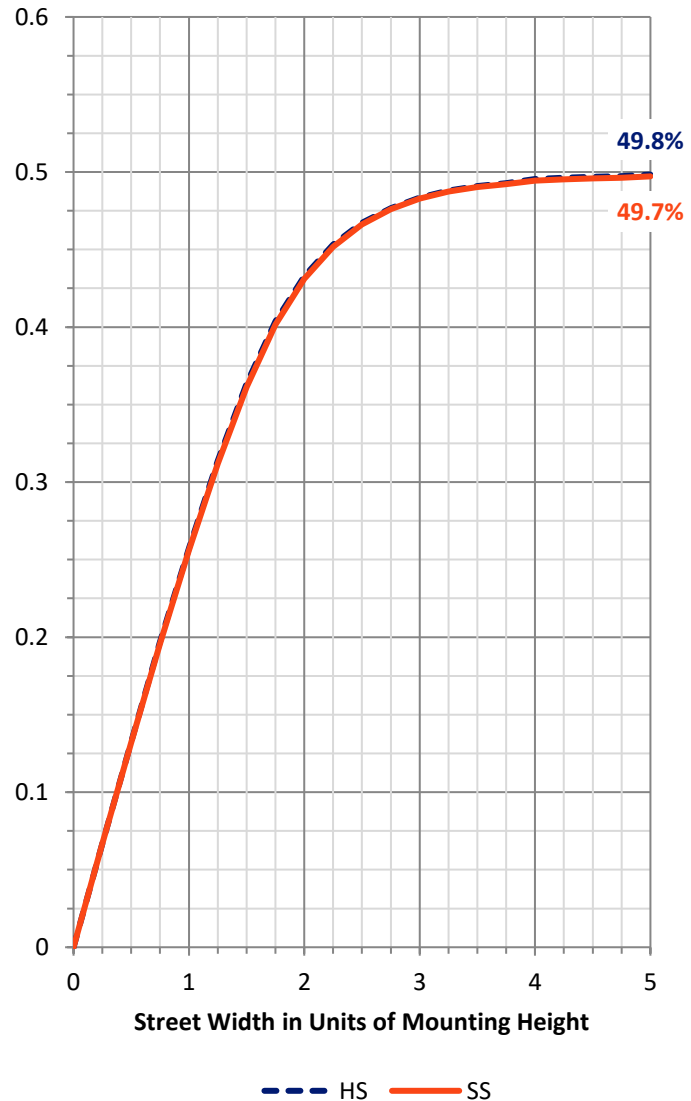
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6215.3	0.0	6215.3
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6215.3	0.0	6215.3
	% Fixture	50.0	0.0	50.0
Total	Lumens	12430.7	0.0	12430.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	0.7
10°-20°	287.0	2.3
20°-30°	548.1	4.4
30°-40°	1044.2	8.4
40°-50°	1798.2	14.5
50°-60°	3213.3	25.8
60°-70°	3913.9	31.5
70°-80°	1394.1	11.2
80°-90°	147.8	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°	12430.7	100.0
0°-180°	12430.7	100.0

Coefficient of Utilization



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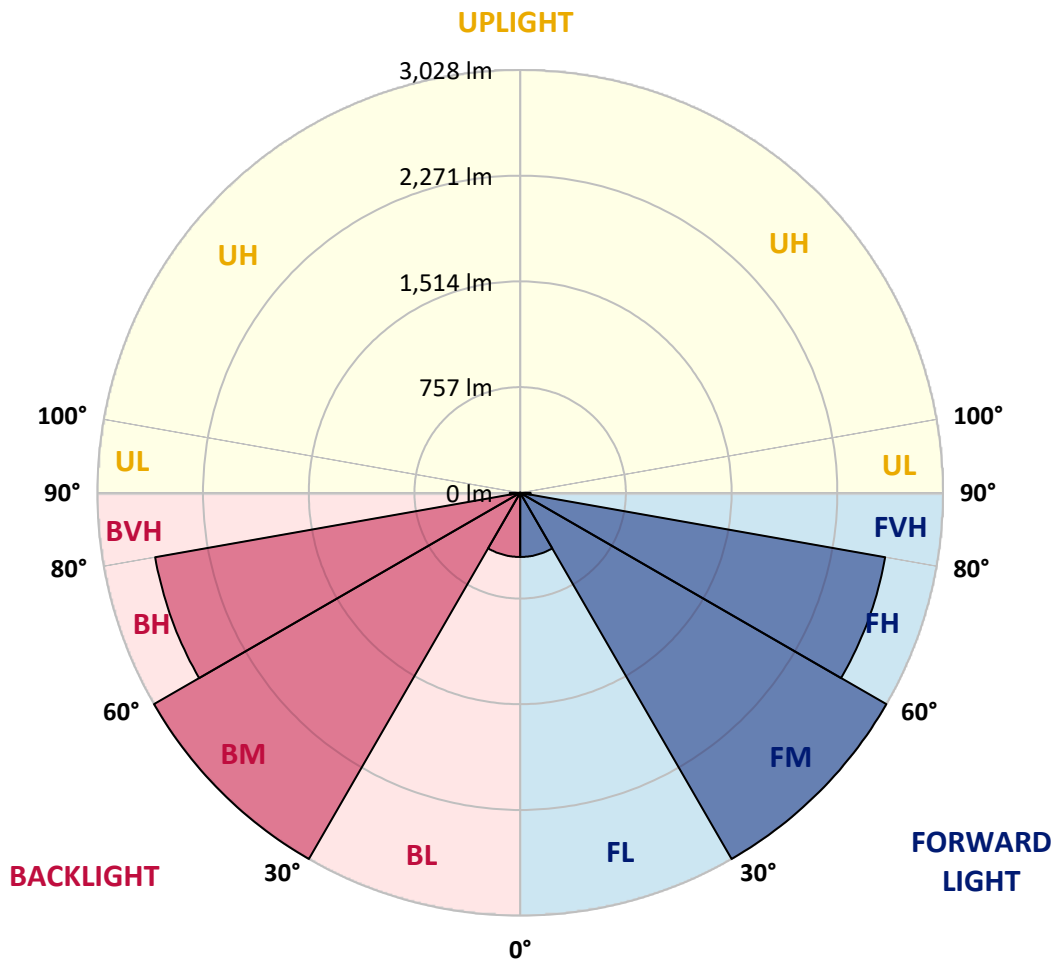
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	459.6	3.7			
FM (30°-60°)	3027.9	24.4			
FH (60°-80°)	2654.0	21.4			G2/5000
FVH (80°-90°)	73.9	0.6			G1/100
BL (0°-30°)	459.6	3.7	B1/500		
BM (30°-60°)	3027.9	24.4	B3/5000		
BH (60°-80°)	2654.0	21.4	B4/5000		G2/5000
BVH (80°-90°)	73.9	0.6			G1/100
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°	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4
2.5°	840.8	840.0	840.8	839.2	839.2	838.4	838.4	838.4	836.8	838.4	836.8
5°	858.4	857.6	858.4	856.8	856.8	855.2	855.2	855.2	853.6	855.2	854.4
7.5°	888.8	890.4	888.8	887.2	887.2	885.6	884.8	884.8	884.0	883.2	884.8
10°	931.2	932.8	930.4	928.8	928.0	927.2	925.6	924.8	924.8	921.6	922.4
12.5°	976.0	976.0	973.6	972.8	972.8	971.2	968.0	967.2	967.2	965.6	964.0
15°	1016.0	1016.0	1014.4	1011.2	1012.0	1009.6	1007.2	1005.6	1005.6	1004.0	1002.4
17.5°	1052.8	1052.8	1050.4	1047.2	1045.6	1044.8	1041.6	1040.0	1040.0	1038.4	1036.8
20°	1089.6	1091.2	1087.2	1084.0	1080.8	1077.6	1074.4	1072.8	1070.4	1071.2	1070.4
22.5°	1133.6	1134.4	1128.0	1124.0	1117.6	1113.6	1108.8	1107.2	1104.0	1104.0	1105.6
25°	1189.6	1188.8	1181.6	1174.4	1167.2	1159.2	1152.0	1150.4	1147.2	1146.4	1147.2
27.5°	1263.2	1262.4	1253.6	1244.0	1234.4	1222.4	1213.6	1208.8	1206.4	1203.2	1204.8
30°	1353.6	1355.2	1344.8	1333.6	1321.6	1307.2	1296.0	1289.6	1284.8	1281.6	1283.2
32.5°	1537.6	1536.0	1520.0	1496.0	1470.4	1436.8	1409.6	1398.4	1389.6	1386.4	1388.8
35°	1722.4	1720.8	1714.4	1707.2	1700.8	1679.2	1659.2	1636.0	1616.8	1604.8	1608.0
37.5°	1809.6	1809.6	1804.8	1803.2	1803.2	1816.0	1832.0	1860.8	1883.2	1884.8	1877.6
40°	1945.6	1945.6	1937.6	1933.6	1931.2	1935.2	1945.6	1956.0	1967.2	1969.6	1961.6
42.5°	2105.6	2098.4	2092.8	2084.8	2084.0	2088.0	2099.2	2112.0	2123.2	2132.8	2116.0
45°	2278.4	2272.0	2266.4	2261.6	2264.8	2275.2	2290.4	2312.8	2328.8	2343.2	2329.6
47.5°	2471.2	2457.6	2463.2	2458.4	2466.4	2487.2	2514.4	2548.0	2564.8	2590.4	2568.8
50°	2711.2	2714.4	2711.2	2711.2	2720.8	2748.0	2788.0	2833.6	2862.4	2876.8	2864.0
52.5°	3068.0	3058.4	3036.8	3043.2	3056.0	3099.2	3151.2	3215.2	3252.0	3286.4	3246.4
55°	3458.4	3460.0	3456.8	3465.6	3490.4	3534.4	3600.0	3696.8	3743.2	3803.2	3755.2
57.5°	3781.6	3792.8	3812.0	3838.4	3892.0	3965.6	4094.4	4242.4	4365.6	4430.4	4355.2
60°	3886.4	3897.6	3944.0	4017.6	4118.4	4268.8	4477.6	4731.2	4952.8	5068.0	4969.6
62.5°	3684.8	3705.6	3774.4	3876.0	4042.4	4277.6	4588.0	4963.2	5304.8	5462.4	5343.2
63°	3619.2	3642.4	3712.8	3816.0	3985.6	4231.2	4566.4	4968.0	5329.6	5496.0	5367.2
65°	3328.0	3343.2	3417.6	3535.2	3724.0	3980.0	4352.8	4828.0	5240.0	5432.8	5296.0
67.5°	2869.6	2889.6	2957.6	3059.2	3242.4	3513.6	3880.0	4353.6	4759.2	4913.6	4796.8
70°	2301.6	2324.0	2380.0	2474.4	2618.4	2869.6	3183.2	3625.6	3930.4	4051.2	3926.4
72.5°	1617.6	1627.2	1668.0	1767.2	1875.2	2075.2	2324.0	2668.0	2960.8	3040.0	2920.0
75°	684.8	685.6	739.2	802.4	937.6	1136.8	1353.6	1649.6	1912.8	2036.0	1884.0
77.5°	219.2	221.6	236.8	260.0	304.8	393.6	553.6	716.0	957.6	1074.4	932.0
80°	183.2	186.4	192.8	197.6	200.8	205.6	224.0	249.6	314.4	365.6	295.2
82.5°	157.6	163.2	177.6	183.2	186.4	188.0	190.4	189.6	185.6	184.0	184.8
85°	120.0	133.6	149.6	162.4	164.0	164.8	169.6	171.2	158.4	145.6	158.4
87.5°	52.0	67.2	103.2	114.4	112.0	104.0	111.2	117.6	107.2	78.4	104.8
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°	834.4	834.4	834.4	834.4	834.4	834.4	834.4	834.4
2.5°	837.6	839.2	839.2	839.2	839.2	840.0	840.8	840.0
5°	855.2	856.8	856.0	856.8	856.8	857.6	858.4	857.6
7.5°	885.6	885.6	885.6	887.2	887.2	888.8	888.8	888.8
10°	923.2	922.4	922.4	924.0	925.6	926.4	928.0	927.2
12.5°	964.0	962.4	963.2	964.8	966.4	967.2	968.8	968.0
15°	1000.8	1000.0	1000.0	1002.4	1003.2	1004.0	1007.2	1007.2
17.5°	1036.0	1036.0	1036.0	1039.2	1040.0	1043.2	1045.6	1045.6
20°	1071.2	1071.2	1071.2	1074.4	1076.8	1081.6	1086.4	1085.6
22.5°	1107.2	1108.0	1109.6	1112.8	1118.4	1125.6	1129.6	1129.6
25°	1152.0	1155.2	1158.4	1163.2	1171.2	1180.8	1187.2	1189.6
27.5°	1209.6	1216.8	1224.8	1232.0	1240.8	1252.8	1261.6	1263.2
30°	1288.0	1298.4	1311.2	1320.8	1332.0	1345.6	1356.0	1361.6
32.5°	1399.2	1424.8	1441.6	1476.0	1496.8	1520.0	1539.2	1547.2
35°	1628.0	1653.6	1676.0	1699.2	1704.0	1712.0	1722.4	1724.8
37.5°	1854.4	1833.6	1813.6	1812.8	1807.2	1808.8	1812.0	1816.0
40°	1952.8	1946.4	1936.0	1940.0	1940.8	1940.8	1947.2	1948.0
42.5°	2111.2	2096.0	2084.0	2093.6	2095.2	2096.8	2103.2	2110.4
45°	2312.8	2289.6	2274.4	2268.8	2274.4	2272.8	2281.6	2283.2
47.5°	2543.2	2512.8	2478.4	2467.2	2464.0	2456.8	2472.0	2470.4
50°	2825.6	2776.8	2735.2	2719.2	2711.2	2707.2	2711.2	2711.2
52.5°	3183.2	3134.4	3077.6	3059.2	3052.8	3061.6	3048.8	3062.4
55°	3675.2	3596.0	3518.4	3493.6	3489.6	3485.6	3487.2	3492.8
57.5°	4228.8	4088.0	3984.0	3923.2	3884.0	3864.8	3844.0	3840.8
60°	4763.2	4507.2	4309.6	4175.2	4080.0	4008.0	3971.2	3958.4
62.5°	5020.8	4646.4	4339.2	4110.4	3968.8	3851.2	3786.4	3769.6
63°	5028.0	4628.8	4303.2	4061.6	3896.8	3791.2	3722.4	3704.8
65°	4894.4	4440.0	4058.4	3792.8	3618.4	3508.0	3423.2	3404.8
67.5°	4408.0	3967.2	3576.8	3307.2	3118.4	3029.6	2936.0	2933.6
70°	3617.6	3224.0	2895.2	2647.2	2489.6	2401.6	2306.4	2308.8
72.5°	2644.8	2295.2	2068.8	1875.2	1708.8	1625.6	1536.0	1544.8
75°	1592.0	1280.0	1076.0	908.0	736.8	634.4	565.6	526.4
77.5°	680.8	465.6	334.4	265.6	224.0	207.2	199.2	196.8
80°	236.8	209.6	197.6	194.4	192.0	188.8	183.2	177.6
82.5°	192.0	192.0	185.6	184.8	177.6	172.0	157.6	150.4
85°	170.4	167.2	161.6	159.2	157.6	145.6	127.2	117.6
87.5°	112.8	104.8	100.0	102.4	99.2	88.8	54.4	43.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)