

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: P143655

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P143655
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
Description: RL LED ROADWAY LARGE CUTOFF COBRAHEAD LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 5 SQUARE MEDIUM
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10261.8 lumens
Efficiency: N/A
Efficacy: 100.4 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

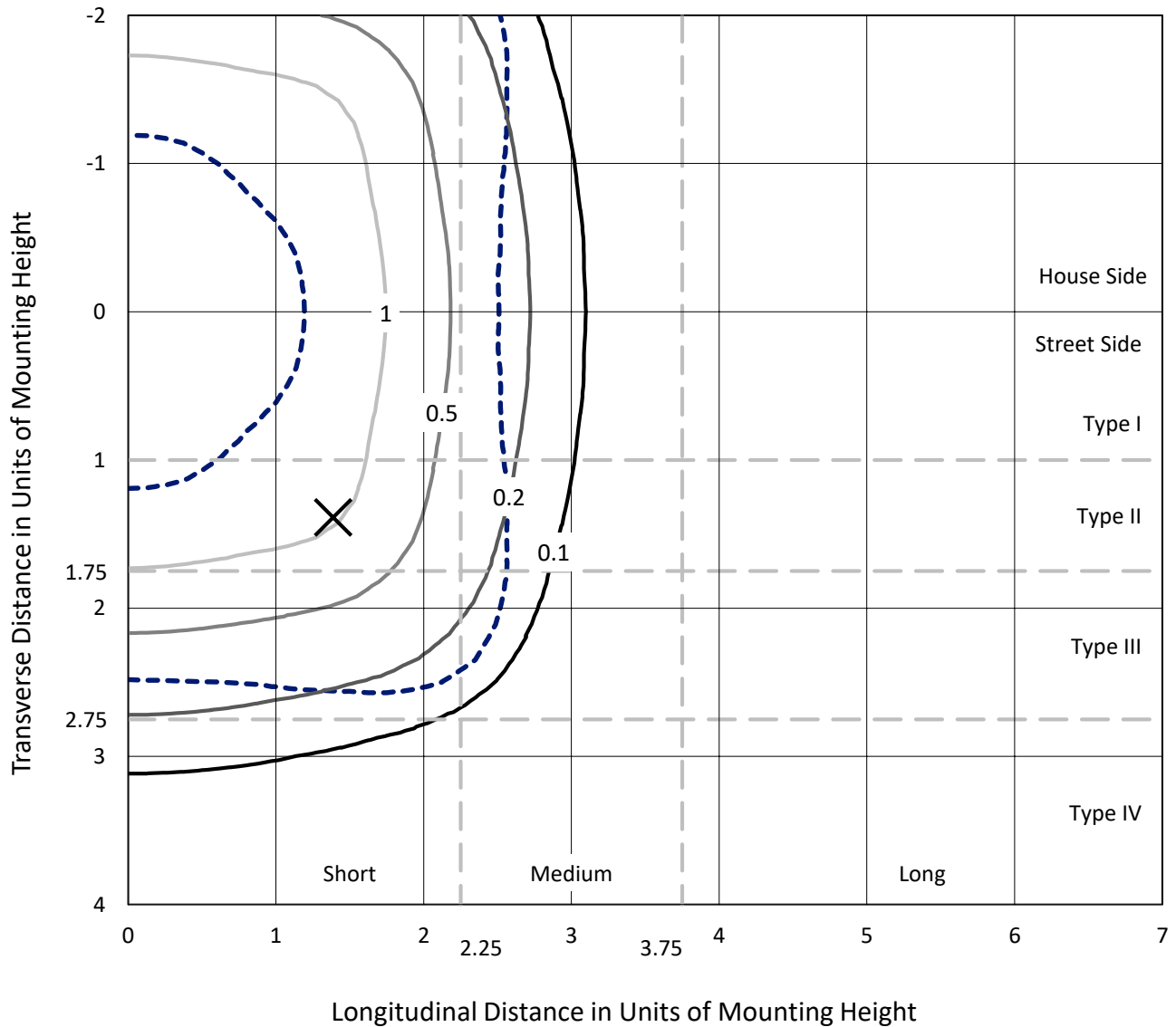
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

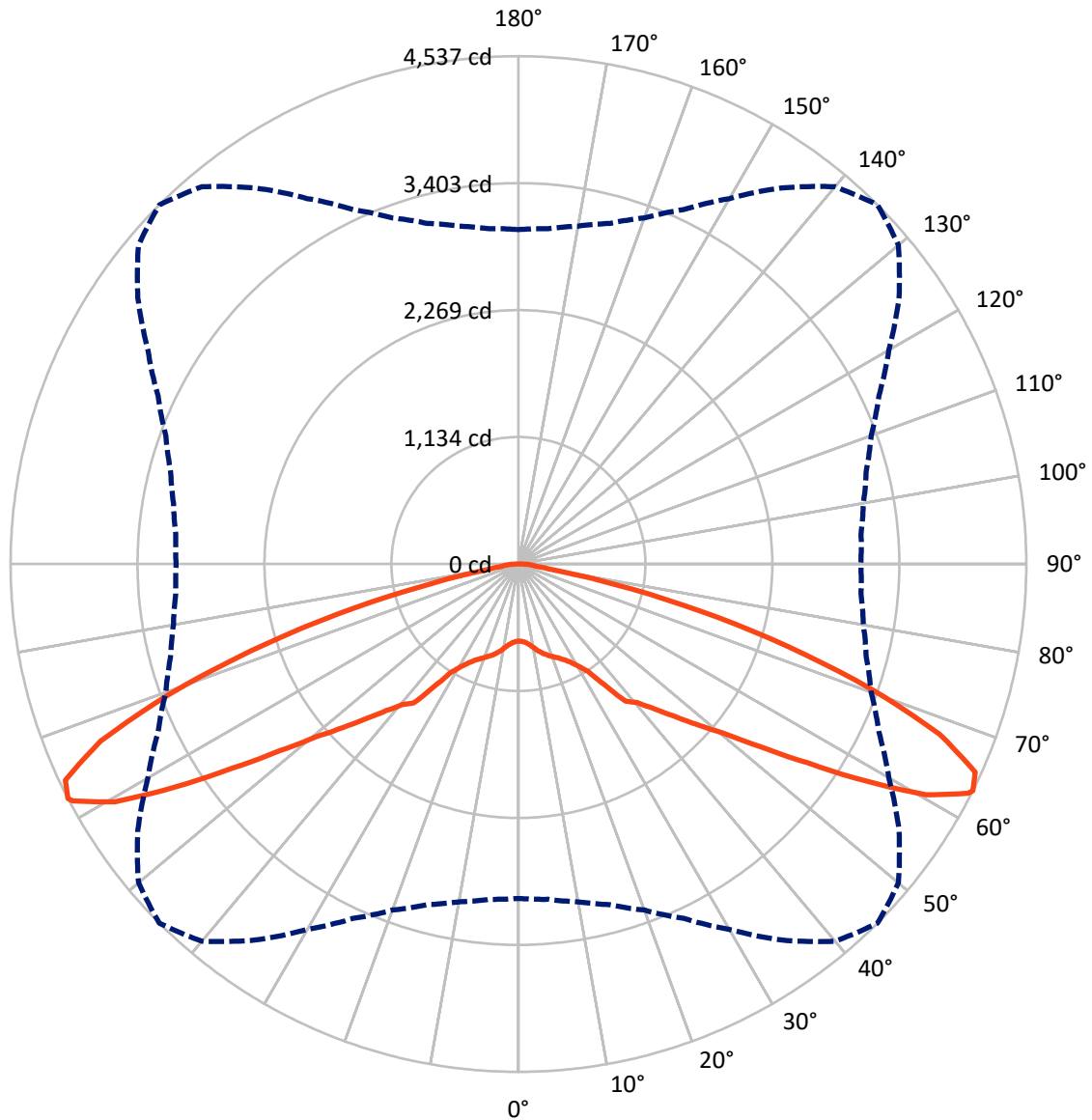
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 1.9 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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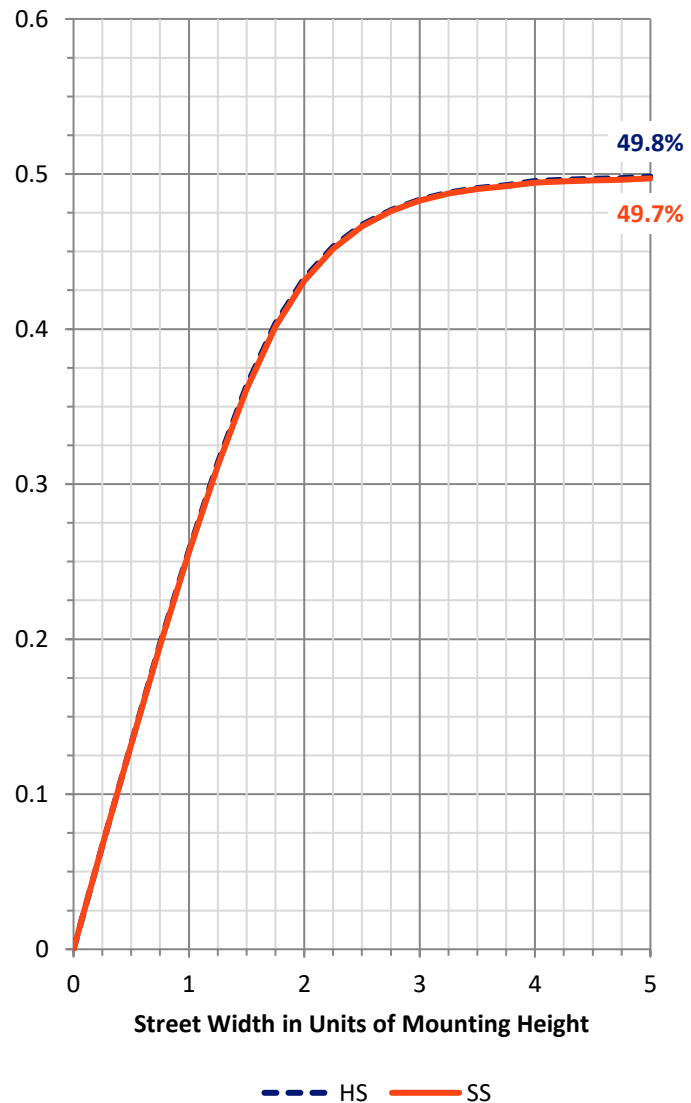
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	5130.9	0.0	5130.9
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	5130.9	0.0	5130.9
	% Fixture	50.0	0.0	50.0
Total	Lumens	10261.8	0.0	10261.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.3	0.7
10°-20°	236.9	2.3
20°-30°	452.5	4.4
30°-40°	862.1	8.4
40°-50°	1484.5	14.5
50°-60°	2652.7	25.8
60°-70°	3231.0	31.5
70°-80°	1150.9	11.2
80°-90°	122.0	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°	10261.8	100.0
0°-180°	10261.8	100.0



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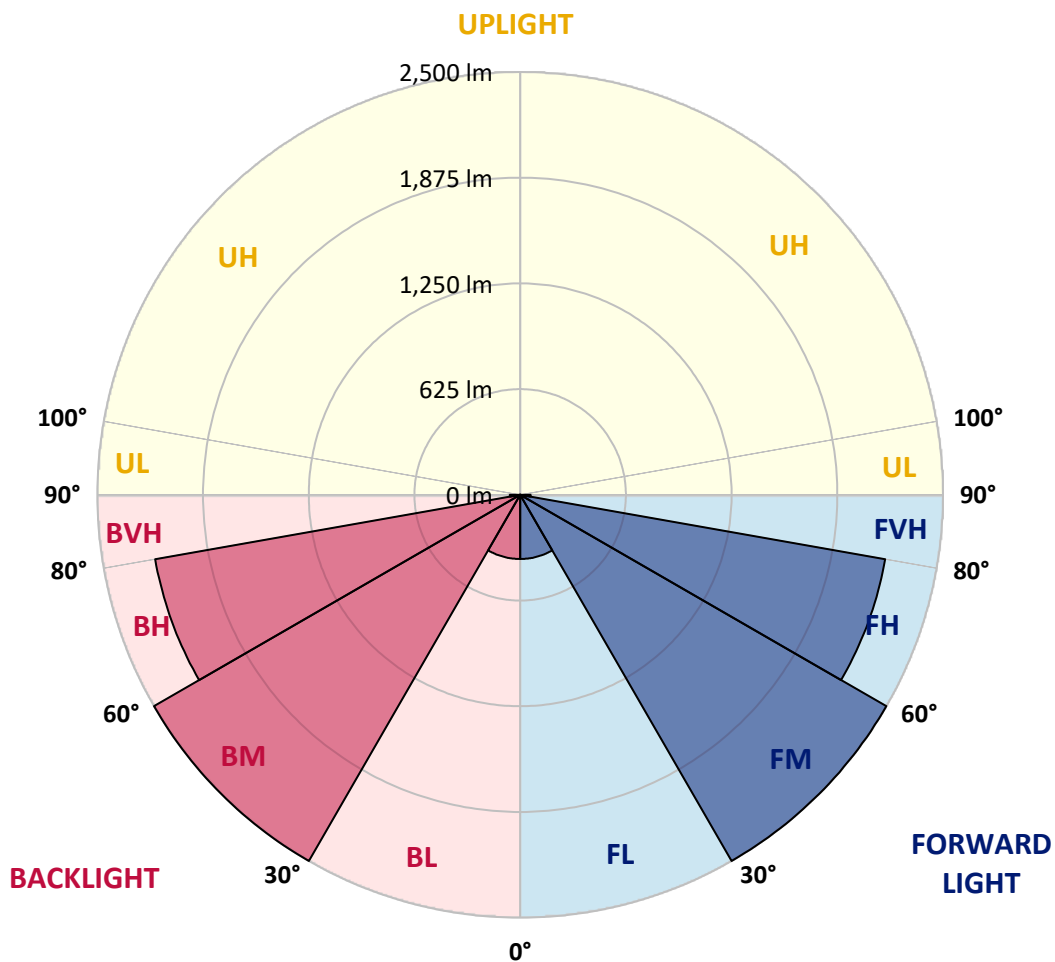
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	379.4	3.7			
FM	(30°-60°)	2499.6	24.4			
FH	(60°-80°)	2190.9	21.4			G2/5000
FVH	(80°-90°)	61.0	0.6			G1/100
BL	(0°-30°)	379.4	3.7	B1/500		
BM	(30°-60°)	2499.6	24.4	B2/2500		
BH	(60°-80°)	2190.9	21.4	B3/2500		G2/5000
BVH	(80°-90°)	61.0	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°	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8
2.5°	694.1	693.4	694.1	692.8	692.8	692.1	692.1	692.1	690.8	692.1	690.8
5°	708.6	708.0	708.6	707.3	707.3	706.0	706.0	706.0	704.7	706.0	705.3
7.5°	733.7	735.0	733.7	732.4	732.4	731.1	730.4	730.4	729.8	729.1	730.4
10°	768.7	770.0	768.1	766.7	766.1	765.4	764.1	763.4	763.4	760.8	761.5
12.5°	805.7	805.7	803.7	803.1	803.1	801.7	799.1	798.4	798.4	797.1	795.8
15°	838.7	838.7	837.4	834.8	835.4	833.4	831.5	830.1	830.1	828.8	827.5
17.5°	869.1	869.1	867.1	864.5	863.2	862.5	859.9	858.5	858.5	857.2	855.9
20°	899.5	900.8	897.5	894.9	892.2	889.6	886.9	885.6	883.6	884.3	883.6
22.5°	935.8	936.5	931.2	927.9	922.6	919.3	915.3	914.0	911.4	911.4	912.7
25°	982.0	981.4	975.4	969.5	963.6	956.9	951.0	949.7	947.0	946.4	947.0
27.5°	1042.8	1042.1	1034.9	1027.0	1019.0	1009.1	1001.9	997.9	995.9	993.3	994.6
30°	1117.4	1118.8	1110.2	1100.9	1091.0	1079.1	1069.9	1064.6	1060.6	1058.0	1059.3
32.5°	1269.3	1268.0	1254.8	1235.0	1213.9	1186.1	1163.7	1154.4	1147.1	1144.5	1146.5
35°	1421.9	1420.6	1415.3	1409.3	1404.1	1386.2	1369.7	1350.6	1334.7	1324.8	1327.4
37.5°	1493.9	1493.9	1489.9	1488.6	1488.6	1499.2	1512.4	1536.1	1554.6	1555.9	1550.0
40°	1606.1	1606.1	1599.5	1596.2	1594.3	1597.6	1606.1	1614.7	1624.0	1626.0	1619.3
42.5°	1738.2	1732.3	1727.7	1721.1	1720.4	1723.7	1732.9	1743.5	1752.8	1760.7	1746.8
45°	1880.9	1875.6	1871.0	1867.0	1869.6	1878.2	1890.8	1909.3	1922.5	1934.4	1923.1
47.5°	2040.0	2028.8	2033.4	2029.5	2036.1	2053.2	2075.7	2103.4	2117.3	2138.4	2120.6
50°	2238.2	2240.8	2238.2	2238.2	2246.1	2268.5	2301.6	2339.2	2363.0	2374.9	2364.3
52.5°	2532.7	2524.8	2507.0	2512.2	2522.8	2558.5	2601.4	2654.2	2684.6	2713.0	2680.0
55°	2855.0	2856.3	2853.7	2860.9	2881.4	2917.7	2971.9	3051.8	3090.1	3139.6	3100.0
57.5°	3121.8	3131.1	3146.9	3168.7	3212.9	3273.7	3380.0	3502.2	3603.9	3657.4	3595.3
60°	3208.3	3217.6	3255.9	3316.6	3399.8	3524.0	3696.4	3905.7	4088.7	4183.8	4102.5
62.5°	3041.9	3059.1	3115.9	3199.7	3337.1	3531.3	3787.5	4097.2	4379.2	4509.3	4410.9
63°	2987.7	3006.9	3065.0	3150.2	3290.2	3493.0	3769.7	4101.2	4399.7	4537.1	4430.8
65°	2747.3	2759.9	2821.3	2918.4	3074.3	3285.6	3593.3	3985.6	4325.8	4484.9	4372.0
67.5°	2368.9	2385.4	2441.6	2525.4	2676.7	2900.6	3203.0	3594.0	3928.8	4056.3	3959.9
70°	1900.0	1918.5	1964.7	2042.7	2161.6	2368.9	2627.8	2993.0	3244.6	3344.4	3241.3
72.5°	1335.4	1343.3	1377.0	1458.9	1548.0	1713.1	1918.5	2202.5	2444.2	2509.6	2410.5
75°	565.3	566.0	610.2	662.4	774.0	938.5	1117.4	1361.8	1579.1	1680.8	1555.3
77.5°	181.0	182.9	195.5	214.6	251.6	324.9	457.0	591.1	790.5	886.9	769.4
80°	151.2	153.9	159.2	163.1	165.8	169.7	184.9	206.1	259.5	301.8	243.7
82.5°	130.1	134.7	146.6	151.2	153.9	155.2	157.2	156.5	153.2	151.9	152.6
85°	99.1	110.3	123.5	134.1	135.4	136.0	140.0	141.3	130.8	120.2	130.8
87.5°	42.9	55.5	85.2	94.4	92.5	85.9	91.8	97.1	88.5	64.7	86.5
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°	688.8	688.8	688.8	688.8	688.8	688.8	688.8	688.8
2.5°	691.5	692.8	692.8	692.8	692.8	693.4	694.1	693.4
5°	706.0	707.3	706.6	707.3	707.3	708.0	708.6	708.0
7.5°	731.1	731.1	731.1	732.4	732.4	733.7	733.7	733.7
10°	762.1	761.5	761.5	762.8	764.1	764.8	766.1	765.4
12.5°	795.8	794.5	795.1	796.5	797.8	798.4	799.8	799.1
15°	826.2	825.5	825.5	827.5	828.2	828.8	831.5	831.5
17.5°	855.2	855.2	855.2	857.9	858.5	861.2	863.2	863.2
20°	884.3	884.3	884.3	886.9	888.9	892.9	896.9	896.2
22.5°	914.0	914.7	916.0	918.6	923.3	929.2	932.5	932.5
25°	951.0	953.6	956.3	960.3	966.9	974.8	980.1	982.0
27.5°	998.6	1004.5	1011.1	1017.0	1024.3	1034.2	1041.5	1042.8
30°	1063.3	1071.9	1082.4	1090.4	1099.6	1110.8	1119.4	1124.0
32.5°	1155.1	1176.2	1190.1	1218.5	1235.6	1254.8	1270.6	1277.3
35°	1344.0	1365.1	1383.6	1402.7	1406.7	1413.3	1421.9	1423.9
37.5°	1530.9	1513.7	1497.2	1496.5	1491.9	1493.2	1495.9	1499.2
40°	1612.1	1606.8	1598.2	1601.5	1602.2	1602.2	1607.5	1608.1
42.5°	1742.8	1730.3	1720.4	1728.3	1729.6	1731.0	1736.2	1742.2
45°	1909.3	1890.1	1877.6	1873.0	1877.6	1876.3	1883.5	1884.8
47.5°	2099.5	2074.4	2046.0	2036.7	2034.1	2028.1	2040.7	2039.4
50°	2332.6	2292.3	2258.0	2244.8	2238.2	2234.9	2238.2	2238.2
52.5°	2627.8	2587.5	2540.6	2525.4	2520.2	2527.4	2516.9	2528.1
55°	3034.0	2968.6	2904.5	2884.1	2880.8	2877.4	2878.8	2883.4
57.5°	3491.0	3374.7	3288.9	3238.7	3206.3	3190.5	3173.3	3170.7
60°	3932.1	3720.8	3557.7	3446.7	3368.1	3308.7	3278.3	3267.8
62.5°	4144.8	3835.7	3582.1	3393.2	3276.3	3179.3	3125.8	3111.9
63°	4150.7	3821.2	3552.4	3353.0	3216.9	3129.7	3072.9	3058.4
65°	4040.4	3665.3	3350.3	3131.1	2987.1	2895.9	2825.9	2810.7
67.5°	3638.9	3275.0	2952.7	2730.2	2574.3	2501.0	2423.7	2421.8
70°	2986.4	2661.5	2390.1	2185.3	2055.2	1982.6	1904.0	1906.0
72.5°	2183.3	1894.7	1707.8	1548.0	1410.7	1342.0	1268.0	1275.3
75°	1314.2	1056.7	888.3	749.6	608.2	523.7	466.9	434.6
77.5°	562.0	384.4	276.1	219.3	184.9	171.0	164.4	162.5
80°	195.5	173.0	163.1	160.5	158.5	155.9	151.2	146.6
82.5°	158.5	158.5	153.2	152.6	146.6	142.0	130.1	124.2
85°	140.7	138.0	133.4	131.4	130.1	120.2	105.0	97.1
87.5°	93.1	86.5	82.6	84.5	81.9	73.3	44.9	35.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)