

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: P196035

Luminaire Tested: **NAV-AF-03-D-UNV-RW-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196035
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24161)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-03-D-UNV-RW-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12475.9 lumens
Efficiency: N/A
Efficacy: 130.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

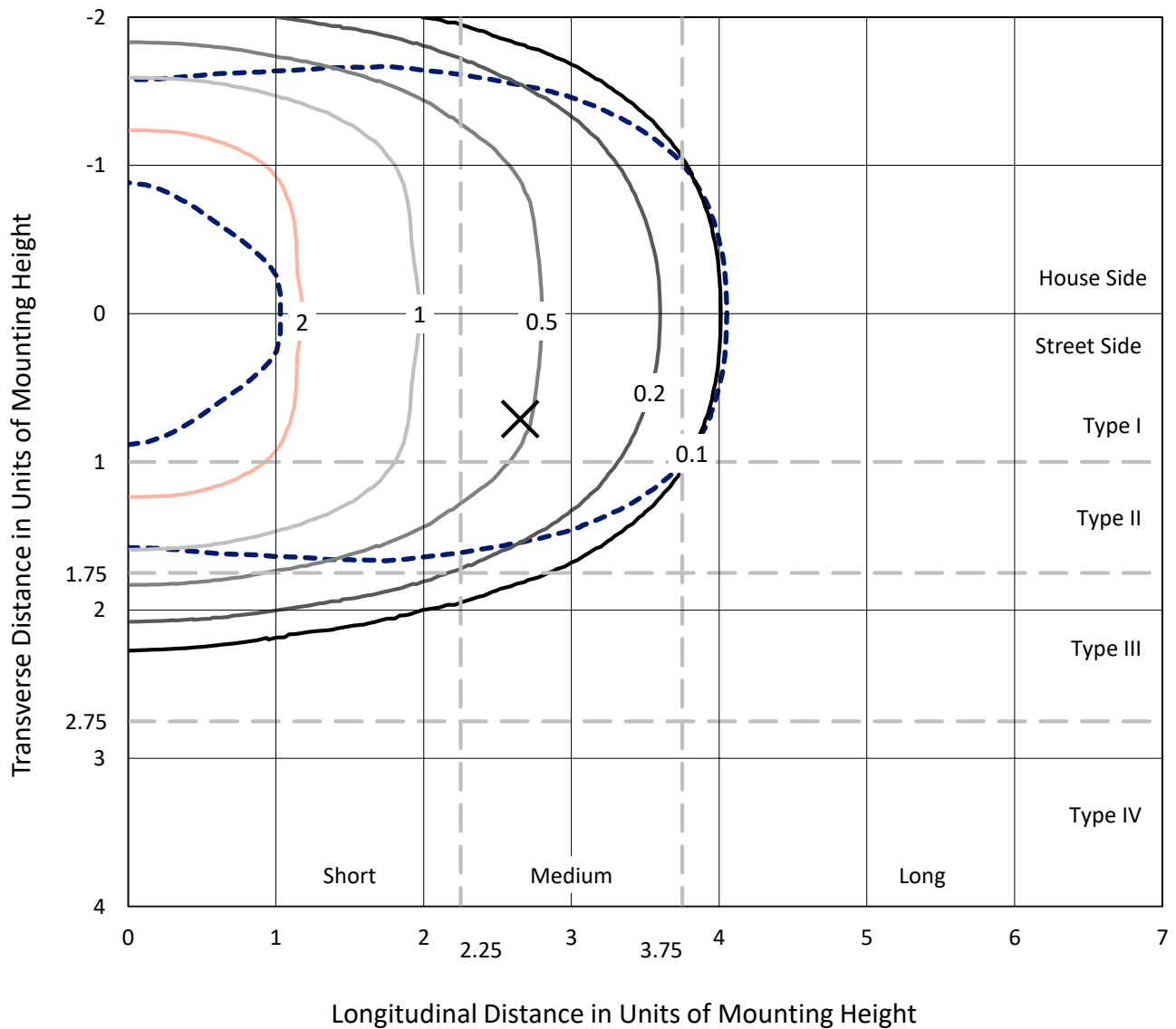
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

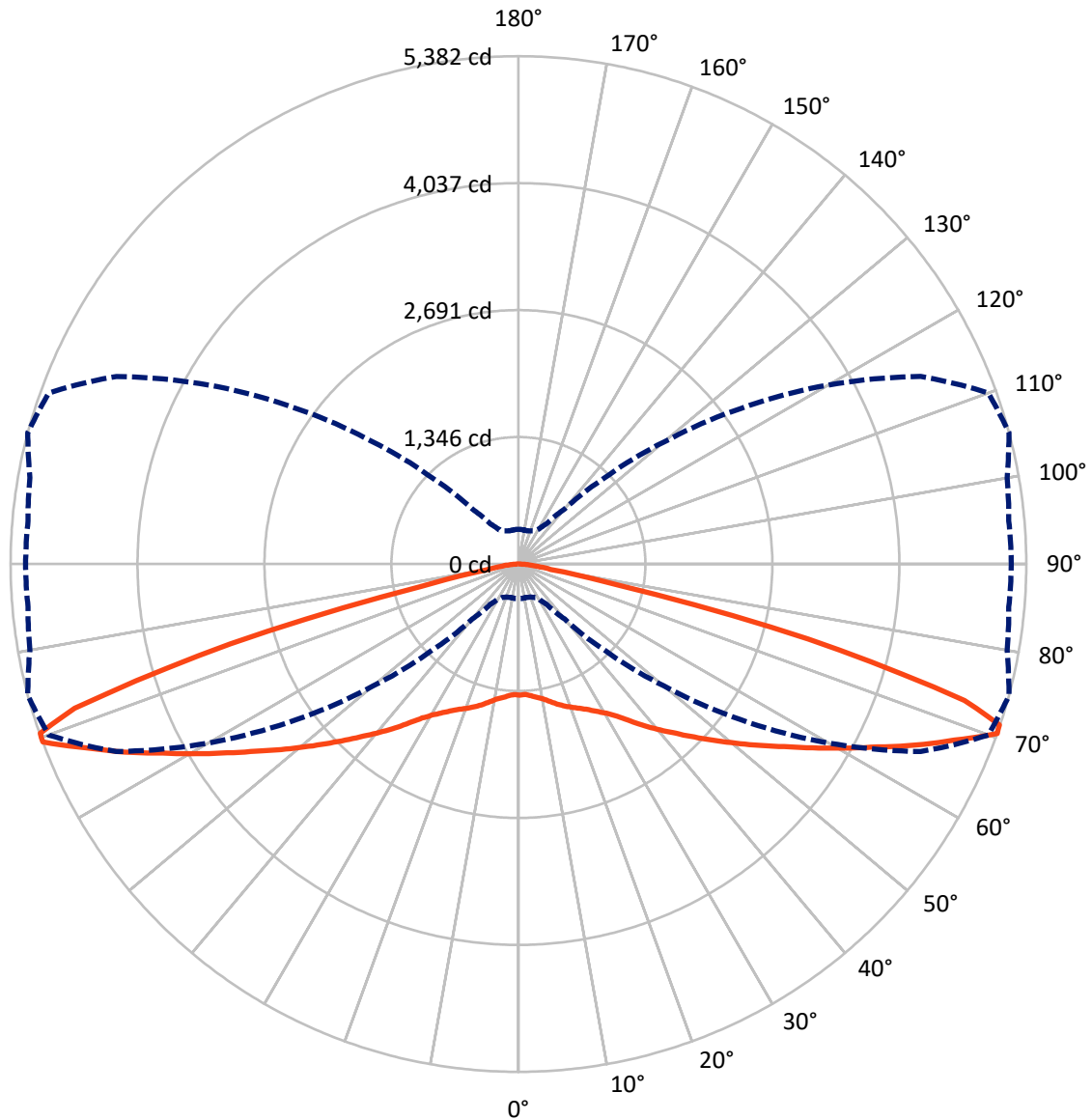
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.5 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6238.0	0.0	6238.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	6238.0	0.0	6238.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	12475.9	0.0	12475.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.3	1.1
10°-20°	413.3	3.3
20°-30°	776.2	6.2
30°-40°	1367.3	11.0
40°-50°	2266.1	18.2
50°-60°	3152.5	25.3
60°-70°	2976.0	23.9
70°-80°	1271.1	10.2
80°-90°	120.1	1.0
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°	12475.9	100.0
0°-180°	12475.9	100.0



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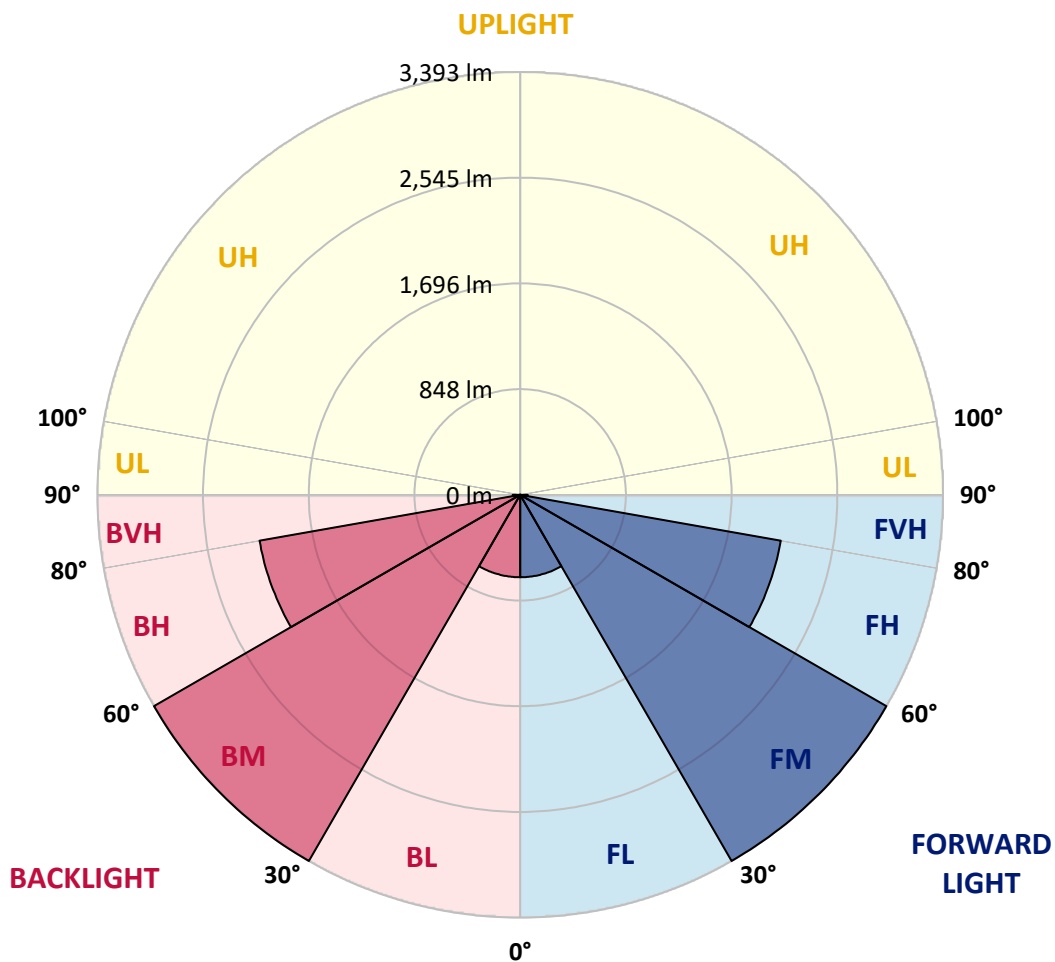
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	661.4	5.3			
FM	(30°-60°)	3393.0	27.2			
FH	(60°-80°)	2123.6	17.0			G2/5000
FVH	(80°-90°)	60.1	0.5			G1/100
BL	(0°-30°)	661.4	5.3	B2/1000		
BM	(30°-60°)	3393.0	27.2	B3/5000		
BH	(60°-80°)	2123.6	17.0	B3/2500		G3/2500
BVH	(80°-90°)	60.1	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3
2.5°	1398.0	1397.1	1398.0	1395.6	1396.3	1395.6	1395.6	1392.4	1392.4	1390.9	1388.6
5°	1382.3	1383.8	1383.8	1383.8	1386.2	1386.2	1389.3	1390.1	1392.4	1394.8	1396.3
7.5°	1356.4	1357.3	1359.6	1361.1	1365.8	1372.1	1378.3	1385.4	1391.6	1399.5	1408.1
10°	1334.5	1336.2	1340.1	1344.0	1352.5	1360.4	1371.4	1382.3	1393.3	1406.6	1419.9
12.5°	1322.9	1325.2	1331.5	1337.7	1351.0	1361.1	1376.1	1393.3	1408.1	1420.6	1435.4
15°	1324.4	1325.2	1333.8	1342.4	1361.1	1375.3	1396.3	1416.7	1434.7	1448.7	1465.9
17.5°	1347.1	1348.7	1357.3	1369.7	1387.7	1405.7	1428.4	1449.5	1473.8	1490.1	1510.5
20°	1391.6	1394.0	1403.4	1416.7	1436.2	1454.9	1478.5	1500.4	1525.3	1544.9	1565.2
22.5°	1449.5	1453.4	1463.6	1480.0	1499.5	1522.3	1546.5	1569.1	1592.6	1612.2	1629.4
25°	1527.0	1531.6	1542.5	1559.0	1578.5	1602.8	1627.8	1651.2	1675.5	1690.3	1704.4
27.5°	1630.9	1638.8	1650.4	1663.7	1680.9	1706.7	1730.2	1749.8	1773.2	1789.7	1799.0
30°	1770.8	1781.8	1791.2	1805.2	1817.8	1845.1	1863.9	1879.6	1897.5	1906.9	1909.2
32.5°	1942.1	1952.2	1961.6	1971.7	1989.0	2014.0	2032.0	2040.6	2050.0	2048.4	2039.8
35°	2135.2	2143.0	2148.5	2166.4	2194.6	2211.0	2224.3	2227.5	2229.0	2212.5	2196.2
37.5°	2338.5	2347.9	2352.5	2380.7	2407.2	2426.0	2432.3	2439.3	2434.6	2407.2	2377.5
40°	2558.2	2568.3	2582.4	2606.6	2637.9	2655.9	2663.7	2662.9	2659.1	2626.9	2578.4
42.5°	2773.9	2786.4	2798.2	2840.4	2866.2	2896.7	2900.6	2899.9	2891.2	2854.4	2798.2
45°	2956.8	2971.8	2996.0	3042.9	3084.3	3121.0	3136.0	3141.4	3132.8	3093.7	3029.6
47.5°	3107.8	3118.0	3148.4	3205.5	3258.7	3312.6	3342.3	3363.5	3362.6	3334.5	3266.5
50°	3210.9	3222.7	3260.2	3324.4	3390.8	3454.1	3512.8	3560.5	3583.1	3562.8	3499.5
52.5°	3240.7	3255.5	3304.8	3381.5	3458.8	3544.0	3631.6	3716.1	3766.8	3779.4	3730.1
55°	3115.6	3132.0	3204.0	3310.3	3437.7	3563.6	3696.5	3816.9	3921.7	3970.2	3950.6
57.5°	2751.2	2763.0	2854.4	2992.0	3174.2	3395.5	3619.1	3839.5	4019.4	4145.3	4167.2
60°	2175.8	2190.6	2290.8	2436.2	2643.4	2923.3	3236.0	3597.2	3949.8	4238.3	4381.4
62.5°	1468.2	1478.5	1574.6	1707.5	1934.3	2203.9	2552.7	3010.0	3512.8	4028.0	4431.4
65°	770.9	770.9	835.8	928.8	1109.4	1351.0	1708.3	2177.4	2775.5	3418.9	4093.6
67.5°	447.2	446.4	461.2	482.4	539.5	637.2	834.2	1179.0	1745.1	2494.1	3261.8
70°	369.0	366.7	364.4	364.4	373.0	387.8	425.3	520.0	760.8	1286.2	2006.9
71°	352.6	351.1	344.8	342.5	346.4	354.1	370.6	414.4	540.2	877.2	1498.7
72.5°	333.1	329.2	319.8	315.9	316.6	319.8	324.5	341.7	379.9	498.8	854.6
75°	303.3	294.0	282.2	276.8	274.5	273.6	273.6	278.3	286.9	301.1	350.3
77.5°	268.9	255.6	243.2	237.6	233.7	231.4	229.9	226.7	225.2	231.4	249.4
80°	227.5	213.5	203.3	200.2	197.8	193.1	186.9	180.7	176.7	179.8	190.8
82.5°	175.9	161.8	163.4	164.2	160.3	152.4	146.2	139.1	132.2	130.5	136.1
85°	139.9	132.9	128.2	138.4	129.8	120.4	111.8	100.0	83.7	68.8	75.1
87.5°	60.3	61.0	87.6	132.2	115.7	93.1	77.4	62.5	39.9	29.7	30.5
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°	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3	1389.3
2.5°	1387.7	1387.7	1385.4	1383.8	1383.8	1383.8	1382.3	1383.0
5°	1397.1	1398.7	1400.2	1399.5	1401.9	1404.2	1403.4	1402.6
7.5°	1412.8	1417.5	1422.1	1424.5	1427.6	1430.8	1431.5	1429.2
10°	1428.4	1437.8	1444.8	1451.1	1454.9	1458.1	1460.5	1459.6
12.5°	1448.0	1461.3	1473.8	1486.2	1494.8	1499.5	1504.2	1502.7
15°	1480.0	1494.8	1510.5	1527.0	1540.3	1547.2	1554.3	1552.7
17.5°	1523.8	1537.1	1549.6	1566.0	1582.4	1590.3	1598.1	1597.2
20°	1578.5	1588.6	1595.7	1605.1	1620.8	1629.4	1636.4	1634.1
22.5°	1641.0	1644.2	1645.0	1648.1	1660.7	1670.8	1680.2	1682.5
25°	1709.0	1706.7	1702.1	1699.7	1708.3	1719.3	1730.9	1734.1
27.5°	1793.5	1785.7	1774.0	1764.6	1766.9	1781.1	1794.3	1797.4
30°	1899.8	1881.8	1856.9	1838.9	1835.8	1850.6	1864.6	1869.3
32.5°	2021.0	1996.8	1962.4	1935.0	1923.4	1936.5	1949.1	1956.2
35°	2164.9	2138.3	2096.8	2061.7	2042.9	2051.5	2073.4	2081.2
37.5°	2335.3	2298.6	2252.4	2207.9	2176.6	2178.2	2201.6	2211.0
40°	2523.7	2470.6	2411.9	2356.5	2311.1	2308.0	2329.1	2336.1
42.5°	2720.0	2652.0	2583.2	2510.4	2454.2	2444.0	2471.3	2472.2
45°	2931.1	2843.5	2758.3	2673.9	2615.3	2597.3	2623.9	2626.9
47.5°	3156.2	3046.8	2945.9	2854.4	2791.1	2763.0	2788.8	2793.5
50°	3390.8	3277.4	3160.2	3058.5	2984.3	2949.9	2980.4	2983.4
52.5°	3623.0	3515.9	3399.4	3283.0	3193.0	3153.9	3189.9	3200.8
55°	3856.7	3753.6	3644.2	3527.6	3414.3	3379.8	3418.9	3430.7
57.5°	4099.9	4000.7	3901.3	3784.1	3673.8	3621.5	3663.7	3680.1
60°	4368.1	4280.5	4186.7	4068.7	3959.9	3899.0	3935.0	3953.7
62.5°	4631.6	4613.6	4528.4	4405.6	4268.1	4207.0	4237.6	4250.8
65°	4653.5	4945.0	4941.2	4819.2	4626.9	4524.4	4533.1	4539.3
67.5°	4061.6	4730.8	5158.5	5196.8	4982.6	4822.3	4803.6	4807.5
70°	2875.6	3794.2	4701.9	5297.7	5382.2	5257.9	5217.2	5223.4
71°	2304.1	3255.5	4254.8	5056.1	5375.9	5339.9	5317.2	5333.7
72.5°	1470.6	2398.6	3371.2	4329.7	4943.5	5119.5	5145.2	5155.4
75°	534.0	1032.1	1746.6	2502.6	3171.9	3632.4	3885.7	3906.0
77.5°	286.9	369.8	571.5	853.8	1072.7	1189.9	1204.0	1209.5
80°	211.1	244.7	279.9	319.8	344.8	349.4	340.8	322.9
82.5°	149.4	168.9	182.9	197.0	207.1	198.6	165.0	125.9
85°	86.7	95.3	103.2	110.3	111.8	105.6	69.6	57.1
87.5°	34.4	37.5	36.7	41.4	39.9	36.7	27.4	23.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)