

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: P270502

Luminaire Tested: **NAV-AF-04-D-UNV-RW-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270502
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-04-D-UNV-RW-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(4) 70 CRI, 2700K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14270.7 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B3 - U0 - G3

Input Watts (W): 129
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

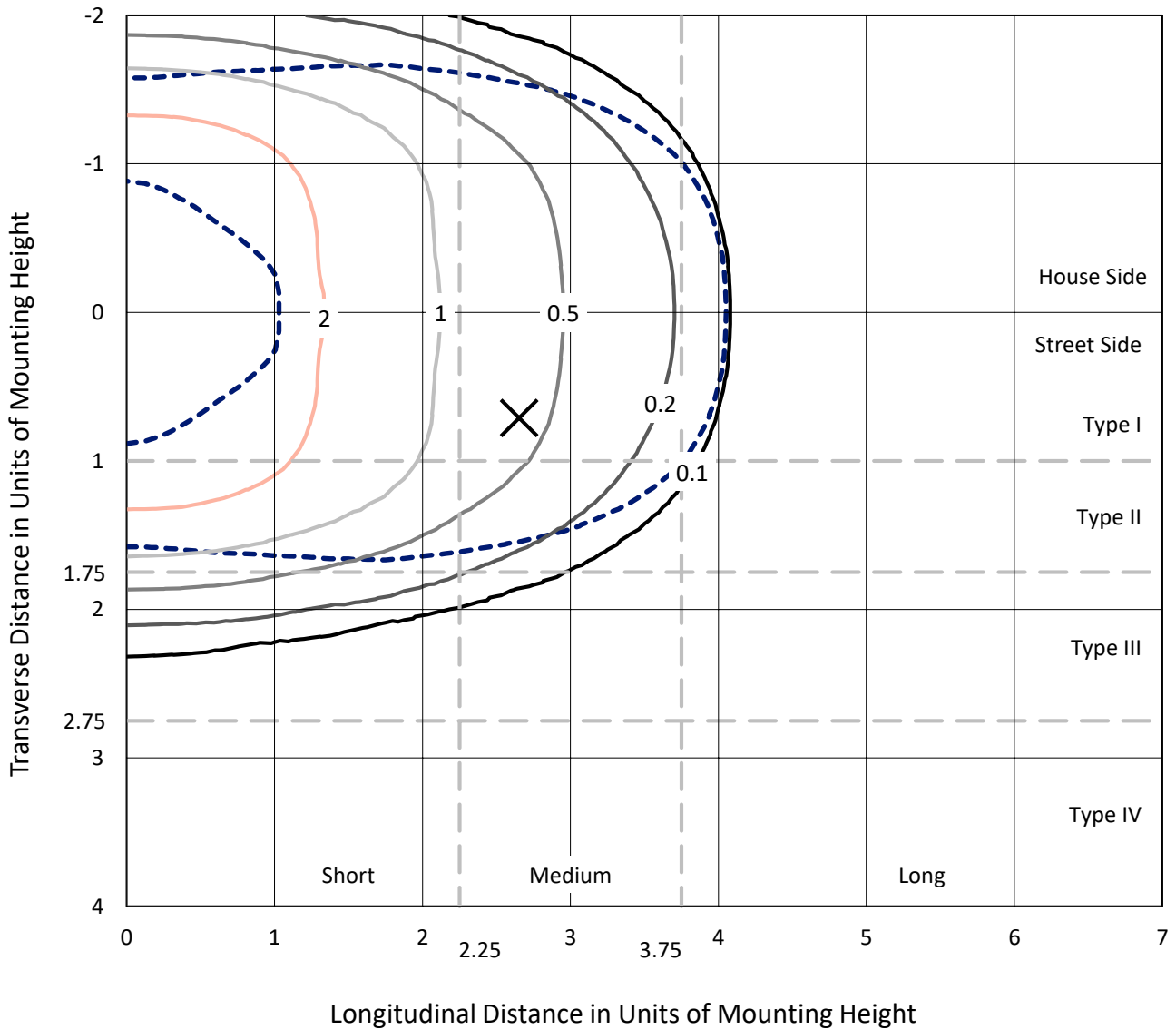


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Iso-Footcandle Lines of Horizontal Illumination

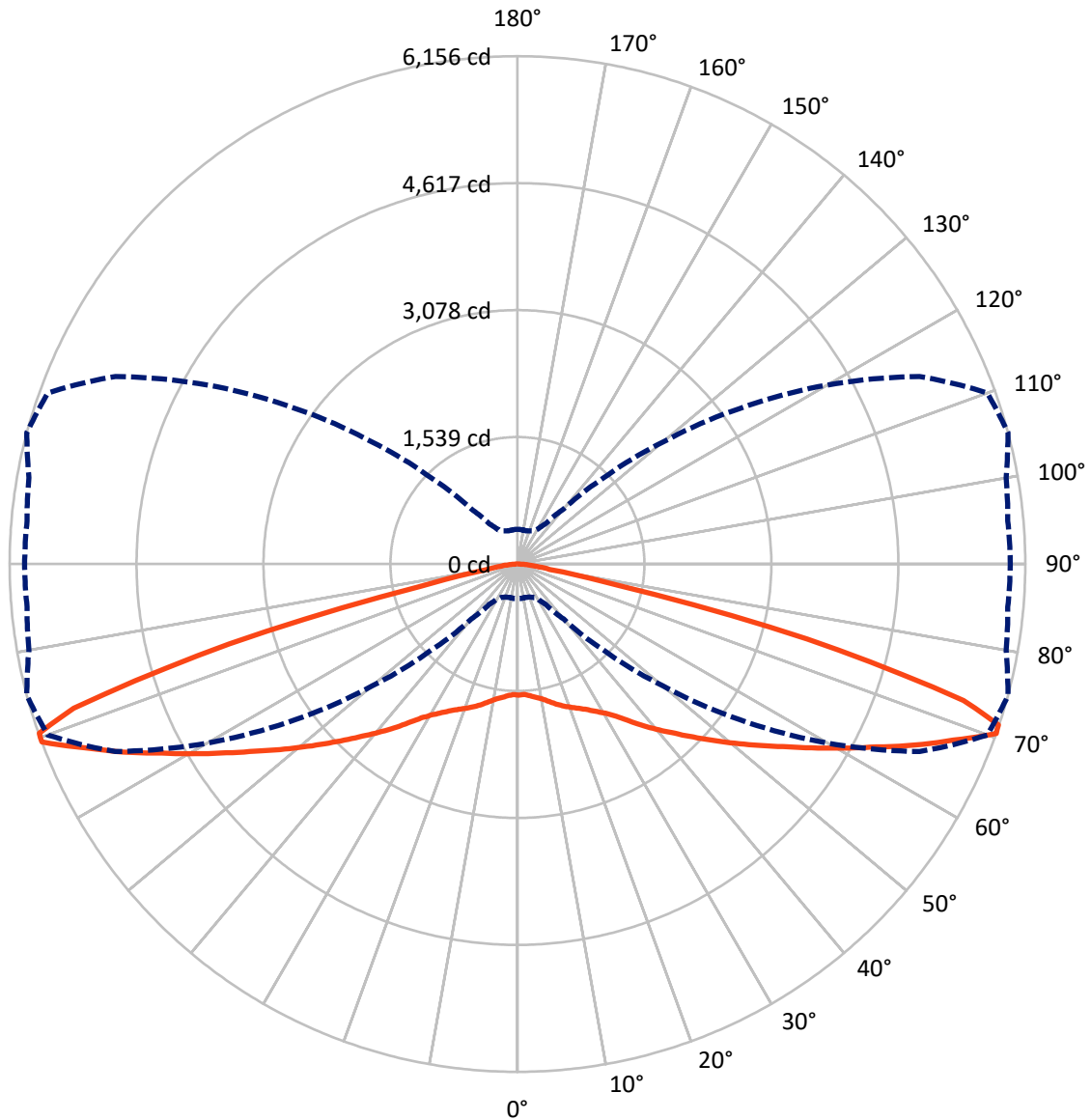
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4 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	7135.4	0.0	7135.4
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	7135.4	0.0	7135.4
	% Fixture	50.0	0.0	50.0
Total	Lumens	14270.7	0.0	14270.7
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	152.4	1.1
10°-20°	472.7	3.3
20°-30°	887.9	6.2
30°-40°	1564.0	11.0
40°-50°	2592.1	18.2
50°-60°	3606.0	25.3
60°-70°	3404.1	23.9
70°-80°	1453.9	10.2
80°-90°	137.4	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°	14270.7	100.0
0°-180°	14270.7	100.0



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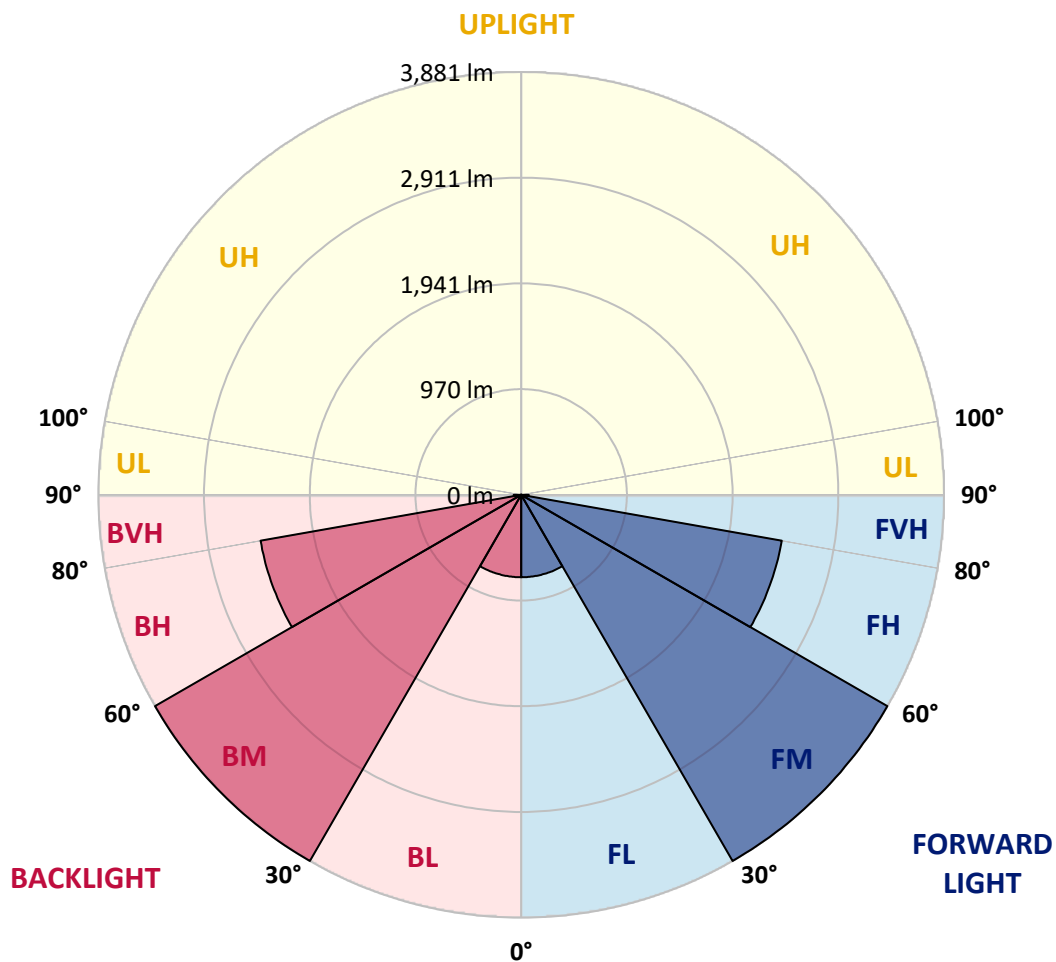
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	756.5	5.3			
FM	(30°-60°)	3881.1	27.2			
FH	(60°-80°)	2429.0	17.0			G2/5000
FVH	(80°-90°)	68.7	0.5			G1/100
BL	(0°-30°)	756.5	5.3	B2/1000		
BM	(30°-60°)	3881.1	27.2	B3/5000		
BH	(60°-80°)	2429.0	17.0	B3/2500		G3/2500
BVH	(80°-90°)	68.7	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°	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2
2.5°	1599.1	1598.2	1599.1	1596.4	1597.2	1596.4	1596.4	1592.8	1592.8	1591.0	1588.4
5°	1581.1	1583.0	1583.0	1583.0	1585.6	1585.6	1589.2	1590.1	1592.8	1595.4	1597.2
7.5°	1551.6	1552.5	1555.1	1557.0	1562.3	1569.5	1576.6	1584.7	1591.8	1600.8	1610.7
10°	1526.6	1528.3	1532.9	1537.3	1547.2	1556.1	1568.6	1581.1	1593.7	1608.9	1624.0
12.5°	1513.1	1515.9	1522.9	1530.2	1545.4	1557.0	1574.0	1593.7	1610.7	1624.9	1641.9
15°	1514.9	1515.9	1525.7	1535.6	1557.0	1573.1	1597.2	1620.5	1641.1	1657.2	1676.9
17.5°	1541.0	1542.7	1552.5	1566.9	1587.3	1608.0	1633.8	1658.0	1685.8	1704.5	1727.8
20°	1591.8	1594.5	1605.4	1620.5	1642.8	1664.3	1691.1	1716.2	1744.8	1767.1	1790.4
22.5°	1658.0	1662.6	1674.1	1692.9	1715.3	1741.3	1768.9	1794.9	1821.8	1844.1	1863.8
25°	1746.6	1752.0	1764.5	1783.2	1805.7	1833.4	1861.9	1888.7	1916.5	1933.5	1949.6
27.5°	1865.5	1874.5	1887.9	1903.1	1922.7	1952.2	1979.1	2001.5	2028.4	2047.1	2057.7
30°	2025.6	2038.2	2048.9	2064.9	2079.2	2110.6	2132.0	2150.0	2170.5	2181.3	2183.9
32.5°	2221.5	2233.0	2243.8	2255.5	2275.0	2303.8	2324.4	2334.2	2344.8	2343.0	2333.3
35°	2442.3	2451.4	2457.6	2478.2	2510.4	2529.1	2544.3	2548.0	2549.7	2530.9	2512.1
37.5°	2674.9	2685.7	2691.0	2723.1	2753.6	2775.0	2782.2	2790.2	2784.8	2753.6	2719.6
40°	2926.1	2937.7	2953.8	2981.7	3017.3	3038.0	3047.0	3046.1	3041.5	3004.9	2949.4
42.5°	3173.1	3187.4	3200.8	3249.0	3278.5	3313.4	3317.9	3317.0	3307.2	3265.1	3200.8
45°	3382.3	3399.2	3427.0	3480.7	3528.1	3570.0	3587.1	3593.3	3583.5	3538.8	3465.4
47.5°	3554.9	3566.5	3601.3	3666.6	3727.4	3789.2	3823.1	3847.4	3846.5	3814.3	3736.4
50°	3672.9	3686.4	3729.3	3802.5	3878.6	3951.0	4018.1	4072.6	4098.5	4075.4	4002.9
52.5°	3706.9	3724.0	3780.2	3867.9	3956.4	4054.0	4154.0	4250.6	4308.8	4323.2	4266.8
55°	3563.8	3582.6	3664.8	3786.4	3932.3	4076.2	4228.3	4366.0	4485.9	4541.3	4519.0
57.5°	3147.1	3160.4	3265.1	3422.5	3630.9	3884.0	4139.7	4392.0	4597.6	4741.7	4766.6
60°	2488.8	2505.8	2620.4	2786.6	3023.7	3343.9	3701.6	4114.6	4518.0	4848.1	5011.7
62.5°	1679.6	1691.1	1801.1	1953.2	2212.5	2521.1	2919.9	3443.2	4018.1	4607.4	5069.0
65°	881.7	881.7	956.1	1062.4	1269.0	1545.4	1954.1	2490.6	3174.8	3910.9	4682.7
67.5°	511.6	510.6	527.7	551.7	617.0	728.9	954.2	1348.6	1996.2	2852.8	3731.1
70°	422.2	419.4	416.8	416.8	426.5	443.6	486.5	594.7	870.2	1471.2	2295.7
71°	403.2	401.5	394.4	391.8	396.2	405.1	423.9	473.9	617.9	1003.3	1714.3
72.5°	381.1	376.5	365.8	361.3	362.1	365.8	371.1	390.9	434.6	570.6	977.4
75°	346.9	336.2	322.9	316.7	313.9	313.0	313.0	318.4	328.2	344.3	400.6
77.5°	307.6	292.5	278.1	271.8	267.3	264.7	262.9	259.3	257.5	264.7	285.3
80°	260.2	244.2	232.5	229.0	226.3	221.0	213.7	206.6	202.1	205.7	218.2
82.5°	201.2	185.1	186.8	187.7	183.3	174.5	167.3	159.2	151.2	149.4	155.5
85°	160.1	152.1	146.7	158.3	148.5	137.7	127.9	114.4	95.7	78.7	85.9
87.5°	68.9	69.8	100.3	151.2	132.4	106.4	88.6	71.5	45.6	34.0	34.9
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°	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2	1589.2
2.5°	1587.3	1587.3	1584.7	1583.0	1583.0	1583.0	1581.1	1582.1
5°	1598.2	1599.9	1601.7	1600.8	1603.5	1606.2	1605.4	1604.5
7.5°	1616.1	1621.4	1626.7	1629.4	1632.9	1636.6	1637.5	1634.7
10°	1633.8	1644.6	1652.7	1659.9	1664.3	1668.0	1670.6	1669.7
12.5°	1656.2	1671.4	1685.8	1700.1	1710.0	1715.3	1720.7	1718.8
15°	1692.9	1710.0	1727.8	1746.6	1761.8	1769.8	1777.8	1776.0
17.5°	1743.0	1758.3	1772.5	1791.3	1810.1	1819.0	1828.1	1827.1
20°	1805.7	1817.2	1825.3	1836.0	1853.9	1863.8	1871.8	1869.2
22.5°	1877.2	1880.7	1881.6	1885.3	1899.6	1911.1	1921.8	1924.6
25°	1954.9	1952.2	1946.8	1944.2	1954.1	1966.6	1980.0	1983.5
27.5°	2051.5	2042.6	2029.2	2018.4	2021.1	2037.3	2052.4	2056.0
30°	2173.2	2152.6	2124.0	2103.4	2099.9	2116.9	2132.9	2138.2
32.5°	2311.8	2284.1	2244.8	2213.5	2199.9	2215.2	2229.6	2237.6
35°	2476.4	2445.9	2398.6	2358.3	2336.9	2346.6	2371.7	2380.7
37.5°	2671.3	2629.2	2576.5	2525.6	2489.7	2491.5	2518.4	2529.1
40°	2886.9	2826.0	2759.0	2695.5	2643.6	2639.9	2664.2	2672.2
42.5°	3111.3	3033.4	2954.7	2871.6	2807.3	2795.6	2826.8	2827.9
45°	3352.7	3252.7	3155.1	3058.5	2991.4	2970.9	3001.2	3004.9
47.5°	3610.3	3485.2	3369.7	3265.1	3192.7	3160.4	3190.1	3195.5
50°	3878.6	3748.9	3614.8	3498.4	3413.6	3374.3	3409.1	3412.8
52.5°	4144.2	4021.7	3888.5	3755.3	3652.4	3607.7	3648.7	3661.3
55°	4411.7	4293.5	4168.3	4035.1	3905.4	3866.0	3910.9	3924.2
57.5°	4689.7	4576.1	4462.6	4328.5	4202.4	4142.4	4190.8	4209.5
60°	4996.6	4896.3	4789.0	4653.9	4529.7	4459.9	4501.0	4522.4
62.5°	5297.8	5277.4	5179.8	5039.4	4882.0	4812.3	4847.2	4862.3
65°	5322.9	5656.4	5652.0	5512.4	5292.5	5175.3	5185.1	5192.4
67.5°	4645.9	5411.5	5900.6	5944.4	5699.4	5516.1	5494.7	5499.2
70°	3289.2	4340.2	5378.3	6059.8	6156.4	6014.2	5967.7	5974.8
71°	2635.5	3724.0	4866.8	5783.5	6149.3	6108.1	6082.2	6101.0
72.5°	1682.2	2743.8	3856.2	4952.6	5654.7	5856.0	5885.4	5897.1
75°	610.8	1180.6	1997.9	2862.7	3628.3	4155.0	4444.8	4468.0
77.5°	328.2	423.0	653.7	976.5	1226.9	1361.1	1377.2	1383.5
80°	241.5	279.9	320.2	365.8	394.4	399.7	390.0	369.4
82.5°	170.8	193.1	209.2	225.4	237.1	227.1	188.7	144.0
85°	99.3	109.1	118.0	126.1	127.9	120.7	79.6	65.2
87.5°	39.3	42.8	42.0	47.4	45.6	42.0	31.4	26.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)