

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: P270380

Luminaire Tested: **NAV-AF-02-D-UNV-T2-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270380
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-02-D-UNV-T2-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11363.6 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B2 - U0 - G2

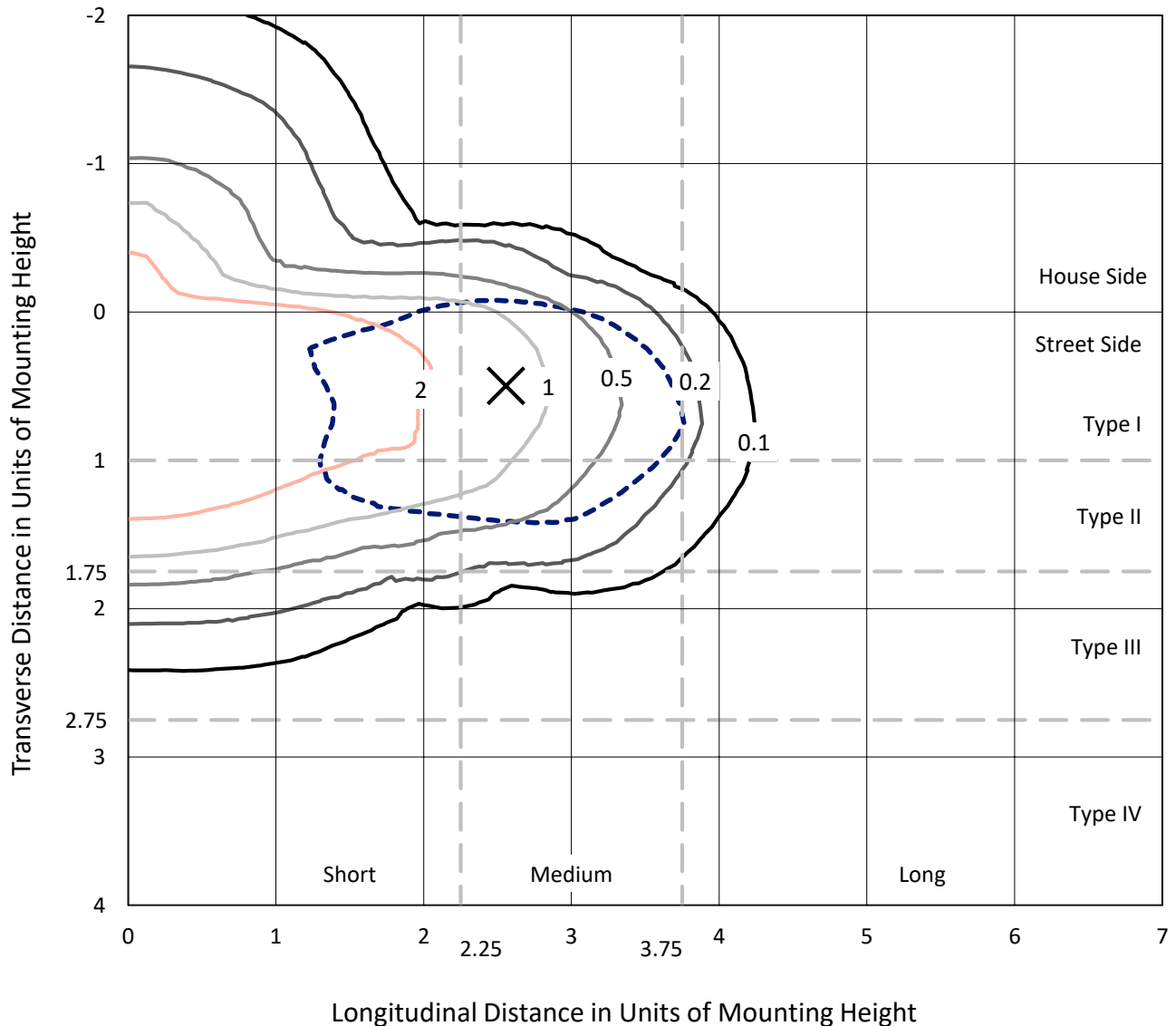
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



REPORT NUMBER: P270380
 CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7027-1200

Iso-Footcandle Lines of Horizontal Illumination

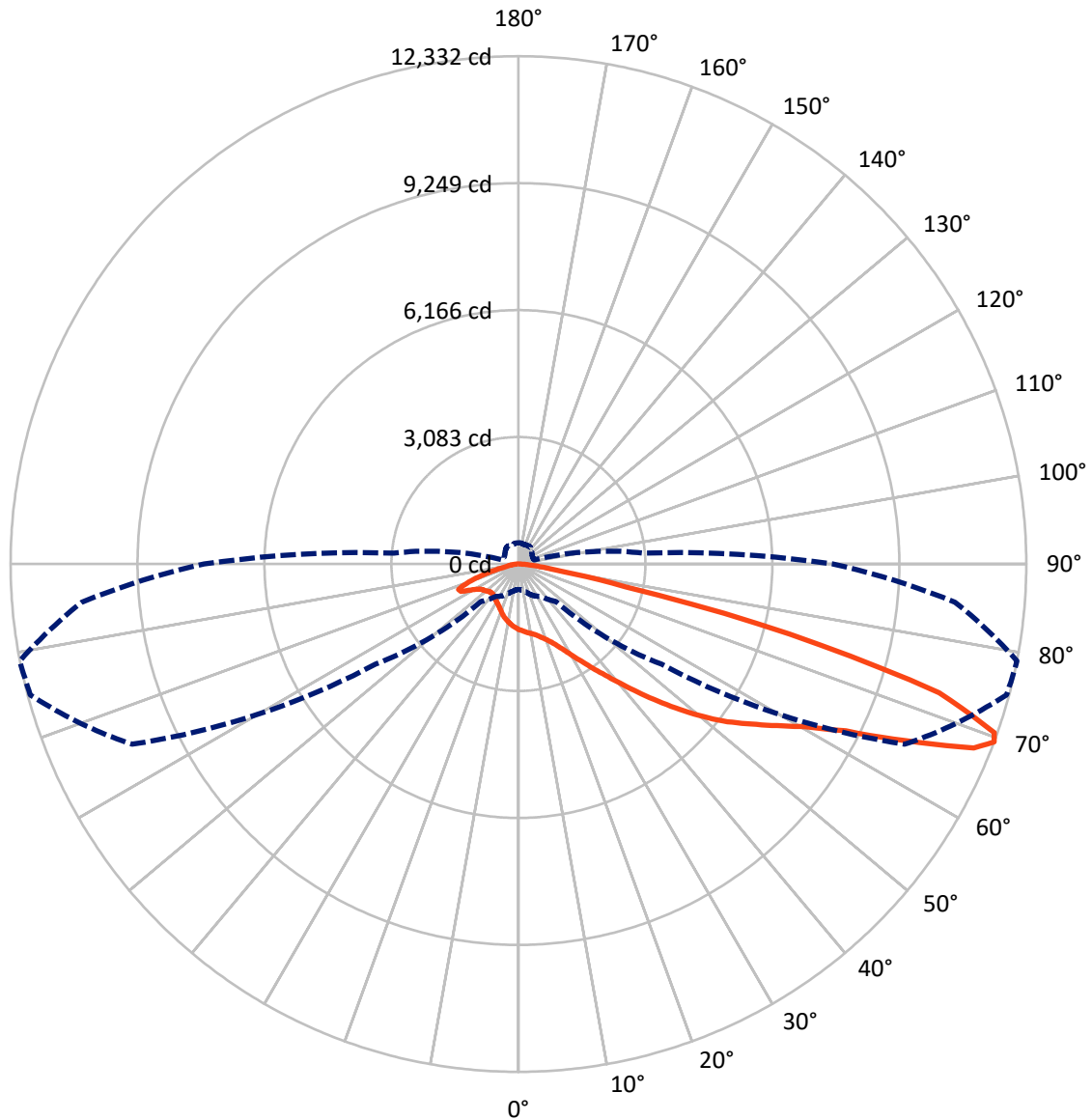
× Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 4.8 fc
 Type II - Medium - Full Cutoff

REPORT NUMBER: P270380
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7027-1200

Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

REPORT NUMBER: P270380

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7027-1200

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2137.7	0.0	2137.7
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	9225.9	0.0	9225.9
	% Fixture	81.2	0.0	81.2
Total	Lumens	11363.6	0.0	11363.6
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	1.3
10°-20°	423.8	3.7
20°-30°	700.3	6.2
30°-40°	1134.1	10.0
40°-50°	1811.6	15.9
50°-60°	2594.5	22.8
60°-70°	2890.6	25.4
70°-80°	1446.2	12.7
80°-90°	214.6	1.9
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°	11363.6	100.0
0°-180°	11363.6	100.0

Coefficient of Utilization



REPORT NUMBER: P270380

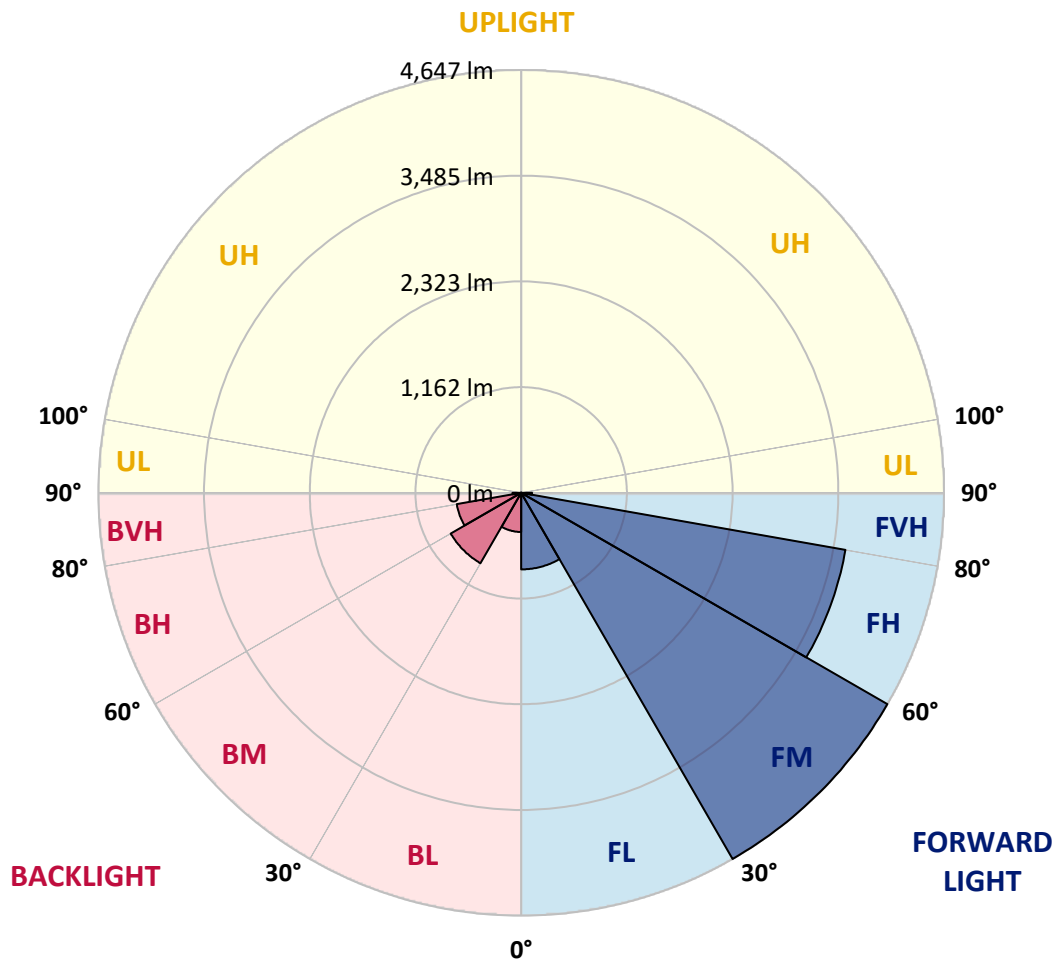
CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7027-1200

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	841.4	7.4			
FM (30°-60°)	4646.6	40.9			
FH (60°-80°)	3618.0	31.8			G2/5000
FVH (80°-90°)	119.9	1.1			G2/225
BL (0°-30°)	430.6	3.8	B1/500		
BM (30°-60°)	893.6	7.9	B1/1000		
BH (60°-80°)	718.8	6.3	B2/1000		G2/1000
BVH (80°-90°)	94.7	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type II Medium





REPORT NUMBER: P270380

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7027-1200

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8
2.5°	1750.7	1747.1	1746.3	1735.2	1729.2	1716.7	1686.8	1656.4	1628.1	1613.3	1597.6
5°	1897.2	1889.9	1886.1	1867.4	1851.1	1822.9	1776.0	1727.7	1677.1	1651.2	1620.0
7.5°	1985.8	1986.4	1986.4	1971.6	1955.3	1921.0	1861.6	1795.4	1720.3	1686.1	1637.0
10°	1993.2	1993.9	2005.0	2008.8	2012.6	1994.6	1939.6	1856.3	1759.7	1715.1	1651.2
12.5°	1919.6	1924.8	1943.4	1970.2	2008.0	2027.4	2003.6	1921.7	1810.3	1755.9	1677.9
15°	1820.7	1825.8	1849.7	1890.6	1951.5	2016.2	2049.7	1996.8	1876.4	1812.5	1717.3
17.5°	1772.4	1778.4	1794.6	1827.3	1886.8	1973.8	2074.1	2077.2	1954.5	1881.0	1764.2
20°	1749.3	1753.9	1774.6	1801.3	1846.6	1930.0	2076.4	2162.0	2047.4	1961.9	1821.5
22.5°	1802.1	1803.5	1813.9	1828.9	1859.3	1923.4	2074.9	2249.6	2163.4	2063.8	1895.1
25°	1956.7	1947.0	1939.6	1921.0	1928.5	1973.8	2098.7	2343.3	2312.1	2197.7	1993.2
27.5°	2139.7	2138.1	2118.8	2075.7	2048.1	2077.2	2166.4	2448.2	2494.2	2367.8	2121.7
30°	2343.3	2344.0	2323.9	2271.3	2215.4	2218.5	2274.1	2569.3	2712.1	2573.0	2280.1
32.5°	2556.7	2570.1	2533.0	2480.1	2412.5	2390.8	2428.7	2715.8	2964.0	2815.4	2463.7
35°	2811.7	2813.9	2773.0	2695.8	2628.0	2593.9	2628.8	2898.7	3254.7	3100.1	2687.5
37.5°	3076.3	3077.9	3035.5	2936.6	2851.1	2828.8	2867.4	3120.9	3562.6	3424.2	2950.8
40°	3292.6	3308.3	3274.9	3181.8	3095.6	3082.3	3138.0	3387.1	3955.9	3807.8	3263.7
42.5°	3538.1	3555.9	3515.6	3419.0	3350.7	3346.1	3433.2	3690.3	4346.9	4251.7	3618.4
45°	3814.6	3839.9	3784.1	3675.5	3617.6	3715.7	3720.9	4026.5	4797.4	4748.4	4017.5
47.5°	4116.5	4137.2	4091.9	3975.2	3911.9	4054.0	4002.7	4389.9	5284.4	5280.6	4449.5
50°	4349.1	4372.1	4376.6	4325.2	4259.1	4277.0	4312.0	4772.2	5769.9	5827.8	4896.3
52.5°	4306.7	4329.0	4429.5	4564.0	4670.3	4624.1	4666.5	5178.0	6238.9	6361.5	5320.8
55°	3964.8	3976.6	4164.7	4484.3	4937.2	5157.2	5160.3	5619.6	6684.9	6856.8	5723.7
57.5°	3348.4	3349.9	3594.5	4065.9	4781.8	5502.8	5939.4	6174.2	7150.4	7403.9	6223.3
60°	2369.3	2375.3	2660.1	3276.3	4225.0	5461.2	6777.2	7166.7	7689.3	8018.7	6867.2
62.5°	1406.6	1420.0	1634.8	2129.3	3138.0	4926.0	7272.3	8932.3	8483.4	8920.4	7897.4
65°	915.2	926.3	1054.9	1303.3	1854.1	3584.1	7109.5	10642.3	9985.9	10339.0	9378.5
67.5°	704.8	713.8	814.9	965.0	1137.4	1937.4	5684.4	11000.6	11814.7	11924.7	10628.1
69°	619.3	626.7	701.0	845.2	957.6	1282.4	4236.0	10350.1	12271.9	12332.1	10643.7
70°	573.9	579.9	649.7	774.7	879.5	1023.7	3242.2	9594.7	12104.7	12258.5	10336.7
72.5°	472.8	478.0	527.8	623.8	719.0	729.3	1436.3	7006.2	10192.4	10684.7	8747.2
75°	394.7	397.7	430.5	500.4	582.1	580.7	733.7	3968.4	6219.5	6806.2	5401.1
77.5°	329.4	331.6	353.2	396.2	459.5	457.1	516.6	1712.9	2746.3	2649.6	1859.3
80°	290.7	292.2	303.3	314.4	354.7	352.3	382.9	786.6	1117.4	1032.6	703.4
82.5°	220.9	223.8	280.4	285.5	275.2	265.4	266.8	458.0	572.4	521.1	377.6
85°	125.0	125.7	179.9	210.5	239.4	179.9	173.3	236.4	282.4	247.6	165.1
87.5°	55.8	58.0	86.2	99.6	129.4	105.6	98.9	100.4	121.9	101.1	65.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P270380

CATALOG NUMBER: NAV-AF-02-D-UNV-T2-7027-1200

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8	1594.8
2.5°	1582.8	1570.1	1540.5	1510.0	1479.5	1460.1	1440.1	1421.5	1414.0	1413.3	1399.1
5°	1589.6	1559.7	1492.1	1417.7	1347.1	1292.1	1245.9	1216.2	1187.3	1182.1	1169.5
7.5°	1591.6	1543.4	1433.3	1314.4	1206.7	1130.7	1084.7	1064.6	1050.5	1046.7	1042.4
10°	1591.0	1522.5	1367.8	1205.0	1082.5	1025.1	1008.1	1012.6	1018.5	1021.6	1021.6
12.5°	1602.8	1512.8	1302.5	1102.5	1002.1	974.7	988.0	1011.1	1028.9	1036.4	1037.8
15°	1624.5	1506.9	1230.4	1013.3	945.6	952.4	985.0	1018.5	1043.8	1054.9	1057.9
17.5°	1651.2	1498.7	1147.1	939.6	912.9	935.9	978.3	1020.7	1051.2	1065.3	1067.5
20°	1680.9	1486.9	1060.9	884.7	883.9	912.9	955.3	1002.9	1035.6	1051.2	1050.5
22.5°	1721.1	1475.7	980.6	844.5	852.0	878.7	913.7	956.9	987.2	1001.4	998.5
25°	1774.6	1465.3	908.5	808.8	815.5	833.4	857.9	890.6	912.1	919.7	914.5
27.5°	1846.6	1457.1	852.0	776.1	775.3	783.6	798.5	816.3	826.7	824.5	816.3
30°	1935.2	1449.0	810.4	747.2	736.7	736.0	742.7	753.0	759.7	746.4	739.8
32.5°	2034.0	1434.9	773.3	721.9	703.4	696.5	699.6	713.8	741.2	727.8	722.6
35°	2150.7	1418.5	736.0	694.4	680.2	667.6	669.9	700.3	783.6	773.9	768.7
37.5°	2291.2	1403.6	701.8	664.7	663.8	648.2	646.8	683.3	794.7	773.9	769.5
40°	2460.0	1400.6	671.4	631.9	643.8	637.8	632.6	655.0	733.0	690.6	682.5
42.5°	2663.7	1414.0	649.0	600.6	620.8	634.9	625.2	630.4	662.4	624.5	617.9
45°	2901.6	1450.5	632.6	573.2	596.3	632.6	621.4	617.0	622.3	601.4	597.0
47.5°	3178.9	1515.1	621.4	550.1	573.2	626.7	620.0	611.0	609.0	597.0	594.0
50°	3475.5	1602.0	614.1	529.3	552.4	616.2	619.3	606.6	602.9	597.7	596.3
52.5°	3769.9	1696.4	605.2	511.5	535.3	603.8	620.0	602.1	597.0	594.0	592.5
55°	4062.9	1794.6	588.7	495.9	522.6	588.7	619.3	596.3	590.2	590.2	590.2
57.5°	4442.7	1944.1	567.2	483.3	506.3	569.4	609.6	589.6	581.4	582.1	582.9
60°	4991.4	2194.6	543.5	469.2	484.7	547.2	594.8	577.6	568.0	571.0	571.7
62.5°	5908.2	2632.6	510.7	449.1	462.4	523.4	575.5	561.4	552.4	557.6	558.3
65°	7130.2	3162.6	467.6	423.8	439.5	496.7	550.9	541.9	532.2	544.9	544.3
67.5°	7876.0	3318.0	422.3	397.1	417.1	468.3	520.4	516.6	510.0	532.2	530.8
69°	7631.5	3036.9	396.2	380.0	401.5	449.1	501.1	499.5	494.3	515.9	514.5
70°	7251.5	2774.5	380.0	368.8	393.3	437.1	488.5	488.5	483.3	501.9	498.1
72.5°	5824.8	2057.8	342.0	340.5	365.0	404.4	454.3	458.0	455.0	461.6	458.0
75°	3419.8	1240.0	304.9	309.2	330.8	369.6	416.4	419.2	416.4	415.6	416.4
77.5°	1185.9	556.1	269.1	275.8	294.5	333.8	374.8	380.6	376.2	371.0	372.4
80°	464.0	323.4	230.4	240.1	255.7	293.7	333.0	336.8	330.0	329.4	323.4
82.5°	278.7	197.0	179.1	194.8	214.1	254.9	287.6	286.2	281.0	311.5	272.8
85°	121.2	109.2	130.9	146.5	156.1	191.1	243.1	236.4	223.8	197.0	192.5
87.5°	49.0	56.6	72.1	87.0	93.7	123.3	166.5	160.5	162.9	133.8	133.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)