

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: STREETWORKS

Report Number: P234791

Luminaire Tested: **ARCH-M-AF48-160-D-U-T2R-8027**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P234791
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29635)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: STREETWORKS
Catalog Number: ARCH-M-AF48-160-D-U-T2R-8027
Description: ARCHEON-M ROADWAY AND AREA LUMINAIRE
(2) 80 CRI, 2700K, 1030mA LIGHT ENGINES WITH 24 LEDS AND TYPE II ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14509 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Luminous Opening: Rectangular (W 0.75' x L: 1' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G2

Input Watts (W): 161
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: 28.75 FT

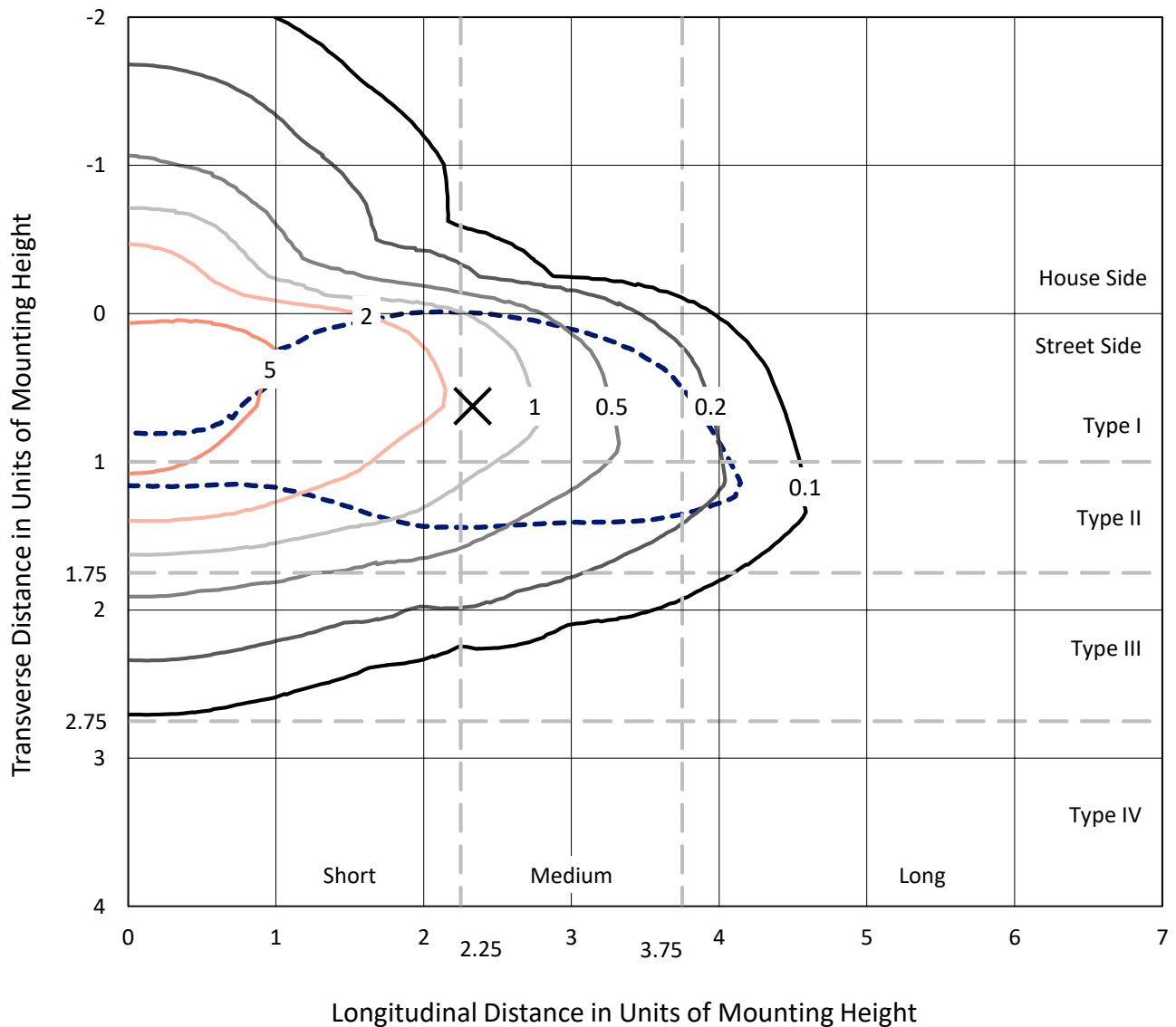


REPORT NUMBER: P234791

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T2R-8027

Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

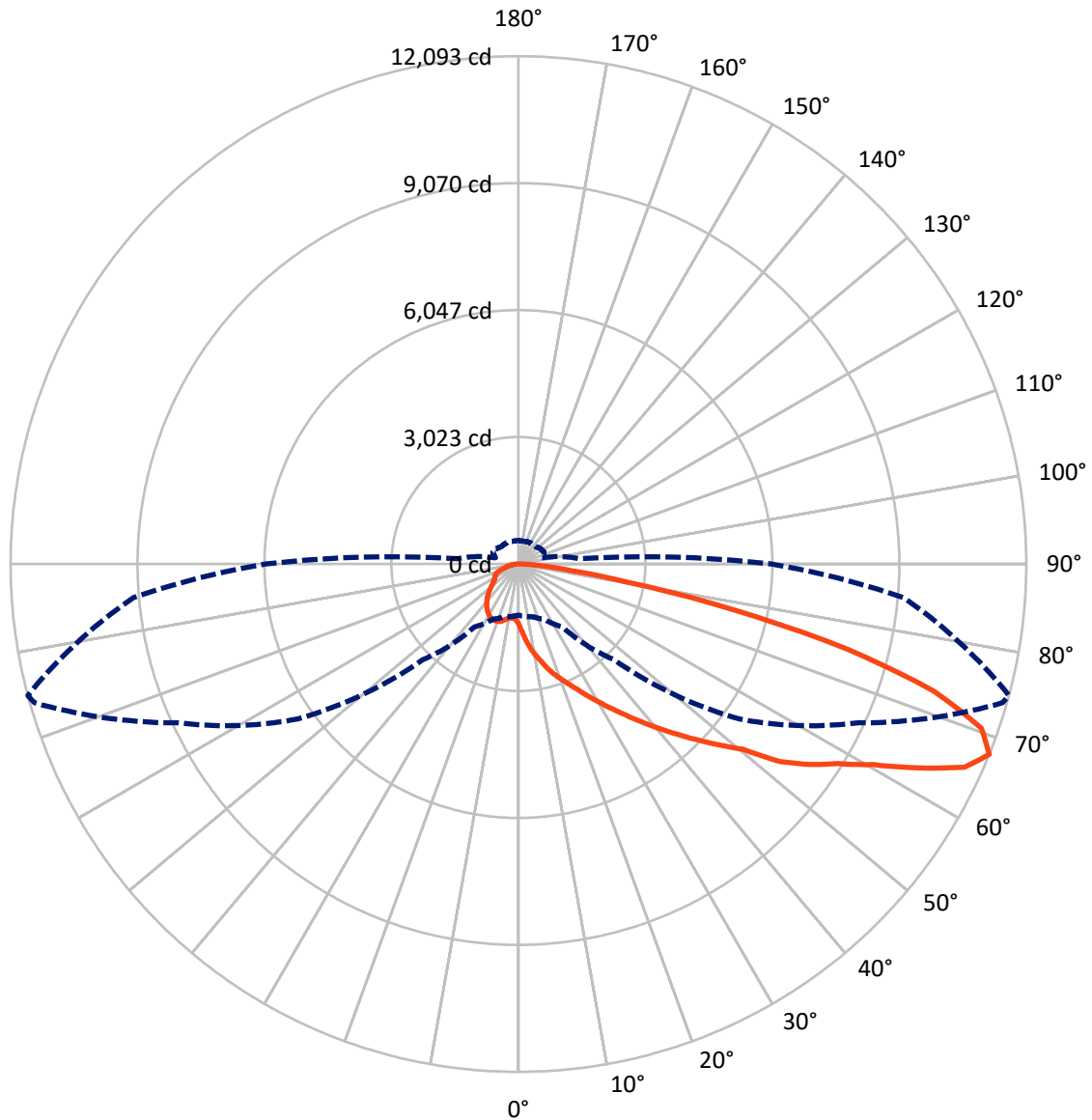


Based on 20 foot mounting height. Maximum calculated value = 7.5 fc
 Type II - Medium - Semi-Cutoff

REPORT NUMBER: P234791

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T2R-8027

Luminous Intensity Polar Plot



— Vertical Plane Through 75-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical



REPORT NUMBER: P234791

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T2R-8027

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2477.6	0.0	2477.6
	% Fixture	17.1	0.0	17.1
Street Side	Lumens	12031.4	0.0	12031.4
	% Fixture	82.9	0.0	82.9
Total	Lumens	14509.0	0.0	14509.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.9	1.2
10°-20°	610.4	4.2
20°-30°	1113.3	7.7
30°-40°	1827.4	12.6
40°-50°	2642.6	18.2
50°-60°	3114.3	21.5
60°-70°	3026.4	20.9
70°-80°	1682.3	11.6
80°-90°	323.5	2.2
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°	14509.0	100.0
0°-180°	14509.0	100.0



REPORT NUMBER: P234791

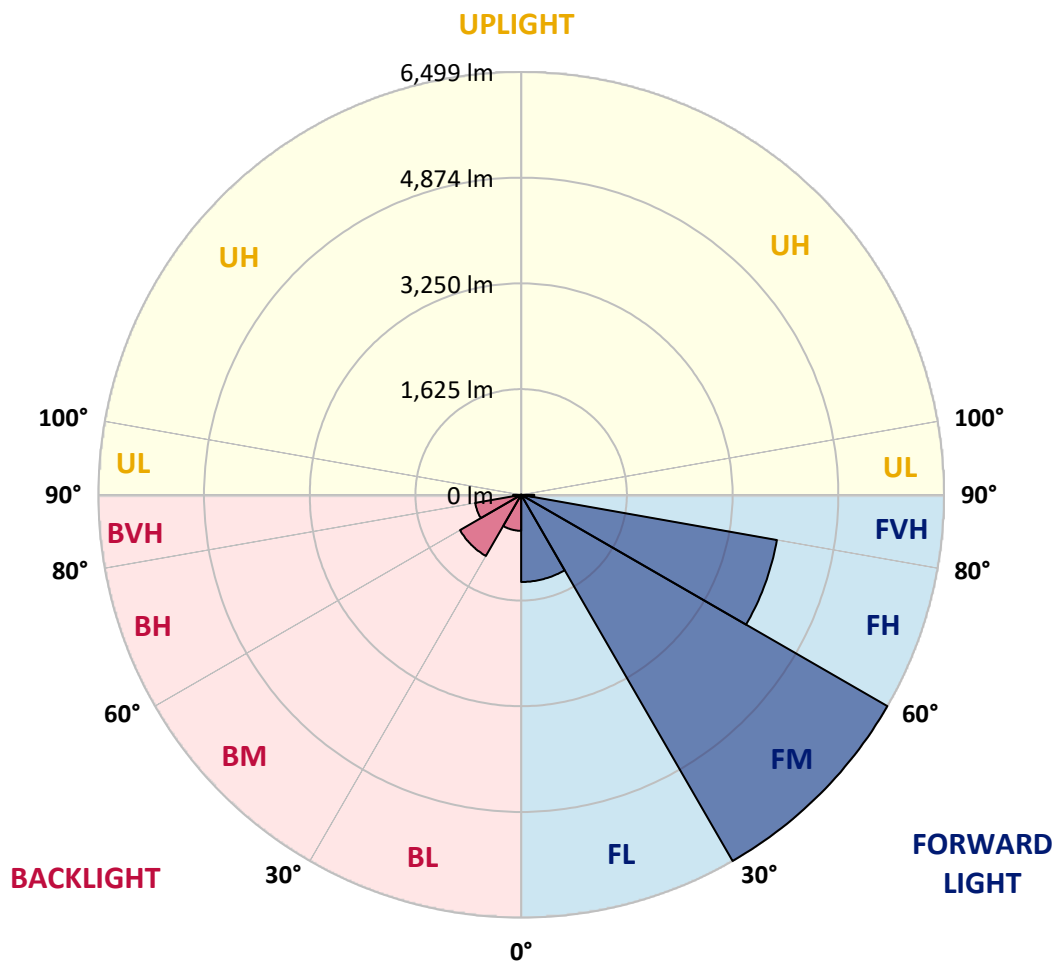
CATALOG NUMBER: ARCH-M-AF48-160-D-U-T2R-8027

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1339.6	9.2			
FM	(30°-60°)	6499.3	44.8			
FH	(60°-80°)	3991.3	27.5			G2/5000
FVH	(80°-90°)	201.3	1.4			G2/225
BL	(0°-30°)	553.0	3.8	B2/1000		
BM	(30°-60°)	1085.1	7.5	B2/2500		
BH	(60°-80°)	717.4	4.9	B2/1000		G2/1000
BVH	(80°-90°)	122.2	0.8			G2/225
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: P234791

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T2R-8027

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	74°	75°	85°
0°	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7
2.5°	2038.3	2044.3	2032.2	2004.9	1965.5	1892.7	1829.0	1716.7	1616.7	1604.5	1498.4
5°	2396.2	2402.2	2387.1	2353.7	2311.2	2232.4	2144.4	1998.8	1838.1	1807.7	1583.3
7.5°	2641.8	2644.9	2626.7	2593.3	2560.0	2481.1	2393.1	2229.3	2032.2	2007.9	1692.5
10°	2851.1	2857.2	2832.9	2811.7	2775.3	2696.4	2605.5	2432.6	2229.3	2196.0	1804.7
12.5°	3045.3	3051.3	3036.2	3018.0	3005.8	2933.0	2832.9	2626.7	2408.3	2371.9	1938.2
15°	3175.7	3181.7	3184.8	3209.0	3224.2	3172.6	3072.6	2848.1	2602.4	2569.1	2095.9
17.5°	3139.3	3154.4	3199.9	3287.9	3381.9	3385.0	3303.1	3066.5	2793.5	2757.1	2256.6
20°	3033.1	3045.3	3099.9	3233.3	3418.3	3524.5	3518.4	3287.9	2972.5	2933.0	2405.3
22.5°	3121.1	3136.2	3136.2	3218.1	3400.1	3597.3	3676.1	3506.3	3151.4	3115.0	2553.9
25°	3497.2	3506.3	3442.6	3409.2	3476.0	3657.9	3806.6	3742.9	3369.8	3327.3	2714.6
27.5°	4021.9	4006.8	3927.9	3794.4	3721.6	3770.2	3921.8	3967.3	3621.5	3570.0	2881.5
30°	4543.6	4534.5	4443.5	4264.6	4100.8	3997.7	4049.2	4167.5	3894.5	3833.9	3042.2
32.5°	5031.9	5016.8	4916.7	4707.4	4522.4	4331.3	4231.2	4349.5	4185.7	4115.9	3221.2
35°	5480.9	5441.4	5341.3	5122.9	4931.9	4749.9	4504.2	4522.4	4501.2	4428.4	3418.3
37.5°	5844.8	5814.5	5705.3	5502.1	5298.9	5126.0	4868.2	4719.5	4840.9	4771.1	3645.8
40°	6166.3	6133.0	6020.7	5817.5	5629.5	5465.7	5262.5	4959.2	5223.0	5144.2	3900.6
42.5°	6409.0	6384.7	6293.7	6093.5	5911.6	5762.9	5662.8	5262.5	5620.4	5544.5	4179.6
45°	6539.4	6515.1	6466.6	6305.9	6139.0	6023.8	6032.9	5623.4	6035.9	5972.2	4510.3
47.5°	6378.7	6396.9	6439.3	6409.0	6305.9	6251.3	6363.5	5996.5	6500.0	6439.3	4868.2
50°	5948.0	5966.2	6136.0	6345.3	6381.7	6448.4	6660.7	6427.2	6991.3	6942.8	5311.0
52.5°	4889.4	4989.5	5459.6	5960.1	6302.8	6578.8	6991.3	7067.2	7819.4	7819.4	6093.5
55°	3694.3	3782.3	4319.2	5192.7	5996.5	6591.0	7234.0	7500.9	8416.9	8429.0	6503.0
57.5°	2993.7	3048.3	3312.2	4206.9	5353.5	6439.3	7522.1	7874.0	8914.3	8968.9	7030.8
60°	2429.5	2459.9	2632.7	3254.5	4464.8	6029.8	7728.4	8407.8	9624.1	9699.9	7704.1
62.5°	1953.3	1983.7	2098.9	2472.0	3503.3	5262.5	7692.0	8962.9	10570.4	10694.8	8586.8
65°	1559.0	1592.4	1668.2	1898.7	2596.4	4310.1	7318.9	9248.0	11550.1	11671.5	9172.2
67.5°	1216.3	1246.6	1298.2	1449.8	1829.0	3224.2	6436.3	8947.7	11989.9	12093.1	9202.5
70°	919.0	934.2	976.7	1073.7	1307.3	2141.4	5038.0	7940.7	11595.6	11689.7	8595.9
72.5°	712.8	709.8	734.0	782.5	913.0	1474.1	3339.5	6457.5	10252.0	10349.0	7334.1
75°	582.4	579.3	594.5	609.7	661.2	988.8	1971.5	4862.1	8274.4	8089.3	5502.1
77.5°	491.4	488.3	503.5	506.5	527.8	682.5	1122.3	3199.9	5520.3	5201.8	3099.9
80°	415.5	412.5	430.7	436.8	451.9	500.5	646.1	1731.9	2772.3	2626.7	1480.2
82.5°	312.4	324.5	357.9	373.1	391.3	370.0	400.4	764.3	1286.0	1228.4	643.0
85°	151.7	179.0	269.9	300.3	321.5	233.6	273.0	360.9	579.3	552.0	260.8
87.5°	51.6	45.5	160.8	191.1	209.3	106.2	151.7	200.2	239.6	218.4	81.9
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: P234791

CATALOG NUMBER: ARCH-M-AF48-160-D-U-T2R-8027

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7	1437.7
2.5°	1452.9	1407.4	1340.6	1289.1	1255.7	1228.4	1216.3	1213.2	1207.2	1204.1	1204.1
5°	1483.2	1401.3	1298.2	1243.6	1228.4	1216.3	1222.3	1225.4	1225.4	1225.4	1225.4
7.5°	1528.7	1413.4	1289.1	1252.7	1249.6	1249.6	1267.8	1276.9	1283.0	1283.0	1283.0
10°	1589.4	1434.7	1304.2	1273.9	1283.0	1289.1	1310.3	1322.4	1328.5	1331.5	1334.6
12.5°	1671.3	1480.2	1334.6	1310.3	1322.4	1325.5	1340.6	1346.7	1352.8	1355.8	1355.8
15°	1780.4	1546.9	1383.1	1352.8	1355.8	1352.8	1352.8	1346.7	1343.7	1343.7	1349.7
17.5°	1892.7	1610.6	1425.6	1383.1	1371.0	1346.7	1328.5	1313.3	1304.2	1298.2	1301.2
20°	2004.9	1668.2	1449.8	1389.2	1355.8	1316.4	1283.0	1261.8	1249.6	1237.5	1243.6
22.5°	2117.1	1722.8	1458.9	1371.0	1322.4	1264.8	1228.4	1195.0	1167.8	1149.6	1152.6
25°	2241.5	1783.5	1458.9	1349.7	1276.9	1216.3	1170.8	1116.2	1076.8	1061.6	1067.7
27.5°	2365.8	1835.0	1443.8	1310.3	1225.4	1164.7	1098.0	1034.3	1010.0	1000.9	1004.0
30°	2490.2	1874.5	1410.4	1261.8	1170.8	1104.1	1016.1	973.6	943.3	919.0	922.1
32.5°	2614.6	1901.8	1364.9	1201.1	1113.2	1028.2	955.4	906.9	852.3	822.0	825.0
35°	2757.1	1923.0	1310.3	1140.5	1049.5	961.5	906.9	828.0	770.4	746.1	740.1
37.5°	2905.7	1938.2	1252.7	1073.7	985.8	913.0	858.4	761.3	706.7	673.4	670.3
40°	3066.5	1944.2	1182.9	1004.0	925.1	882.6	794.7	721.9	627.9	606.6	606.6
42.5°	3257.6	1941.2	1113.2	934.2	858.4	812.9	749.2	715.8	633.9	612.7	600.6
45°	3476.0	1941.2	1037.3	852.3	791.6	724.9	697.6	676.4	621.8	630.9	637.0
47.5°	3724.7	1935.1	946.3	785.6	737.0	679.4	664.3	618.8	597.5	603.6	609.7
50°	4067.4	1944.2	864.4	731.0	697.6	649.1	630.9	606.6	597.5	600.6	597.5
52.5°	4543.6	1913.9	785.6	697.6	667.3	603.6	603.6	600.6	603.6	600.6	600.6
55°	4804.5	1847.2	727.9	679.4	646.1	582.4	594.5	600.6	606.6	603.6	603.6
57.5°	5174.5	1801.7	682.5	667.3	633.9	576.3	588.4	600.6	603.6	600.6	600.6
60°	5611.3	1771.3	652.1	670.3	624.8	576.3	591.5	600.6	597.5	594.5	594.5
62.5°	6117.8	1759.2	630.9	679.4	615.7	579.3	591.5	600.6	588.4	585.4	585.4
65°	6308.9	1650.0	603.6	685.5	621.8	579.3	588.4	591.5	576.3	573.3	570.2
67.5°	6014.7	1462.0	564.2	673.4	640.0	579.3	579.3	576.3	558.1	555.1	549.0
70°	5356.5	1213.2	503.5	633.9	652.1	582.4	567.2	552.0	533.8	533.8	521.7
72.5°	4385.9	955.4	424.6	564.2	643.0	591.5	542.9	521.7	500.5	500.5	488.3
75°	3160.5	712.8	339.7	470.1	603.6	588.4	512.6	485.3	461.0	458.0	442.8
77.5°	1801.7	500.5	276.0	367.0	536.9	573.3	485.3	442.8	415.5	406.4	397.3
80°	925.1	336.7	224.5	288.1	445.9	530.8	464.1	394.3	364.0	348.8	333.6
82.5°	439.8	224.5	172.9	212.3	336.7	464.1	436.8	339.7	306.3	288.1	269.9
85°	197.2	133.5	115.3	136.5	239.6	360.9	385.2	279.0	239.6	300.3	221.4
87.5°	63.7	60.7	60.7	63.7	115.3	157.7	282.1	206.3	191.1	157.7	133.5
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)