The Christmas Star

Faceting design by Andrew Brown
December 2023

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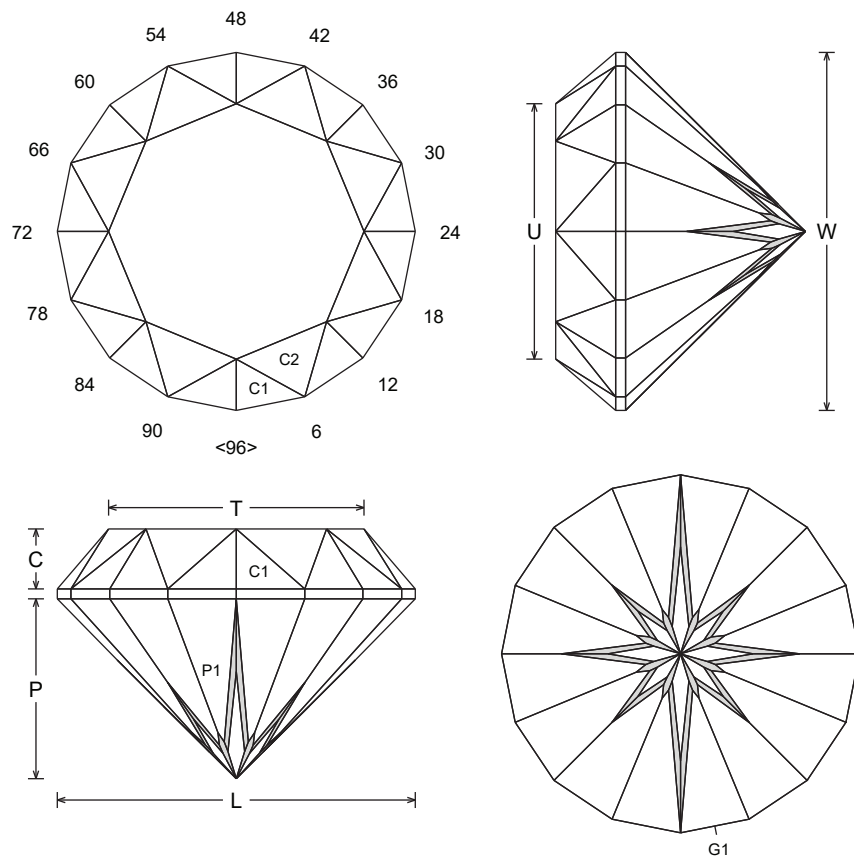https://facetingdesigns.com/

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Design Information	
Pavilion facets	44
Girdle facets	16
Crown facets	24+1
Total facets	89
Index gear	96
Symmetry	1-fold
	mirror image
RI range	1.54 to 2.30
RI diagram	1.80 to 2.30
L/W = 1.000	T/W = 0.713
U/W = 0.713	P/W = 0.502
C/W = 0.167	V/W³ = 0.245

Note: Frosted facet indexes are indicated by **bold** text in the cutting instructions. I recommend cutting this design in light color-saturated rough so the frosting and extinction stands out. I suggest only cutting it in a large stone and taking your time cutting the pavilion facets. Some tiers have similar angles and indexes, **be gentle**. Angle set "A" has a higher crown to help generate the edge patterns. You can use angle set "B" at low RI but the edge patterns will not be as nice.

RI = 1.76
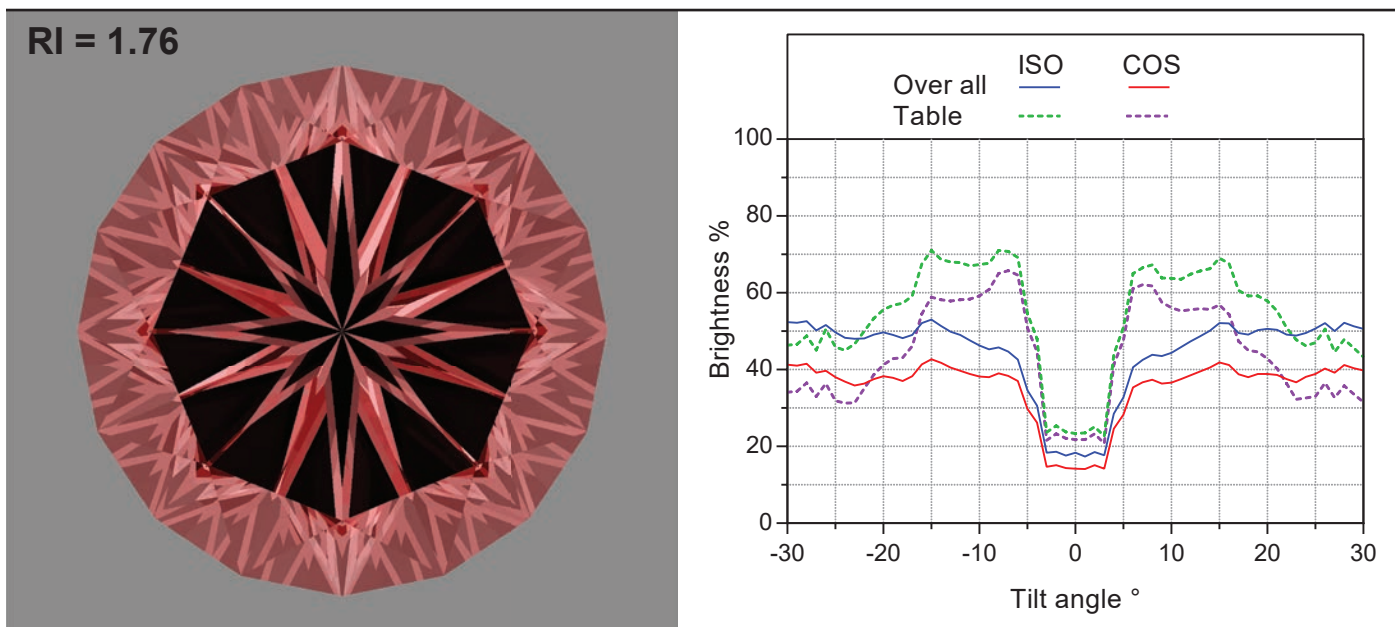
Pavilion

*A = RI 1.54 to 1.80 B = RI 1.80 to 2.30

Facets	A	B	Index	Instructions
P1	46.15°	46.15°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Form a TCP
G1	90.00°	90.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Set stone size
P2	45.33°	45.33°	**01-47-49-95**	Meet G1, P1. Form a new TCP [Frost]
P3	45.05°	45.05°	**11-13-35-37-59-61-83-85**	Meet TCP [Frost, cut slowly]
P4	45.16°	45.16°	**23-25-71-73**	Meet TCP [Frost, cut slowly]
P5	44.61°	44.61°	12-36-60-84	Float in tier as shown in the diagram. Form FCP [Cut slowly]
P6	45.07°	45.07°	96-48	Meet FCP [Cut slowly]
P7	44.78°	44.78°	24-72	Meet FCP [Cut slowly]
P8	43.89°	43.89°	**06-18-30-42-54-66-78-90**	Meet FCP [Frost, cut very slowly]

Crown

*A = RI 1.54 to 2.30

Facets	A	B	Index	Instructions
C1	59.35°	50.00°	03-09-15-21-27-33-39-45-51-57-63-69-75-81-87-93	Establish girdle width
C2	54.28°	44.50°	06-18-30-42-54-66-78-90	Meet G1, C1
T	0.00°	0.00°	Table	Meet C1, C2
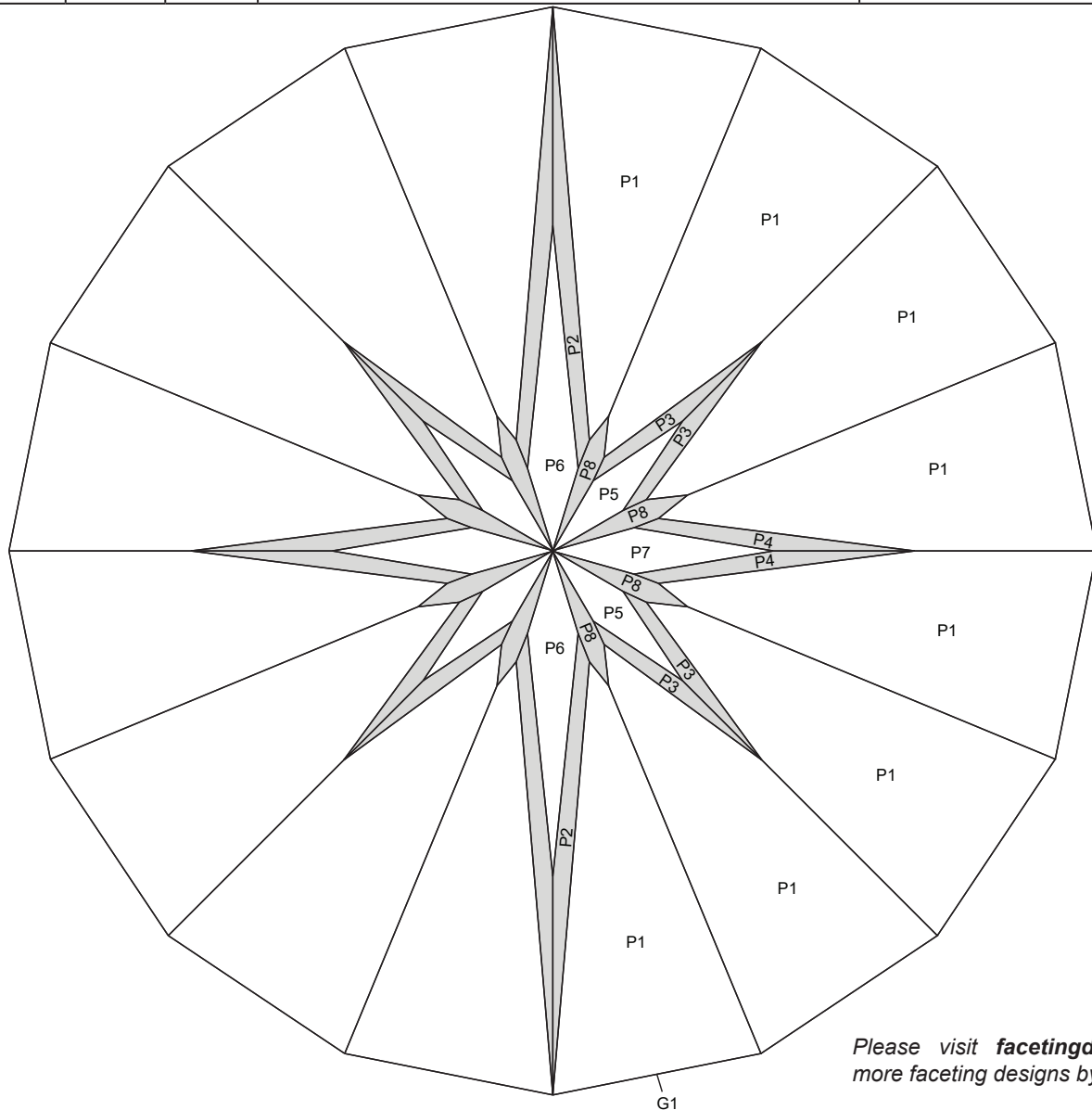
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