

**Gems & Gemology Data Depository:** Summary of brightness and fire metrics that were studied.

Metric name <sup>a</sup>	Angular spread of observation <sup>b</sup>	Degree area of darkness <sup>c</sup>	Degree area of brightness	Angle of observation position
21090g	2°	20° arc	10–90°	0°
21090ng	2°	20° arc	10–90°	0°
21190g	2°	22° arc	11–90°	0°
21290g	2°	24° arc	12–90°	0°
21390g	2°	26° arc	13–90°	0°
21490g	2°	28° arc	14–90°	0°
21590g	2°	30° arc	15–90°	0°
21690g	2°	32° arc	16–90°	0°
21790g	2°	34° arc	17–90°	0°
21890g	2°	36° arc	18–90°	0°
21990g	2°	38° arc	19–90°	0°
22090g	2°	40° arc	20–90°	0°
22090g, 12° tilt	2°	40° arc	20–90°	12°
22090g, 15° tilt	2°	40° arc	20–90°	15°
22090g, 3° tilt	2°	40° arc	20–90°	3°
22090g, 6° tilt	2°	40° arc	20–90°	6°
22090g, 9° tilt	2°	40° arc	20–90°	9°
22090ng	2°	40° arc	20–90°	0°
22190g	2°	42° arc	21–90°	0°
22290g	2°	44° arc	22–90°	0°
22390g	2°	46° arc	23–90°	0°
22490g	2°	48° arc	24–90°	0°
22585g	2°	50° arc	25–90°	0°
22585ng	2°	50° arc and 85–90°	25–85°	0°
22590g	2°	50° arc	25–90°	0°
2h2090g	2°	40° arc	20–90°	0°
2s2090g	2°	40° arc	20–90°	0°
31090g	3°	20° arc	10–90°	0°
31590g	3°	30° arc	15–90°	0°
32090g	3°	40° arc	20–90°	0°
32190g	3°	42° arc	21–90°	0°
322.590g	3°	45° arc	22.5–90°	0°
32290g	3°	44° arc	22–90°	0°
32390g	3°	46° arc	23–90°	0°
32490g	3°	48° arc	24–90°	0°
32590g	3°	50° arc	25–90°	0°
41090g	4°	20° arc	10–90°	0°
41090ng	4°	20° arc	10–90°	0°
41590g	4°	30° arc	15–90°	0°
42085g	4°	40° arc and 85–90°	20–85°	0°
42090g	4°	40° arc	20–90°	0°
42090ng	4°	40° arc	20–90°	0°
42190g	4°	42° arc	21–90°	0°

Metric name <sup>a</sup>	Angular spread of observation <sup>b</sup>	Degree area of darkness <sup>c</sup>	Degree area of brightness	Angle of observation position
42290g	4°	44° arc	22–90°	0°
42390g	4°	46° arc	23–90°	0°
42490g	4°	48° arc	24–90°	0°
42585g	4°	50° arc and 85–90°	25–85°	0°
42585g, 12° tilt	4°	50° arc and 85–90°	25–85°	12°
42585g, 15° tilt	4°	50° arc and 85–90°	25–85°	15°
42585g, 3° tilt	4°	50° arc and 85–90°	25–85°	3°
42585g, 6° tilt	4°	50° arc and 85–90°	25–85°	6°
42585g, 9° tilt	4°	50° arc and 85–90°	25–85°	9°
42585ng	4°	50° arc and 85–90°	25–85°	0°
42590g	4°	50° arc	25–90°	0°
52090g	5°	40° arc	20–90°	0°
61090g	6°	20° arc	10–90°	0°
61090ng	6°	20° arc	10–90°	0°
62090g	6°	40° arc	20–90°	0°
62090ng	6°	40° arc	20–90°	0°
62585g	6°	50° arc and 85–90°	25–85°	0°
62585ng	6°	50° arc and 85–90°	25–85°	0°
81090g	8°	20° arc	10–90°	0°
81090ng	8°	20° arc	10–90°	0°
82090g	8°	40° arc	20–90°	0°
82090ng	8°	40° arc	20–90°	0°
82585g	8°	50° arc and 85–90°	25–85°	0°
82585ng	8°	50° arc and 85–90°	25–85°	0°
WLR <sup>d</sup>	180° (cosine <sup>2</sup> weighted)	0°	0–90°	0°
DCLR <sup>e</sup> 0.50	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 0.75	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 1.00	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 1.25	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 2.00	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 2.50	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 2.75	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 3.00	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 3.25	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 3.35	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 3.50	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°
DCLR 4.00	180° (cosine <sup>2</sup> weighted)	360° (other than light beam)	0–90°	0°

<sup>a</sup> Metric names listed contain g (glare included) and ng (glare excluded). “Tilt” describes the angle from the azimuth at which observation was considered for calculation.

<sup>b</sup> The total angle through which an aspect was considered for calculation.

<sup>c</sup> Arc” is the total angle (with its center located at the azimuth, or directly over the diamond table) that is darkened, thereby forming a circle. Darkness ranges listed are considered from the azimuth (which is considered to be at 0°).

<sup>d</sup> Weighted Light Return; see Hemphill et al. (1998).

<sup>e</sup> Dispersed Colored Light Return; see Reinitz et al. (2001).