



## Light Measurement Report

Print date: 10/3/2025

Measurement date and time: 9/29/2025 3:40:11 PM – Measurement no. VFR-250929-0174-MS

Operator: Shawn Blaszak

### Tested Light Source

Product Name Dram: DR-L-PC54\_PC98-MTP-27-1\_10V\_UNV  
Manufacturer RBW  
Product Description Dram-Large-Glossy White\_Penny Vein-Matte PET-2700K-1% Dimming, 0-10V Control, 120V-277V "Universal Input" (Driver External), Input Current: 400mA, Driver Model: ERP ESS020W-0400-42



### Summary of Results

Total Lumen Output 1420 lm  
Luminaire Efficacy 84 lm/W  
Peak Intensity and Beam Angle 639 cd - 99.5°  
Color Rendering TM13-18 R<sub>r</sub> 91.0 – R<sub>g</sub> 97.5  
Color Shift, CIE duv Duv 0.0012  
MacAdams Steps 3  
Flicker SVM 0.42 – PstLM 0.01  
Input Power, Power and Displ. Factors 16.8 W – PF 0.99 – DPF 1.0  
Input RMS Voltage and Current 119 V – 0.142 A  
Frequency of Input Power 60 Hz

#### Light Quality

CRI: 91.2

#### Color Temperature

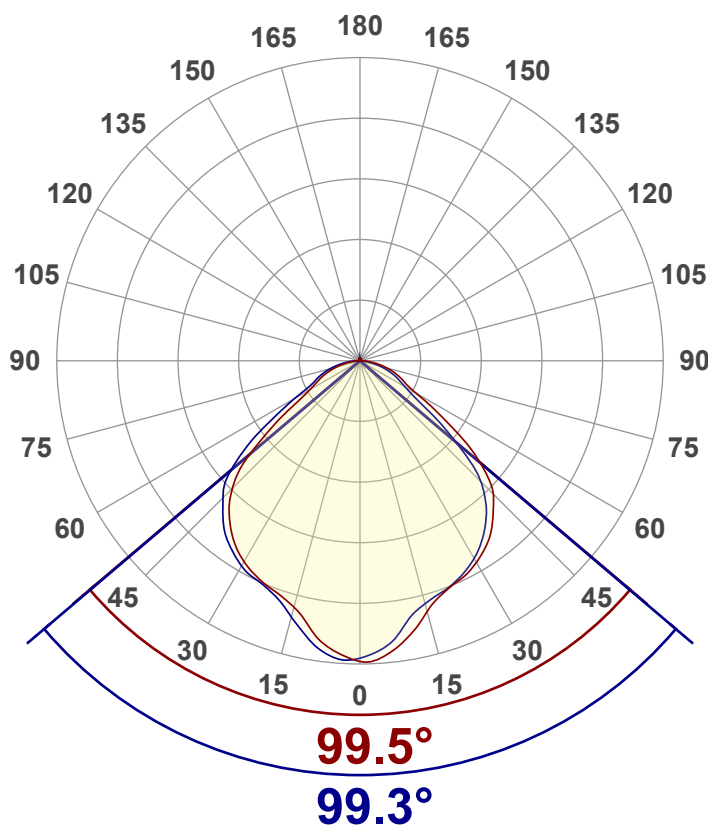
2656 K

#### Color Match

CIE1931  
x: {CIEx#}  
y: {CIEy#}

### Luminous Intensity diagram

Unit: 0-100% of peak intensity



### Main Values

Output (total Lumen) 1420 lm  
Lumen Up% / Down% 1.42% / 98.58%  
Peak Intensity 639 cd  
Beam Angle (50%-FWHM) 99.46°

### Cut-off Angle

Average 2,5% 169.9°

### Field Angle

Average 10% 146.2°

### Intensity Ratio

In 120° cone 86.2%  
In 90° cone 62.8%

C000-C180

C090-C270



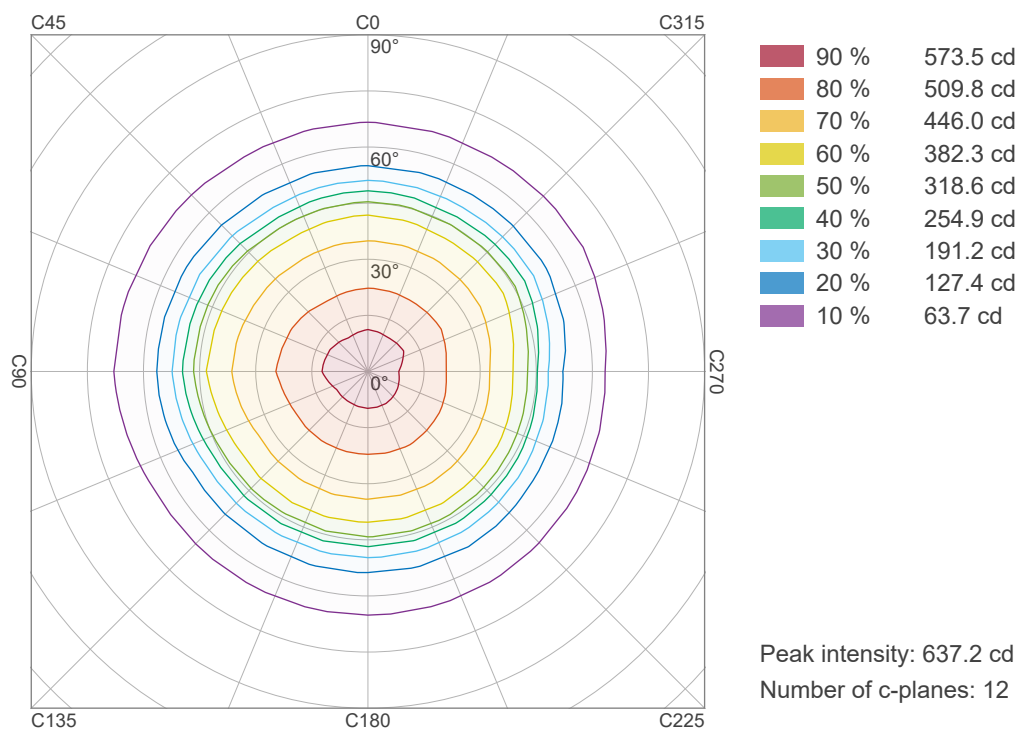
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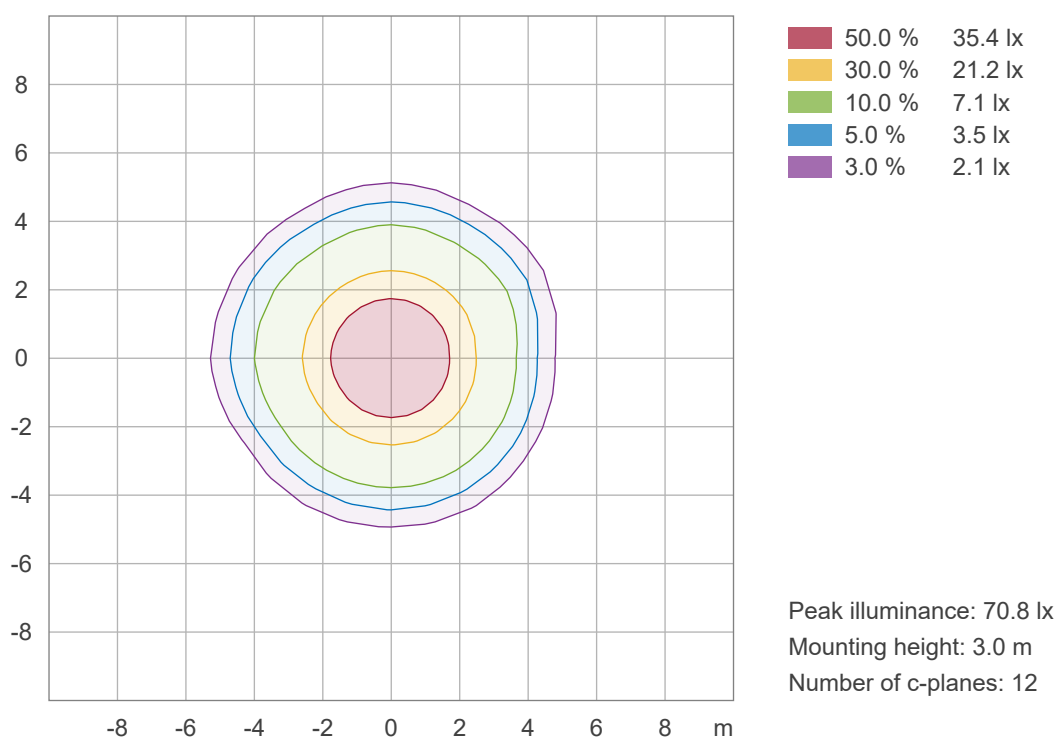
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### Iso-intensity Diagram (Iso-candela)



### Iso-illuminance Diagram (Iso-lux)





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### Color details

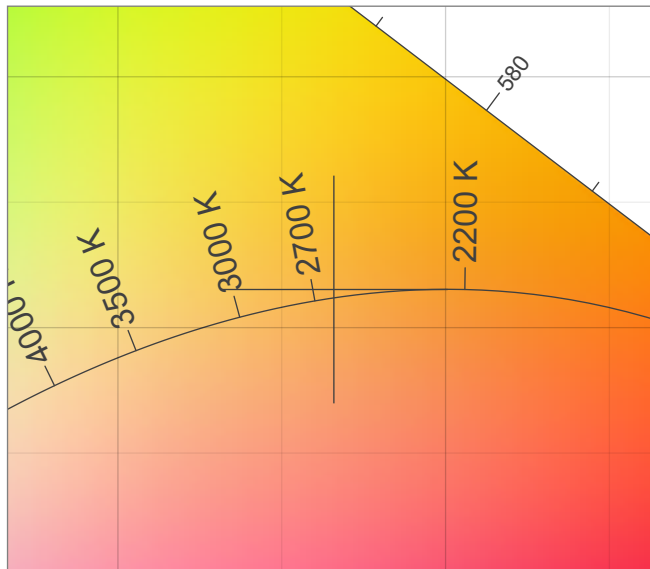
Correlated Color Temperature, Target CCT = 2656 K  
Correlated Color Temperature, Measured CCT = 2656 K  
Color Rendering Index CRI 91.2  
Color Rendering Index, R9 (red component) R9 = 48.4  
Color Rendering TM30-18 R<sub>f</sub> 91.0 – R<sub>g</sub> 97.5  
Color Quality Scale CQS = 89.4

MacAdam Steps 3  
Color coordinates CIE 1931 (x;y) = (0.466;0.415)  
Color coordinate CIEs 1960 (u;v) = (0.264;0.353)  
Color deviation from BBL Duv = 0.0012  
Color coordinate CIEs 1976 (CIELUV)(u';v') = (0.264;0.530)

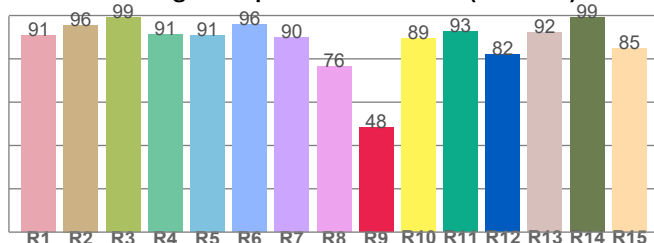
#### CIE 1931



#### CIE 1931 – zoomed on Planckian locus



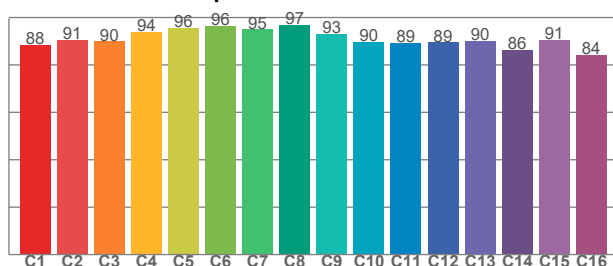
#### Color Rendering Index per reference color (CIE 1995)



CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
90.9	95.7	99.2	91.3	90.8	95.9	89.9	76.4	48.4	89.4	92.8	82.2	92.2	99.0	84.9

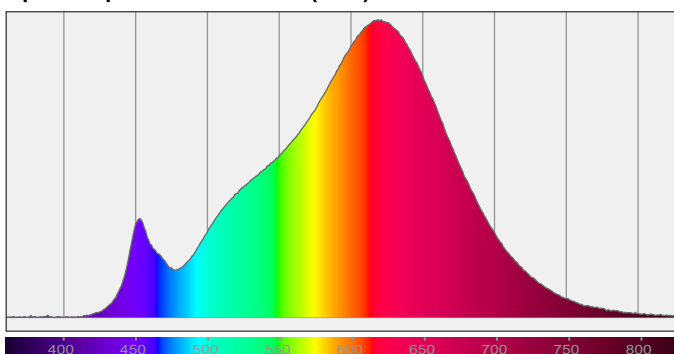
#### TM30-18 R<sub>f</sub>-values per hue bin



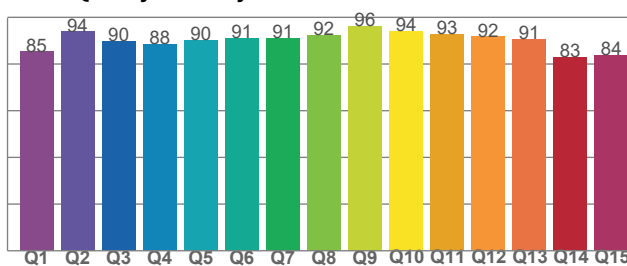
TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
88.3	90.5	89.9	93.9	95.6	96.4	94.9	96.8	93.0	89.7	89.4	89.4	90.1	86.3	90.6	84.1

#### Spectral power distribution (SPD) / W/nm – 0-100%



#### Color Quality Scale by reference color



CQS Q values

Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
85.4	93.9	89.7	88.5	90.3	91.0	91.0	92.3	96.1	94.1	92.8	91.8	90.7	83.0	83.9



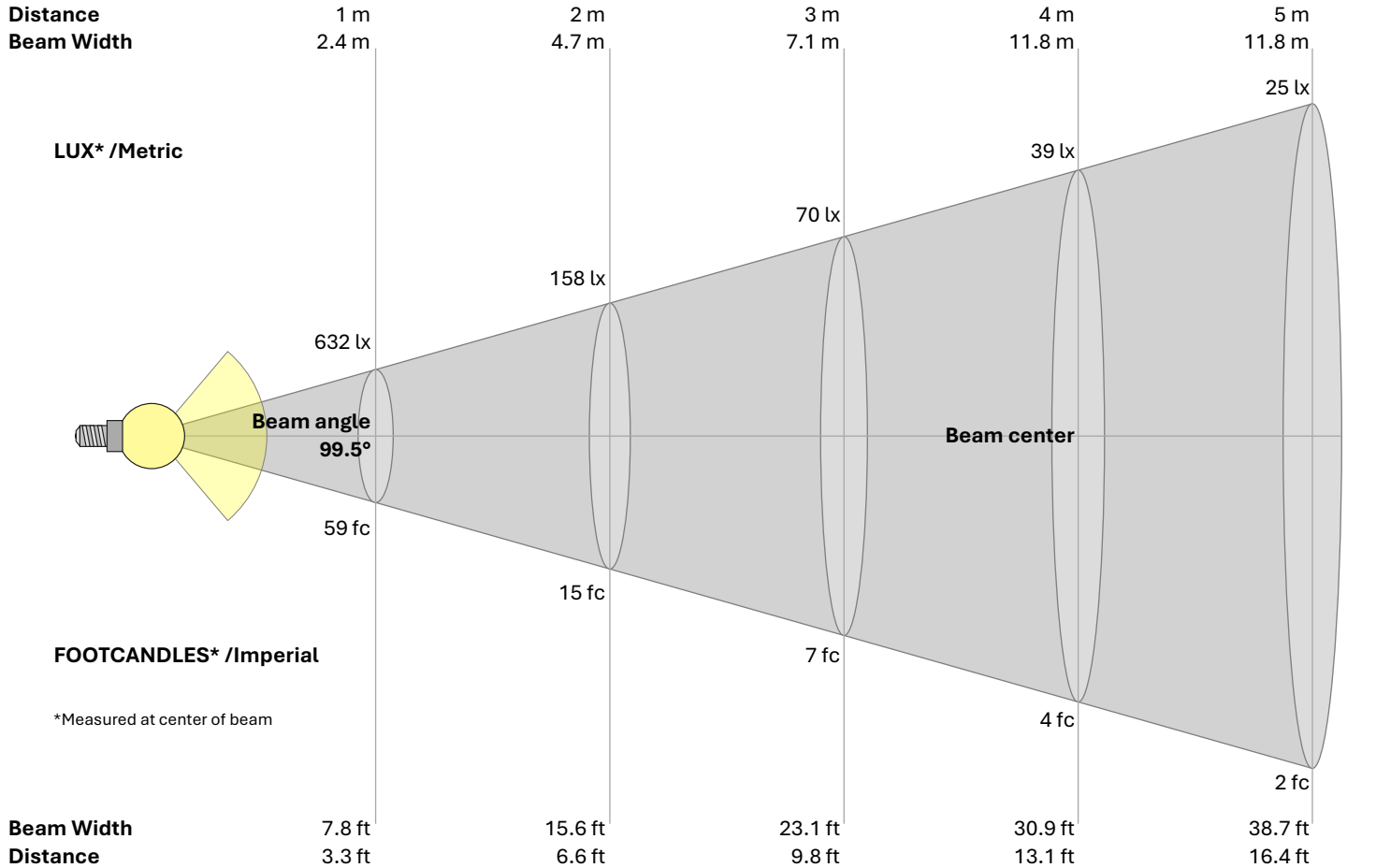
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### Beam Details



#### Beam intensities from 1 – 20 m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6	ft
632	158	70	39	25	18	13	10	8	6	5	4	4	3	3	2	2	2	2	2	lux
58.7	14.7	6.5	3.7	2.3	1.6	1.2	0.9	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	fc

#### Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
632	624	593	552	524	509	493	470	437	396	326	227	143	103	81	59	38	19	5	1	cd
100%	99%	94%	87%	83%	81%	78%	74%	69%	63%	52%	36%	23%	16%	13%	9%	6%	3%	1%	0%	of 0°val

#### Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
632	607	565	535	519	504	483	454	415	358	262	165	113	87	66	44	25	9	3	2	cd
100%	96%	90%	85%	82%	80%	76%	72%	66%	57%	41%	26%	18%	14%	10%	7%	4%	1%	0%	0%	of 0°val

#### Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
632	616	582	543	522	509	491	465	429	379	299	196	126	96	74	52	31	14	3	2	cd
100%	98%	92%	86%	83%	81%	78%	74%	68%	60%	47%	31%	20%	15%	12%	8%	5%	2%	1%	0%	of 0°val

#### Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	γ
632	629	602	563	531	514	501	479	449	409	351	257	164	110	88	66	44	24	8	1	cd
100%	100%	95%	89%	84%	81%	79%	76%	71%	65%	55%	41%	26%	17%	14%	10%	7%	4%	1%	0%	of 0°val