

IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR2AENG-L33-827-CA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #4792155668.03

[TESTLAB] UL, LLC

[ISSUE DATE] 2026-08-07

[TEST DATE] 3/17/2026

[MANUFAC] H E Williams Inc

[LUMCAT] CMR2AENG-L33-827-CA-DIM-UNV (A,E&N)

[LUMINAIRE] 2' x 2' multi-function recessed troffer with door frame; door

[MORE] frame has arrangement of curved diffused acrylic lenses

[OTHER] This test was performed using the calibrated photodetector method

[MORE] of absolute photometry.

[OTHER] The reported results were measured in a facility that meets the

[MORE] requirements of ANSI/IES LM-75-19. The device under test emits no

[MORE] detectable uplight as defined by ANSI/IES LM-75-19.

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8729
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	78.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.75 ft
Luminous Width (90-270)	1.75 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10550	10116	9835
55	9490	9250	9004
65	8200	8110	7880
75	6385	6122	5704
85	3694	1672	1059

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	3691.155	3691.155	3691.155	3691.155	3691.155	3691.155	3691.155	3691.155	3691.155	3691.155
5	3677.635	3665.980	3665.947	3655.623	3649.120	3653.424	3661.793	3659.626	3671.386	3660.045
10	3611.542	3598.153	3583.360	3561.639	3548.612	3557.345	3574.912	3585.760	3596.879	3584.817
15	3500.839	3479.845	3449.921	3411.308	3390.022	3404.919	3436.620	3459.737	3475.459	3457.398
20	3346.999	3320.084	3269.480	3218.414	3184.131	3209.931	3250.907	3290.934	3308.457	3286.779
25	3157.914	3123.864	3058.361	2992.184	2961.714	2981.606	3033.679	3084.031	3104.675	3078.341
30	2930.761	2894.101	2818.199	2754.781	2723.300	2742.283	2786.884	2843.027	2865.407	2836.708
35	2681.587	2642.403	2565.039	2504.613	2478.639	2490.509	2527.230	2582.565	2609.461	2577.224
40	2413.505	2374.543	2300.190	2251.164	2230.875	2235.908	2257.179	2310.726	2340.988	2306.816
45	2124.457	2094.353	2037.141	1998.782	1980.541	1982.444	1991.862	2030.774	2054.464	2028.082
50	1837.334	1816.041	1776.006	1740.084	1725.100	1723.083	1731.973	1756.860	1772.637	1754.982
55	1550.186	1538.330	1510.881	1478.522	1470.791	1461.555	1470.674	1485.890	1492.877	1484.518
60	1265.692	1267.459	1240.968	1220.727	1212.650	1204.780	1206.958	1223.066	1216.667	1221.977
65	986.913	999.487	976.037	956.161	948.445	942.298	949.257	964.060	946.822	963.131
70	719.078	735.991	710.481	689.779	680.736	679.648	691.919	710.272	688.322	709.553
75	470.614	482.305	451.203	429.240	420.443	423.983	440.848	466.016	449.165	465.503
80	255.267	254.681	219.085	192.348	179.323	190.979	215.496	246.977	242.493	246.669
85	91.677	73.787	41.496	27.816	26.274	27.764	41.101	72.335	86.570	72.195
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	3691.155	3691.155	3691.155	3691.155	3691.155	3691.155	3691.155
5	3661.932	3653.563	3649.260	3655.623	3665.109	3664.269	3677.635
10	3574.493	3557.205	3548.891	3561.569	3582.453	3596.233	3611.542
15	3435.503	3404.430	3390.197	3411.273	3449.013	3477.855	3500.839
20	3248.813	3209.163	3184.235	3218.135	3268.712	3318.129	3346.999
25	3030.502	2980.349	2961.854	2991.730	3057.174	3121.700	3157.914
30	2782.729	2740.572	2723.230	2754.257	2816.907	2891.657	2930.761
35	2522.168	2488.205	2478.324	2504.264	2563.363	2639.819	2681.587
40	2252.292	2233.255	2230.142	2251.094	2298.200	2371.471	2413.505
45	1987.987	1979.267	1979.913	1998.433	2035.082	2090.618	2124.457
50	1729.034	1719.801	1724.262	1739.491	1774.191	1812.271	1837.334
55	1468.751	1458.273	1470.023	1477.893	1508.856	1534.630	1550.186
60	1205.628	1201.788	1212.126	1220.274	1238.978	1263.584	1265.692

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CANDELA TABULATION - (Cont.)

65	948.304	939.885	947.897	955.637	974.152	995.752	986.913
70	691.291	678.216	680.264	689.363	708.624	732.576	719.078
75	440.475	423.340	420.318	429.041	449.723	479.254	470.614
80	215.329	190.798	179.396	192.306	218.205	252.297	255.267
85	41.074	27.771	26.348	27.893	41.283	72.866	91.677
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000
95	0.000	0.000	0.000	0.000	0.000	0.000	0.000
100	0.000	0.000	0.000	0.000	0.000	0.000	0.000
105	0.000	0.000	0.000	0.000	0.000	0.000	0.000
110	0.000	0.000	0.000	0.000	0.000	0.000	0.000
115	0.000	0.000	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1314.98	N.A.	15.10
0-30	2716.6	N.A.	31.10
0-40	4314.19	N.A.	49.40
0-60	7212.52	N.A.	82.60
0-80	8642.77	N.A.	99.00
0-90	8729.28	N.A.	100.00
10-90	8382.5	N.A.	96.00
20-40	2999.2	N.A.	34.40
20-50	4562.71	N.A.	52.30
40-70	3851.19	N.A.	44.10
60-80	1430.25	N.A.	16.40
70-80	477.39	N.A.	5.50
80-90	86.51	N.A.	1.00
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	8729.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	346.78
10-20	968.20
20-30	1401.62
30-40	1597.59
40-50	1563.5
50-60	1334.83
60-70	952.86
70-80	477.39
80-90	86.51
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	87	85
2	100	92	86	80	98	90	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	73	64	58	82	71	64	57	69	62	57	67	61	56	64	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	44	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	49	43	38	36
8	62	49	41	35	61	48	41	35	47	40	35	46	39	35	45	39	34	33
9	58	45	37	32	57	45	37	32	43	36	32	42	36	31	41	36	31	29
10	55	42	34	29	53	41	34	29	40	33	29	39	33	29	38	33	28	27

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UGR TABLE - CORRECTED

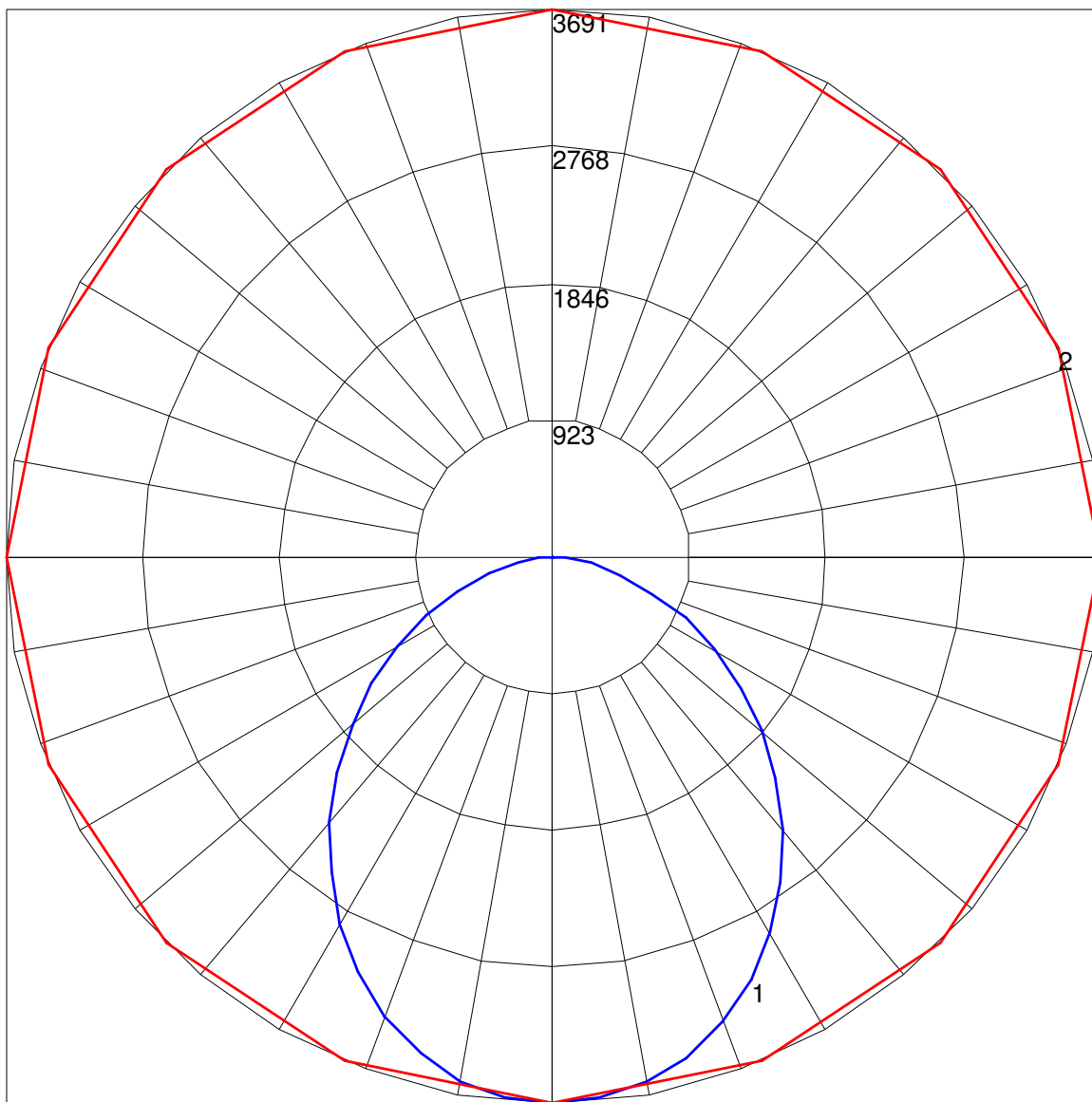
Reflectances

Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20

Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	19.8	21.4	20.2	21.7	22.0	19.5	21.1	19.9	21.4	21.7
	3H	21.4	22.8	21.8	23.1	23.5	21.1	22.5	21.4	22.8	23.2
	4H	21.9	23.3	22.3	23.6	24.0	21.5	22.9	21.9	23.2	23.6
	6H	22.3	23.5	22.7	23.9	24.3	21.8	23.0	22.2	23.4	23.8
	8H	22.4	23.5	22.8	23.9	24.3	21.8	23.0	22.2	23.4	23.8
	12H	22.4	23.5	22.8	23.9	24.3	21.8	22.9	22.2	23.3	23.7
4H	2H	20.4	21.7	20.8	22.0	22.4	20.1	21.4	20.5	21.8	22.2
	3H	22.2	23.3	22.6	23.7	24.1	21.8	23.0	22.3	23.4	23.8
	4H	22.8	23.8	23.2	24.2	24.7	22.4	23.4	22.9	23.8	24.3
	6H	23.3	24.1	23.7	24.6	25.0	22.7	23.6	23.2	24.0	24.5
	8H	23.4	24.2	23.8	24.6	25.1	22.8	23.6	23.2	24.0	24.5
	12H	23.4	24.2	23.9	24.6	25.1	22.8	23.5	23.2	24.0	24.4
8H	4H	23.0	23.8	23.5	24.3	24.7	22.6	23.5	23.1	23.9	24.4
	6H	23.5	24.2	24.0	24.7	25.2	23.0	23.7	23.5	24.2	24.6
	8H	23.7	24.3	24.2	24.8	25.3	23.1	23.7	23.6	24.2	24.7
	12H	23.8	24.3	24.3	24.8	25.4	23.1	23.6	23.6	24.1	24.7
12H	4H	23.0	23.7	23.5	24.2	24.7	22.7	23.4	23.1	23.9	24.3
	6H	23.6	24.2	24.1	24.6	25.2	23.0	23.6	23.6	24.1	24.6
	8H	23.7	24.3	24.2	24.8	25.3	23.1	23.7	23.6	24.1	24.7

Maximum UGR = 25.4

POLAR GRAPH



Maximum Candela = 3691.155 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)