

IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR2AENG-L33-840-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-L33-840-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	9269
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	119
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	11203	10742	10444
55	10077	9822	9561
65	8707	8611	8368
75	6780	6500	6057
85	3922	1775	1124

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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	3919.474	3919.474	3919.474	3919.474	3919.474	3919.474	3919.474	3919.474	3919.474	3919.474
5	3905.118	3892.742	3892.707	3881.744	3874.839	3879.409	3888.296	3885.995	3898.482	3886.440
10	3834.936	3820.720	3805.012	3781.946	3768.113	3777.386	3796.041	3807.560	3819.367	3806.559
15	3717.386	3695.093	3663.318	3622.317	3599.714	3615.533	3649.194	3673.741	3690.436	3671.257
20	3554.030	3525.450	3471.716	3417.491	3381.087	3408.483	3451.994	3494.496	3513.104	3490.085
25	3353.249	3317.093	3247.538	3177.267	3144.913	3166.035	3221.329	3274.796	3296.717	3268.753
30	3112.045	3073.118	2992.520	2925.180	2891.752	2911.908	2959.268	3018.884	3042.649	3012.174
35	2847.459	2805.850	2723.701	2659.538	2631.956	2644.561	2683.554	2742.312	2770.871	2736.640
40	2562.794	2521.422	2442.469	2390.411	2368.867	2374.211	2396.799	2453.657	2485.792	2449.505
45	2255.867	2223.901	2163.150	2122.418	2103.049	2105.069	2115.070	2156.389	2181.544	2153.530
50	1950.983	1928.374	1885.862	1847.718	1831.807	1829.665	1839.106	1865.532	1882.285	1863.538
55	1646.074	1633.485	1604.338	1569.976	1561.768	1551.960	1561.644	1577.801	1585.220	1576.344
60	1343.982	1345.859	1317.729	1296.236	1287.659	1279.303	1281.615	1298.720	1291.925	1297.563
65	1047.960	1061.311	1036.411	1015.305	1007.111	1000.584	1007.974	1023.692	1005.388	1022.706
70	763.557	781.516	754.429	732.446	722.843	721.688	734.718	754.206	730.899	753.443
75	499.725	512.138	479.112	455.791	446.450	450.208	468.117	494.841	476.949	494.297
80	271.056	270.435	232.637	204.246	190.415	202.792	228.826	262.253	257.492	261.927
85	97.348	78.352	44.063	29.536	27.900	29.481	43.644	76.809	91.925	76.661
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	3919.474	3919.474	3919.474	3919.474	3919.474	3919.474	3919.474
5	3888.444	3879.557	3874.987	3881.744	3891.817	3890.925	3905.118
10	3795.596	3777.238	3768.410	3781.872	3804.048	3818.681	3834.936
15	3648.008	3615.014	3599.900	3622.279	3662.354	3692.980	3717.386
20	3449.770	3407.668	3381.198	3417.195	3470.900	3523.374	3554.030
25	3217.956	3164.700	3145.062	3176.785	3246.277	3314.795	3353.249
30	2954.857	2910.092	2891.677	2924.624	2991.149	3070.523	3112.045
35	2678.179	2642.115	2631.623	2659.167	2721.922	2803.107	2847.459
40	2391.609	2371.394	2368.089	2390.337	2440.356	2518.160	2562.794
45	2110.955	2101.696	2102.381	2122.047	2160.963	2219.935	2255.867
50	1835.984	1826.181	1830.917	1847.088	1883.935	1924.370	1950.983
55	1559.601	1548.476	1560.952	1569.309	1602.188	1629.555	1646.074
60	1280.203	1276.126	1287.103	1295.754	1315.616	1341.744	1343.982

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CANDELA TABULATION - (Cont.)

65	1006.962	998.023	1006.529	1014.749	1034.409	1057.345	1047.960
70	734.051	720.168	722.343	732.005	752.457	777.890	763.557
75	467.721	449.526	446.317	455.580	477.541	508.899	499.725
80	228.648	202.600	190.493	204.201	231.703	267.903	271.056
85	43.614	29.488	27.977	29.618	43.837	77.373	97.348
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	1396.32	N.A.	15.10
0-30	2884.64	N.A.	31.10
0-40	4581.04	N.A.	49.40
0-60	7658.66	N.A.	82.60
0-80	9177.37	N.A.	99.00
0-90	9269.24	N.A.	100.00
10-90	8901.01	N.A.	96.00
20-40	3184.72	N.A.	34.40
20-50	4844.94	N.A.	52.30
40-70	4089.41	N.A.	44.10
60-80	1518.72	N.A.	16.40
70-80	506.92	N.A.	5.50
80-90	91.87	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	9269.24	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	368.23
10-20	1028.09
20-30	1488.32
30-40	1696.41
40-50	1660.22
50-60	1417.4
60-70	1011.79
70-80	506.92
80-90	91.87
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

X=2H	Y=2H	20.0	21.6	20.4	21.9	22.2	19.7	21.3	20.1	21.6	21.9
	3H	21.6	23.0	22.0	23.4	23.7	21.3	22.7	21.6	23.0	23.4
	4H	22.1	23.5	22.5	23.8	24.2	21.7	23.1	22.1	23.4	23.8
	6H	22.5	23.7	22.9	24.1	24.5	22.0	23.2	22.4	23.6	24.0
	8H	22.6	23.7	23.0	24.1	24.5	22.0	23.2	22.4	23.6	24.0
	12H	22.6	23.7	23.0	24.1	24.5	22.0	23.1	22.4	23.5	23.9

UGR Viewed Endwise

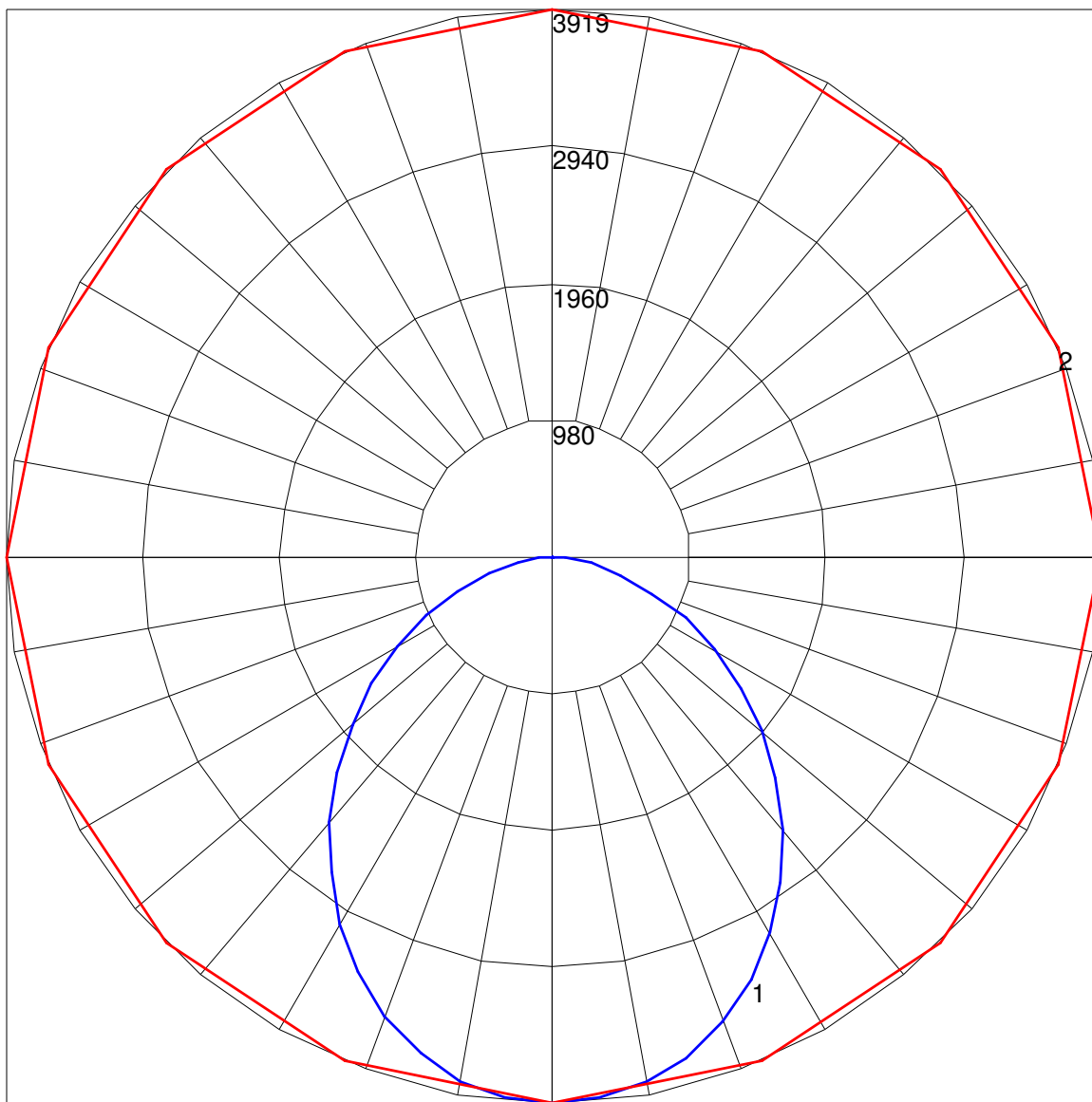
4H	2H	20.6	21.9	21.0	22.2	22.6	20.3	21.6	20.7	22.0	22.4
	3H	22.4	23.5	22.8	23.9	24.3	22.0	23.2	22.5	23.6	24.0
	4H	23.0	24.0	23.4	24.4	24.9	22.6	23.6	23.1	24.0	24.5
	6H	23.5	24.3	23.9	24.8	25.2	22.9	23.8	23.4	24.2	24.7
	8H	23.6	24.4	24.0	24.8	25.3	23.0	23.8	23.4	24.2	24.7
	12H	23.6	24.4	24.1	24.8	25.3	23.0	23.7	23.4	24.2	24.6

8H	4H	23.2	24.0	23.7	24.5	24.9	22.8	23.7	23.3	24.1	24.6
	6H	23.7	24.4	24.2	24.9	25.4	23.2	23.9	23.7	24.4	24.8
	8H	23.9	24.5	24.4	25.0	25.5	23.3	23.9	23.8	24.4	24.9
	12H	24.0	24.5	24.5	25.0	25.6	23.3	23.8	23.8	24.3	24.9

12H	4H	23.2	23.9	23.7	24.4	24.9	22.9	23.6	23.3	24.1	24.5
	6H	23.8	24.4	24.3	24.8	25.4	23.2	23.8	23.8	24.3	24.8
	8H	23.9	24.5	24.4	25.0	25.5	23.3	23.9	23.8	24.3	24.9

Maximum UGR = 25.6

POLAR GRAPH



Maximum Candela = 3919.474 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.)