

IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR2AENG-L33-950-CA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #4792155668.03

[TESTLAB] UL, LLC

[ISSUEDATE] 2026-08-07

[TESTDATE] 3/17/2026

[MANUFAC] H E Williams Inc

[LUMCAT] CMR2AENG-L33-950-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	8009
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
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	9680	9282	9024
55	8708	8487	8262
65	7524	7441	7231
75	5858	5617	5234
85	3389	1534	971

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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	3386.730	3386.730	3386.730	3386.730	3386.730	3386.730	3386.730	3386.730	3386.730	3386.730
5	3374.325	3363.631	3363.601	3354.128	3348.162	3352.110	3359.789	3357.801	3368.592	3358.186
10	3313.683	3301.398	3287.826	3267.895	3255.943	3263.955	3280.074	3290.027	3300.229	3289.162
15	3212.110	3192.848	3165.391	3129.963	3110.433	3124.101	3153.187	3174.397	3188.823	3172.251
20	3070.958	3046.263	2999.832	2952.978	2921.522	2945.194	2982.791	3019.516	3035.595	3015.705
25	2897.468	2866.226	2806.125	2745.406	2717.449	2735.700	2783.479	2829.678	2848.620	2824.457
30	2689.048	2655.412	2585.770	2527.582	2498.698	2516.115	2557.038	2608.550	2629.085	2602.752
35	2460.425	2424.473	2353.489	2298.047	2274.215	2285.107	2318.799	2369.570	2394.248	2364.669
40	2214.453	2178.704	2110.483	2065.501	2046.885	2051.503	2071.020	2120.150	2147.917	2116.563
45	1949.244	1921.623	1869.130	1833.934	1817.197	1818.943	1827.585	1863.287	1885.024	1860.818
50	1685.801	1666.265	1629.532	1596.572	1582.823	1580.973	1589.130	1611.964	1626.440	1610.241
55	1422.336	1411.457	1386.272	1356.582	1349.489	1341.014	1349.381	1363.343	1369.753	1362.084
60	1161.305	1162.926	1138.621	1120.049	1112.637	1105.417	1107.415	1122.195	1116.323	1121.195
65	905.519	917.056	895.539	877.302	870.223	864.583	870.968	884.550	868.733	883.698
70	659.773	675.290	651.885	632.890	624.593	623.594	634.854	651.693	631.553	651.033
75	431.801	442.527	413.990	393.839	385.768	389.015	404.490	427.581	412.121	427.111
80	234.214	233.677	201.016	176.484	164.533	175.228	197.724	226.607	222.493	226.326
85	84.116	67.702	38.074	25.522	24.107	25.474	37.712	66.369	79.430	66.241
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	3386.730	3386.730	3386.730	3386.730	3386.730	3386.730	3386.730
5	3359.917	3352.238	3348.290	3354.128	3362.832	3362.062	3374.325
10	3279.690	3263.827	3256.199	3267.831	3286.993	3299.637	3313.683
15	3152.162	3123.653	3110.593	3129.931	3164.558	3191.022	3212.110
20	2980.869	2944.490	2921.618	2952.722	2999.128	3044.469	3070.958
25	2780.564	2734.547	2717.577	2744.989	2805.036	2864.240	2897.468
30	2553.226	2514.546	2498.634	2527.102	2584.585	2653.170	2689.048
35	2314.154	2282.992	2273.926	2297.727	2351.952	2422.102	2460.425
40	2066.536	2049.069	2046.212	2065.437	2108.657	2175.886	2214.453
45	1824.029	1816.028	1816.621	1833.614	1867.240	1918.196	1949.244
50	1586.433	1577.962	1582.055	1596.028	1627.866	1662.805	1685.801
55	1347.617	1338.003	1348.784	1356.005	1384.414	1408.062	1422.336
60	1106.195	1102.672	1112.157	1119.632	1136.795	1159.371	1161.305

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CANDELA TABULATION - (Cont.)

65	870.094	862.369	869.720	876.822	893.810	913.628	905.519
70	634.277	622.281	624.160	632.509	650.181	672.158	659.773
75	404.147	388.426	385.652	393.656	412.632	439.728	431.801
80	197.570	175.062	164.601	176.446	200.209	231.489	234.214
85	37.686	25.480	24.175	25.592	37.878	66.856	84.116
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	1206.53	N.A.	15.10
0-30	2492.55	N.A.	31.10
0-40	3958.38	N.A.	49.40
0-60	6617.67	N.A.	82.60
0-80	7929.96	N.A.	99.00
0-90	8009.34	N.A.	100.00
10-90	7691.16	N.A.	96.00
20-40	2751.85	N.A.	34.40
20-50	4186.4	N.A.	52.30
40-70	3533.57	N.A.	44.10
60-80	1312.29	N.A.	16.40
70-80	438.02	N.A.	5.50
80-90	79.38	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	8009.34	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	318.18
10-20	888.35
20-30	1286.02
30-40	1465.83
40-50	1434.56
50-60	1224.74
60-70	874.27
70-80	438.02
80-90	79.38
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

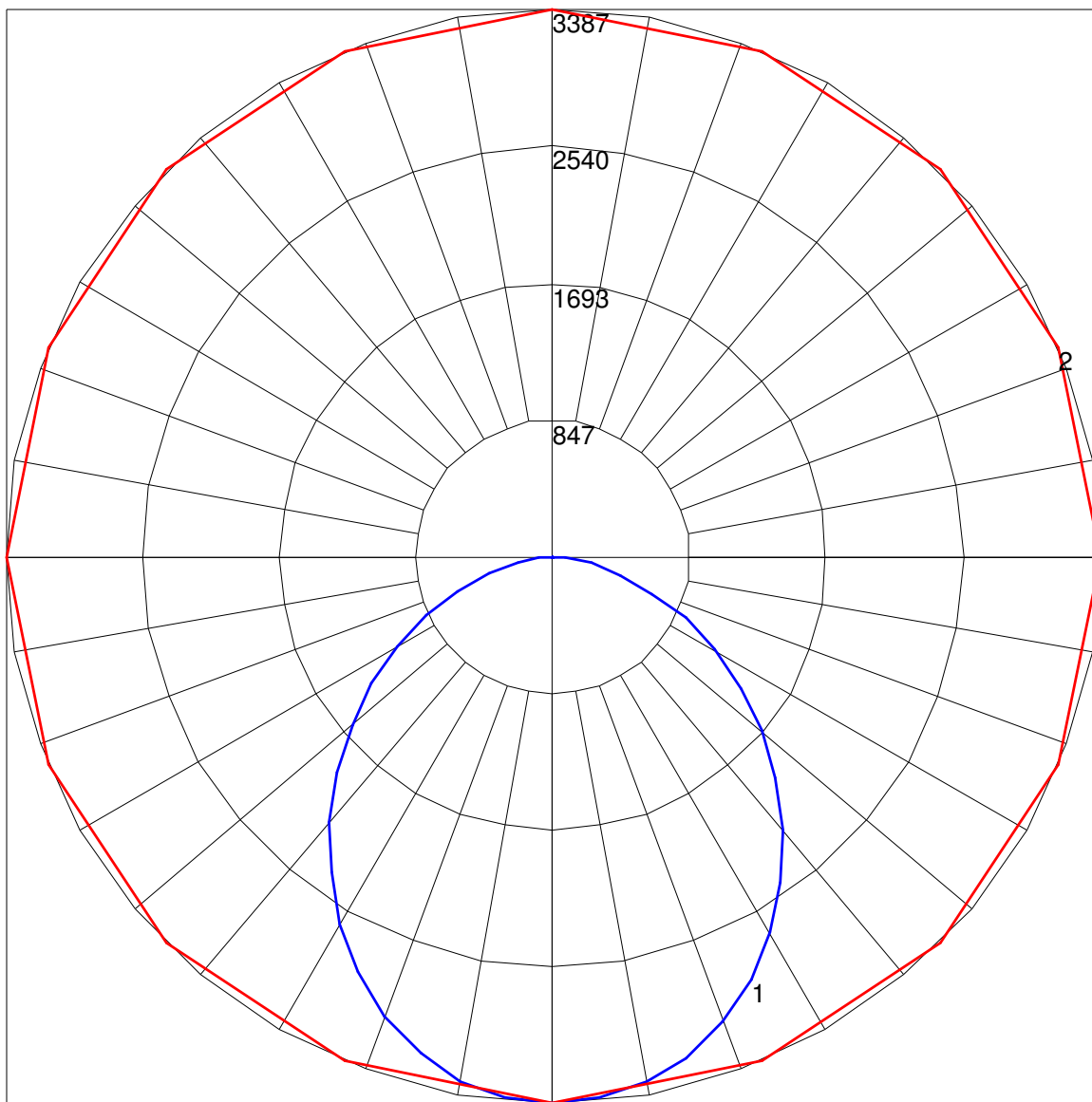
Reflectances

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	19.5	21.1	19.9	21.4	21.7	19.2	20.8	19.6	21.1	21.4
	3H	21.1	22.5	21.5	22.8	23.2	20.8	22.2	21.1	22.5	22.9
	4H	21.6	23.0	22.0	23.3	23.7	21.2	22.6	21.6	22.9	23.3
	6H	22.0	23.2	22.4	23.6	24.0	21.5	22.7	21.9	23.1	23.5
	8H	22.1	23.2	22.5	23.6	24.0	21.5	22.7	21.9	23.1	23.5
	12H	22.1	23.2	22.5	23.6	24.0	21.5	22.6	21.9	23.0	23.4
4H	2H	20.1	21.4	20.5	21.7	22.1	19.8	21.1	20.2	21.5	21.9
	3H	21.9	23.0	22.3	23.4	23.8	21.5	22.7	22.0	23.1	23.5
	4H	22.5	23.5	22.9	23.9	24.4	22.1	23.1	22.6	23.5	24.0
	6H	23.0	23.8	23.4	24.3	24.7	22.4	23.3	22.9	23.7	24.2
	8H	23.1	23.9	23.5	24.3	24.8	22.5	23.3	22.9	23.7	24.2
	12H	23.1	23.9	23.6	24.3	24.8	22.5	23.2	22.9	23.7	24.1
8H	4H	22.7	23.5	23.2	24.0	24.4	22.3	23.2	22.8	23.6	24.1
	6H	23.2	23.9	23.7	24.4	24.9	22.7	23.4	23.2	23.9	24.3
	8H	23.4	24.0	23.9	24.5	25.0	22.8	23.4	23.3	23.9	24.4
	12H	23.5	24.0	24.0	24.5	25.1	22.8	23.3	23.3	23.8	24.4
12H	4H	22.7	23.4	23.2	23.9	24.4	22.4	23.1	22.8	23.6	24.0
	6H	23.3	23.9	23.8	24.3	24.9	22.7	23.3	23.3	23.8	24.3
	8H	23.4	24.0	23.9	24.5	25.0	22.8	23.4	23.3	23.8	24.4

Maximum UGR = 25.1

POLAR GRAPH



Maximum Candela = 3386.73 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.)