

IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR2AENG-L33-940-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-L33-940-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	7739
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	99
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	9354	8969	8720
55	8414	8201	7983
65	7270	7190	6987
75	5661	5427	5057
85	3275	1482	939

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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	3272.570	3272.570	3272.570	3272.570	3272.570	3272.570	3272.570	3272.570	3272.570	3272.570
5	3260.584	3250.250	3250.221	3241.068	3235.302	3239.118	3246.538	3244.617	3255.043	3244.988
10	3201.986	3190.115	3177.000	3157.741	3146.192	3153.934	3169.510	3179.127	3188.986	3178.292
15	3103.837	3085.224	3058.693	3024.458	3005.587	3018.794	3046.900	3067.395	3081.335	3065.322
20	2967.443	2943.580	2898.714	2853.439	2823.044	2845.918	2882.248	2917.735	2933.272	2914.052
25	2799.800	2769.612	2711.536	2652.864	2625.850	2643.485	2689.653	2734.296	2752.599	2729.250
30	2598.406	2565.904	2498.609	2442.383	2414.472	2431.302	2470.845	2520.622	2540.464	2515.019
35	2377.490	2342.749	2274.158	2220.585	2197.556	2208.080	2240.637	2289.697	2313.543	2284.962
40	2139.809	2105.265	2039.343	1995.877	1977.889	1982.351	2001.211	2048.685	2075.516	2045.218
45	1883.539	1856.849	1806.125	1772.116	1755.944	1757.630	1765.981	1800.480	1821.484	1798.093
50	1628.976	1610.098	1574.604	1542.755	1529.470	1527.682	1535.564	1557.629	1571.616	1555.963
55	1374.392	1363.880	1339.544	1310.854	1304.000	1295.811	1303.897	1317.387	1323.581	1316.171
60	1122.160	1123.727	1100.240	1082.294	1075.133	1068.156	1070.087	1084.368	1078.694	1083.402
65	874.995	886.144	865.353	847.730	840.889	835.439	841.610	854.734	839.450	853.910
70	637.533	652.528	629.911	611.557	603.539	602.574	613.454	629.726	610.265	629.088
75	417.246	427.611	400.036	380.563	372.764	375.902	390.855	413.169	398.229	412.714
80	226.319	225.800	194.241	170.535	158.987	169.322	191.059	218.969	214.994	218.697
85	81.281	65.420	36.790	24.662	23.295	24.615	36.440	64.132	76.753	64.008
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	3272.570	3272.570	3272.570	3272.570	3272.570	3272.570	3272.570
5	3246.662	3239.242	3235.426	3241.068	3249.478	3248.734	3260.584
10	3169.138	3153.811	3146.439	3157.680	3176.195	3188.413	3201.986
15	3045.910	3018.361	3005.741	3024.428	3057.888	3083.459	3103.837
20	2880.391	2845.237	2823.136	2853.192	2898.033	2941.846	2967.443
25	2686.837	2642.371	2625.974	2652.462	2710.484	2767.693	2799.800
30	2467.162	2429.786	2414.410	2441.919	2497.464	2563.738	2598.406
35	2236.149	2206.038	2197.277	2220.276	2272.672	2340.458	2377.490
40	1996.877	1979.999	1977.239	1995.815	2037.579	2102.541	2139.809
45	1762.545	1754.814	1755.387	1771.806	1804.299	1853.538	1883.539
50	1532.958	1524.772	1528.727	1542.229	1572.994	1606.755	1628.976
55	1302.191	1292.902	1303.319	1310.297	1337.749	1360.599	1374.392
60	1068.907	1065.503	1074.668	1081.892	1098.476	1120.291	1122.160

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CANDELA TABULATION - (Cont.)

65	840.765	833.301	840.403	847.266	863.681	882.832	874.995
70	612.897	601.305	603.121	611.188	628.265	649.501	637.533
75	390.524	375.333	372.653	380.387	398.723	424.906	417.246
80	190.910	169.161	159.052	170.498	193.461	223.686	226.319
85	36.416	24.621	23.360	24.730	36.601	64.603	81.281
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	1165.86	N.A.	15.10
0-30	2408.53	N.A.	31.10
0-40	3824.95	N.A.	49.40
0-60	6394.61	N.A.	82.60
0-80	7662.66	N.A.	99.00
0-90	7739.37	N.A.	100.00
10-90	7431.91	N.A.	96.00
20-40	2659.09	N.A.	34.40
20-50	4045.29	N.A.	52.30
40-70	3414.46	N.A.	44.10
60-80	1268.05	N.A.	16.40
70-80	423.26	N.A.	5.50
80-90	76.70	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	7739.37	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	307.46
10-20	858.40
20-30	1242.67
30-40	1416.42
40-50	1386.2
50-60	1183.46
60-70	844.80
70-80	423.26
80-90	76.70
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

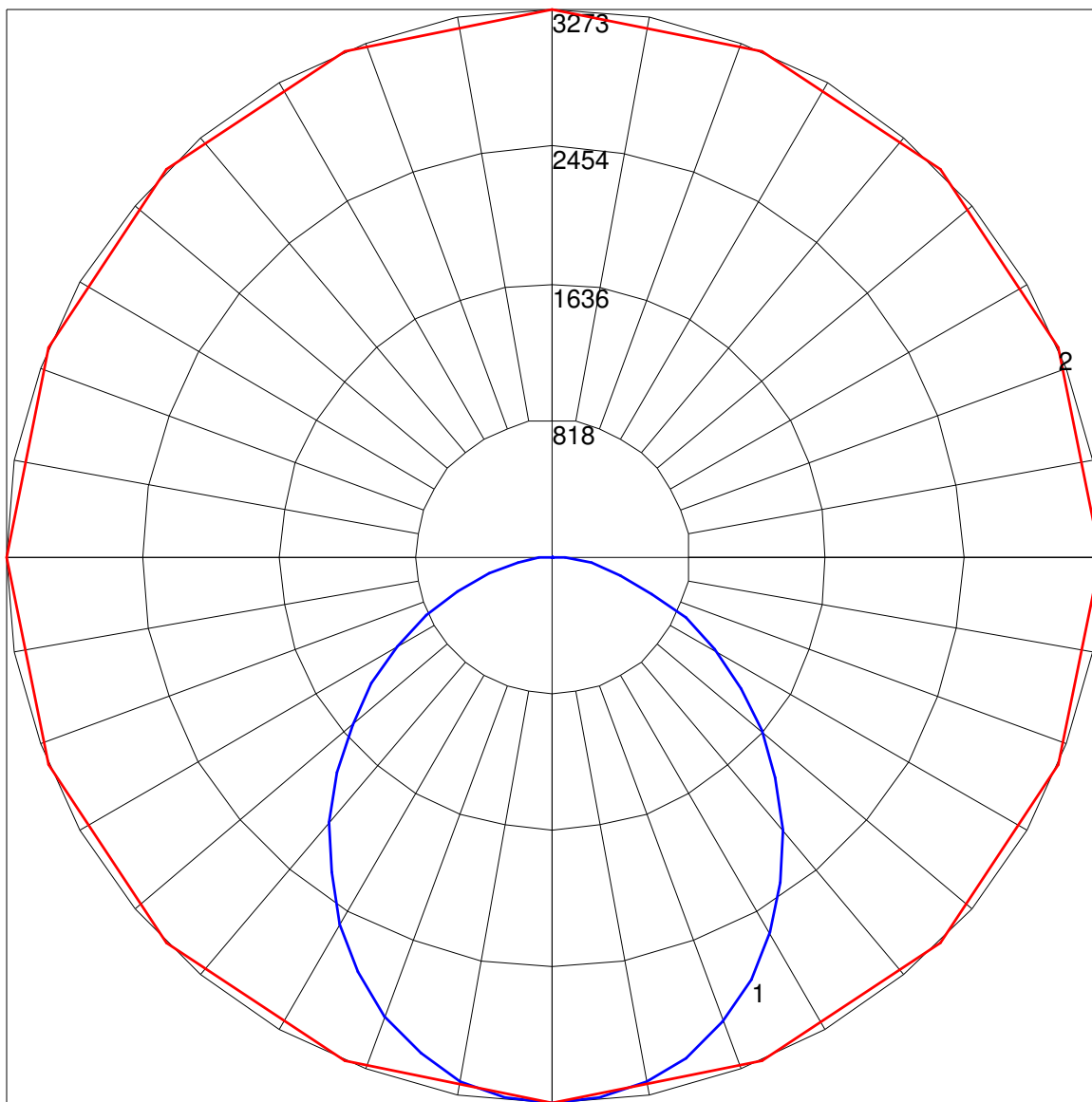
Reflectances

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	19.4	21.0	19.8	21.3	21.6	19.1	20.7	19.5	21.0	21.3
	3H	21.0	22.4	21.4	22.7	23.1	20.7	22.1	21.0	22.4	22.8
	4H	21.5	22.9	21.9	23.2	23.6	21.1	22.5	21.5	22.8	23.2
	6H	21.9	23.1	22.3	23.5	23.9	21.4	22.6	21.8	23.0	23.4
	8H	22.0	23.1	22.4	23.5	23.9	21.4	22.6	21.8	23.0	23.4
	12H	22.0	23.1	22.4	23.5	23.9	21.4	22.5	21.8	22.9	23.3
4H	2H	20.0	21.3	20.4	21.6	22.0	19.7	21.0	20.1	21.4	21.8
	3H	21.8	22.9	22.2	23.3	23.7	21.4	22.6	21.9	23.0	23.4
	4H	22.4	23.4	22.8	23.8	24.3	22.0	23.0	22.5	23.4	23.9
	6H	22.9	23.7	23.3	24.2	24.6	22.3	23.2	22.8	23.6	24.1
	8H	23.0	23.8	23.4	24.2	24.7	22.4	23.2	22.8	23.6	24.1
	12H	23.0	23.8	23.5	24.2	24.7	22.4	23.1	22.8	23.6	24.0
8H	4H	22.6	23.4	23.1	23.9	24.3	22.2	23.1	22.7	23.5	24.0
	6H	23.1	23.8	23.6	24.3	24.8	22.6	23.3	23.1	23.8	24.2
	8H	23.3	23.9	23.8	24.4	24.9	22.7	23.3	23.2	23.8	24.3
	12H	23.4	23.9	23.9	24.4	25.0	22.7	23.2	23.2	23.7	24.3
12H	4H	22.6	23.3	23.1	23.8	24.3	22.3	23.0	22.7	23.5	23.9
	6H	23.2	23.8	23.7	24.2	24.8	22.6	23.2	23.2	23.7	24.2
	8H	23.3	23.9	23.8	24.4	24.9	22.7	23.3	23.2	23.7	24.3

Maximum UGR = 25.0

POLAR GRAPH



Maximum Candela = 3272.57 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.)