

IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR2AENG-L33-850-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-L33-850-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	9539
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
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	11529	11055	10748
55	10371	10108	9840
65	8961	8862	8612
75	6977	6690	6234
85	4036	1827	1157

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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	4033.633	4033.633	4033.633	4033.633	4033.633	4033.633	4033.633	4033.633	4033.633	4033.633
5	4018.859	4006.122	4006.087	3994.804	3987.698	3992.401	4001.547	3999.179	4012.030	3999.637
10	3946.633	3932.003	3915.837	3892.100	3877.864	3887.407	3906.605	3918.459	3930.610	3917.429
15	3825.659	3802.718	3770.017	3727.821	3704.560	3720.839	3755.481	3780.743	3797.924	3778.187
20	3657.545	3628.133	3572.834	3517.030	3479.565	3507.760	3552.538	3596.278	3615.428	3591.738
25	3450.917	3413.708	3342.126	3269.809	3236.513	3258.250	3315.154	3370.178	3392.738	3363.960
30	3202.687	3162.626	3079.681	3010.379	2975.977	2996.721	3045.461	3106.813	3131.270	3099.907
35	2930.394	2887.574	2803.032	2737.000	2708.615	2721.588	2761.715	2822.185	2851.576	2816.348
40	2637.439	2594.861	2513.609	2460.035	2437.863	2443.363	2466.608	2525.123	2558.194	2520.850
45	2321.572	2288.675	2226.154	2184.236	2164.303	2166.382	2176.674	2219.196	2245.085	2216.255
50	2007.808	1984.540	1940.790	1901.536	1885.161	1882.956	1892.672	1919.868	1937.108	1917.815
55	1694.018	1681.062	1651.066	1615.704	1607.256	1597.163	1607.128	1623.757	1631.391	1622.257
60	1383.128	1385.058	1356.110	1333.991	1325.164	1316.564	1318.944	1336.547	1329.553	1335.356
65	1078.483	1092.223	1066.598	1044.877	1036.445	1029.728	1037.333	1053.509	1034.671	1052.494
70	785.797	804.279	776.402	753.779	743.897	742.708	756.118	776.173	752.187	775.388
75	514.280	527.055	493.067	469.067	459.454	463.321	481.752	509.254	490.840	508.693
80	278.951	278.312	239.413	210.194	195.961	208.699	235.491	269.892	264.992	269.556
85	100.184	80.634	45.346	30.397	28.712	30.340	44.915	79.047	94.602	78.894
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	4033.633	4033.633	4033.633	4033.633	4033.633	4033.633	4033.633
5	4001.699	3992.554	3987.851	3994.804	4005.171	4004.253	4018.859
10	3906.147	3887.255	3878.169	3892.024	3914.845	3929.904	3946.633
15	3754.261	3720.305	3704.751	3727.783	3769.025	3800.543	3825.659
20	3550.249	3506.920	3479.680	3516.725	3571.995	3625.997	3657.545
25	3311.683	3256.876	3236.665	3269.313	3340.829	3411.342	3450.917
30	3040.921	2994.852	2975.901	3009.807	3078.270	3159.956	3202.687
35	2756.184	2719.070	2708.272	2736.619	2801.201	2884.751	2930.394
40	2461.267	2440.464	2437.062	2459.959	2511.435	2591.504	2637.439
45	2172.439	2162.910	2163.616	2183.854	2223.904	2284.593	2321.572
50	1889.460	1879.370	1884.245	1900.887	1938.807	1980.420	2007.808
55	1605.026	1593.577	1606.417	1615.017	1648.853	1677.018	1694.018
60	1317.491	1313.294	1324.591	1333.495	1353.935	1380.824	1383.128

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CANDELA TABULATION - (Cont.)

65	1036.291	1027.091	1035.846	1044.305	1064.537	1088.141	1078.483
70	755.431	741.144	743.382	753.325	774.373	800.547	785.797
75	481.344	462.619	459.316	468.849	491.450	523.721	514.280
80	235.308	208.501	196.041	210.149	238.451	275.706	278.951
85	44.884	30.347	28.792	30.481	45.113	79.626	100.184
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	1436.99	N.A.	15.10
0-30	2968.66	N.A.	31.10
0-40	4714.47	N.A.	49.40
0-60	7881.72	N.A.	82.60
0-80	9444.68	N.A.	99.00
0-90	9539.22	N.A.	100.00
10-90	9160.26	N.A.	96.00
20-40	3277.48	N.A.	34.40
20-50	4986.05	N.A.	52.30
40-70	4208.52	N.A.	44.10
60-80	1562.95	N.A.	16.40
70-80	521.69	N.A.	5.50
80-90	94.54	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	9539.22	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	378.96
10-20	1058.03
20-30	1531.66
30-40	1745.82
40-50	1708.57
50-60	1458.68
60-70	1041.26
70-80	521.69
80-90	94.54
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	20.1	21.7	20.5	22.0	22.3	19.8	21.4	20.2	21.7	22.0
	3H	21.7	23.1	22.1	23.5	23.8	21.4	22.8	21.7	23.1	23.5
	4H	22.2	23.6	22.6	23.9	24.3	21.8	23.2	22.2	23.5	23.9
	6H	22.6	23.8	23.0	24.2	24.6	22.1	23.3	22.5	23.7	24.1
	8H	22.7	23.8	23.1	24.2	24.6	22.1	23.3	22.5	23.7	24.1
	12H	22.7	23.8	23.1	24.2	24.6	22.1	23.2	22.5	23.6	24.0

UGR Viewed Endwise

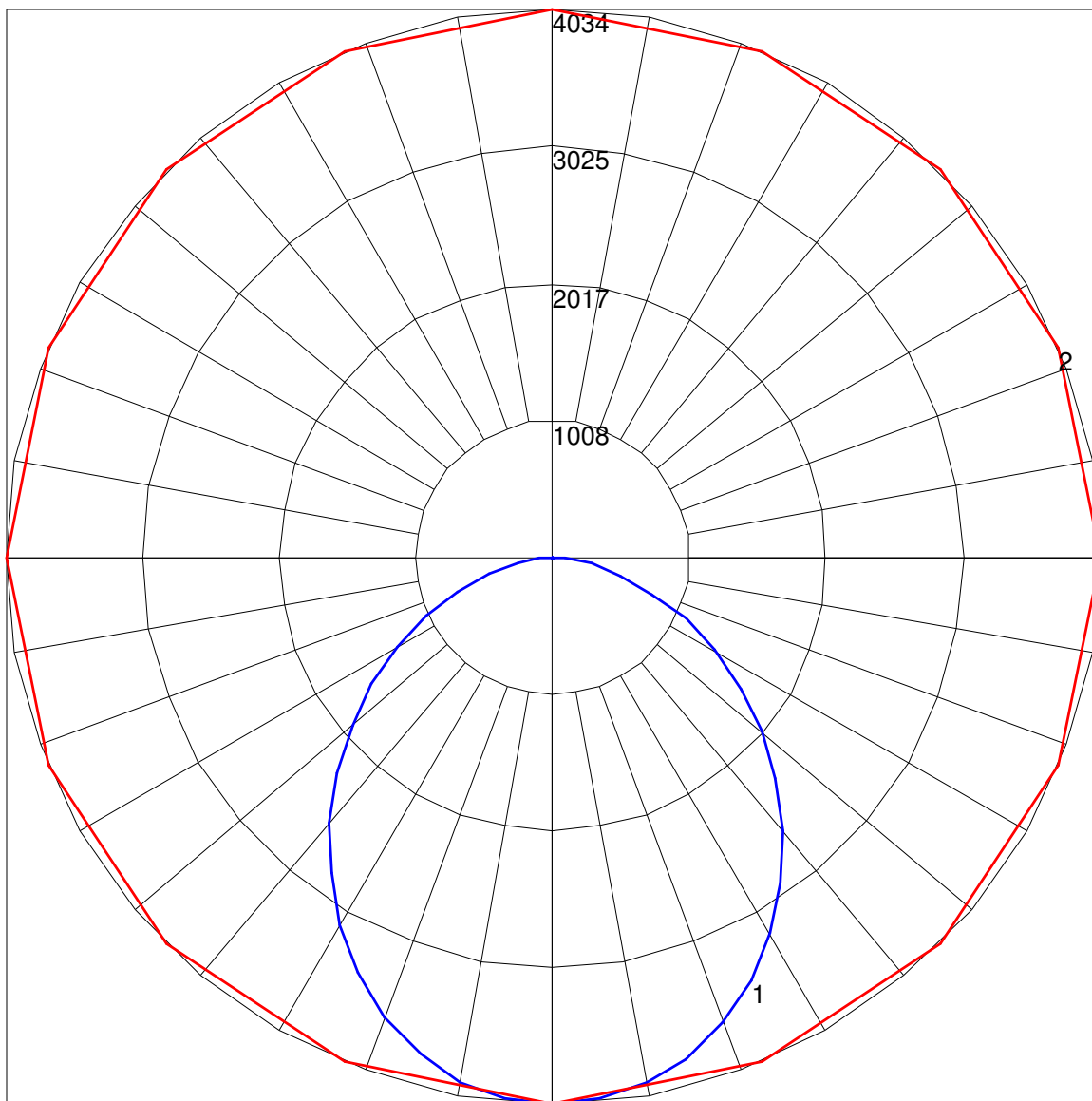
4H	2H	20.7	22.0	21.1	22.3	22.7	20.4	21.7	20.8	22.1	22.5
	3H	22.5	23.6	22.9	24.0	24.4	22.1	23.3	22.6	23.7	24.1
	4H	23.1	24.1	23.5	24.5	25.0	22.7	23.7	23.2	24.1	24.6
	6H	23.6	24.4	24.0	24.9	25.3	23.0	23.9	23.5	24.3	24.8
	8H	23.7	24.5	24.1	24.9	25.4	23.1	23.9	23.5	24.3	24.8
	12H	23.7	24.5	24.2	24.9	25.4	23.1	23.8	23.5	24.3	24.7

8H	4H	23.3	24.1	23.8	24.6	25.0	22.9	23.8	23.4	24.2	24.7
	6H	23.8	24.5	24.3	25.0	25.5	23.3	24.0	23.8	24.5	24.9
	8H	24.0	24.6	24.5	25.1	25.6	23.4	24.0	23.9	24.5	25.0
	12H	24.1	24.6	24.6	25.1	25.7	23.4	23.9	23.9	24.4	25.0

12H	4H	23.3	24.0	23.8	24.5	25.0	23.0	23.7	23.4	24.2	24.6
	6H	23.9	24.5	24.4	24.9	25.5	23.3	23.9	23.9	24.4	24.9
	8H	24.0	24.6	24.5	25.1	25.6	23.4	24.0	23.9	24.4	25.0

Maximum UGR = 25.7

POLAR GRAPH



Maximum Candela = 4033.633 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.)