

IES INDOOR REPORT

PHOTOMETRIC FILENAME : CMR2AENG-L33-830-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-L33-830-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	8909
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
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	10767	10325	10038
55	9686	9440	9190
65	8369	8277	8043
75	6517	6248	5822
85	3770	1706	1080

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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	3767.261	3767.261	3767.261	3767.261	3767.261	3767.261	3767.261	3767.261	3767.261	3767.261
5	3753.463	3741.567	3741.534	3730.997	3724.360	3728.752	3737.294	3735.082	3747.085	3735.510
10	3686.007	3672.342	3657.244	3635.074	3621.779	3630.692	3648.622	3659.693	3671.042	3658.731
15	3573.022	3551.595	3521.053	3481.644	3459.920	3475.124	3507.478	3531.071	3547.118	3528.684
20	3416.009	3388.540	3336.892	3284.773	3249.783	3276.115	3317.936	3358.788	3376.673	3354.548
25	3223.026	3188.274	3121.420	3053.878	3022.781	3043.082	3096.229	3147.619	3168.689	3141.812
30	2991.189	2953.773	2876.306	2811.580	2779.451	2798.825	2844.345	2901.646	2924.488	2895.197
35	2736.878	2696.885	2617.926	2556.255	2529.744	2541.860	2579.338	2635.814	2663.265	2630.363
40	2463.268	2423.503	2347.616	2297.580	2276.872	2282.009	2303.719	2358.370	2389.256	2354.379
45	2168.260	2137.536	2079.144	2039.994	2021.377	2023.319	2032.931	2072.645	2096.824	2069.898
50	1875.217	1853.485	1812.625	1775.962	1760.669	1758.610	1767.684	1793.084	1809.186	1791.167
55	1582.149	1570.048	1542.033	1509.006	1501.117	1491.690	1500.997	1516.527	1523.658	1515.127
60	1291.789	1293.592	1266.555	1245.897	1237.653	1229.621	1231.844	1248.284	1241.753	1247.172
65	1007.262	1020.095	996.162	975.876	968.000	961.727	968.830	983.937	966.344	982.990
70	733.905	751.166	725.131	704.001	694.771	693.661	706.186	724.917	702.514	724.183
75	480.318	492.250	460.506	438.091	429.112	432.725	449.938	475.624	458.426	475.101
80	260.530	259.933	223.602	196.314	183.020	194.917	219.940	252.069	247.493	251.755
85	93.568	75.309	42.352	28.389	26.816	28.336	41.949	73.827	88.355	73.684
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	3767.261	3767.261	3767.261	3767.261	3767.261	3767.261	3767.261
5	3737.436	3728.894	3724.502	3730.997	3740.679	3739.821	3753.463
10	3648.194	3630.549	3622.064	3635.003	3656.318	3670.382	3686.007
15	3506.338	3474.625	3460.098	3481.608	3520.127	3549.564	3573.022
20	3315.799	3275.331	3249.890	3284.488	3336.108	3386.544	3416.009
25	3092.987	3041.799	3022.923	3053.415	3120.208	3186.065	3223.026
30	2840.105	2797.079	2779.379	2811.046	2874.988	2951.279	2991.189
35	2574.172	2539.508	2529.424	2555.899	2616.216	2694.249	2736.878
40	2298.731	2279.301	2276.124	2297.508	2345.585	2420.367	2463.268
45	2028.976	2020.076	2020.736	2039.638	2077.042	2133.724	2168.260
50	1764.684	1755.261	1759.814	1775.357	1810.772	1849.637	1875.217
55	1499.034	1488.341	1500.333	1508.365	1539.967	1566.271	1582.149
60	1230.486	1226.567	1237.118	1245.434	1264.524	1289.637	1291.789

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CANDELA TABULATION - (Cont.)

65	967.857	959.265	967.441	975.341	994.238	1016.283	1007.262
70	705.544	692.200	694.290	703.577	723.235	747.681	733.905
75	449.557	432.069	428.984	437.887	458.995	489.135	480.318
80	219.769	194.732	183.095	196.271	222.705	257.499	260.530
85	41.920	28.343	26.891	28.468	42.134	74.368	93.568
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	1342.1	N.A.	15.10
0-30	2772.61	N.A.	31.10
0-40	4403.14	N.A.	49.40
0-60	7361.23	N.A.	82.60
0-80	8820.97	N.A.	99.00
0-90	8909.27	N.A.	100.00
10-90	8555.34	N.A.	96.00
20-40	3061.04	N.A.	34.40
20-50	4656.78	N.A.	52.30
40-70	3930.6	N.A.	44.10
60-80	1459.74	N.A.	16.40
70-80	487.24	N.A.	5.50
80-90	88.30	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	8909.27	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	353.93
10-20	988.16
20-30	1430.52
30-40	1630.53
40-50	1595.74
50-60	1362.35
60-70	972.50
70-80	487.24
80-90	88.30
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

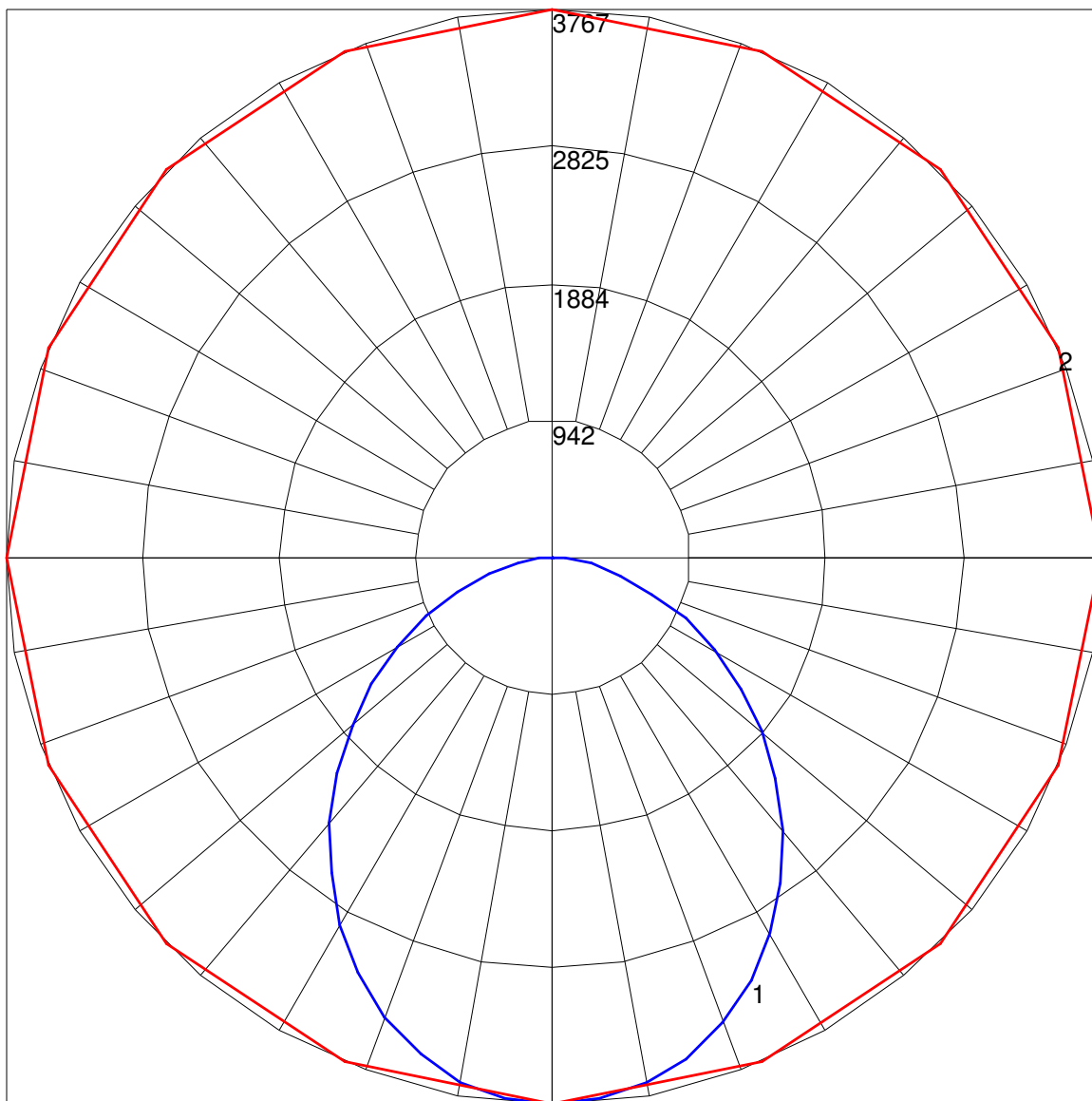
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UGR TABLE - CORRECTED

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	19.9	21.5	20.3	21.8	22.1	19.6	21.2	20.0	21.5	21.8
	3H	21.5	22.9	21.9	23.2	23.6	21.2	22.6	21.5	22.9	23.3
	4H	22.0	23.4	22.4	23.7	24.1	21.6	23.0	22.0	23.3	23.7
	6H	22.4	23.6	22.8	24.0	24.4	21.9	23.1	22.3	23.5	23.9
	8H	22.5	23.6	22.9	24.0	24.4	21.9	23.1	22.3	23.5	23.9
	12H	22.5	23.6	22.9	24.0	24.4	21.9	23.0	22.3	23.4	23.8
4H	2H	20.5	21.8	20.9	22.1	22.5	20.2	21.5	20.6	21.9	22.3
	3H	22.3	23.4	22.7	23.8	24.2	21.9	23.1	22.4	23.5	23.9
	4H	22.9	23.9	23.3	24.3	24.8	22.5	23.5	23.0	23.9	24.4
	6H	23.4	24.2	23.8	24.7	25.1	22.8	23.7	23.3	24.1	24.6
	8H	23.5	24.3	23.9	24.7	25.2	22.9	23.7	23.3	24.1	24.6
	12H	23.5	24.3	24.0	24.7	25.2	22.9	23.6	23.3	24.1	24.5
8H	4H	23.1	23.9	23.6	24.4	24.8	22.7	23.6	23.2	24.0	24.5
	6H	23.6	24.3	24.1	24.8	25.3	23.1	23.8	23.6	24.3	24.7
	8H	23.8	24.4	24.3	24.9	25.4	23.2	23.8	23.7	24.3	24.8
	12H	23.9	24.4	24.4	24.9	25.5	23.2	23.7	23.7	24.2	24.8
12H	4H	23.1	23.8	23.6	24.3	24.8	22.8	23.5	23.2	24.0	24.4
	6H	23.7	24.3	24.2	24.7	25.3	23.1	23.7	23.7	24.2	24.7
	8H	23.8	24.4	24.3	24.9	25.4	23.2	23.8	23.7	24.2	24.8

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 3767.261 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.)