



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AHTG-24-L40-835-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 18091.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 17-NOV-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 2'x4' RECESSED LED TROFFER
 [MORE] FROSTED ACRYLIC DIFFUSER
 [LUMCAT] AHTG-24-L40-835-A-DIM-UNV
 [LAMPCAT] HLM 80 CRI, 3500K CCT
 [SEARCH_SOURCETYPE]LED
 [SEARCH_APPLICATION]INDOOR,DIRECT
 [SEARCH_MOUNTING]RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3924
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	129
Total Luminaire Watts	30.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1887	1932	1923
55	1601	1723	1695
65	1337	1470	1171
75	1018	926	662
85	776	581	514

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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>
0	1657.693	1657.693	1657.693	1657.693	1657.693
5	1650.667	1650.667	1649.456	1648.729	1648.729
10	1620.624	1618.686	1615.779	1612.144	1611.175
15	1553.997	1550.363	1543.336	1536.795	1535.099
20	1519.593	1516.201	1506.025	1494.395	1490.761
25	1404.024	1401.844	1391.183	1379.796	1371.074
30	1296.209	1292.574	1281.430	1266.650	1257.201
35	1190.574	1189.362	1181.852	1167.072	1162.227
40	1063.860	1066.283	1067.252	1056.834	1053.200
45	931.817	944.173	954.107	954.107	949.503
50	778.937	793.231	814.310	823.759	817.944
55	641.078	659.249	690.019	695.834	678.874
60	507.096	527.206	562.094	524.783	501.766
65	394.435	418.179	433.927	378.687	345.494
70	287.104	313.755	297.765	236.467	211.754
75	183.892	201.094	167.417	130.348	119.687
80	109.027	111.450	87.222	71.958	69.535
85	47.245	41.915	35.373	31.739	31.254
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	595.06	N.A.	15.20
0-30	1236.57	N.A.	31.50
0-40	1972.4	N.A.	50.30
0-60	3300.77	N.A.	84.10
0-80	3879.44	N.A.	98.90
0-90	3924.11	N.A.	100.00
10-90	3767.76	N.A.	96.00
20-40	1377.34	N.A.	35.10
20-50	2104.37	N.A.	53.60
40-70	1725.21	N.A.	44.00
60-80	578.67	N.A.	14.70
70-80	181.83	N.A.	4.60
80-90	44.67	N.A.	1.10
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	3924.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	156.35
10-20	438.71
20-30	641.51
30-40	735.84
40-50	727.02
50-60	601.35
60-70	396.84
70-80	181.83
80-90	44.67
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	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	82	74	68	90	81	73	68	78	72	67	75	70	65	72	68	64	62
4	85	73	65	59	82	72	64	58	69	63	57	67	61	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	55	50	61	54	50	59	53	49	47
6	72	59	51	45	70	59	50	45	57	50	44	55	49	44	54	48	43	41
7	67	54	46	40	65	53	45	40	52	45	39	50	44	39	49	43	39	37
8	63	50	41	36	61	49	41	36	48	40	35	46	40	35	45	39	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	30
10	55	42	34	29	54	42	34	29	41	34	29	40	33	29	39	33	29	27

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UGR TABLE - CORRECTED

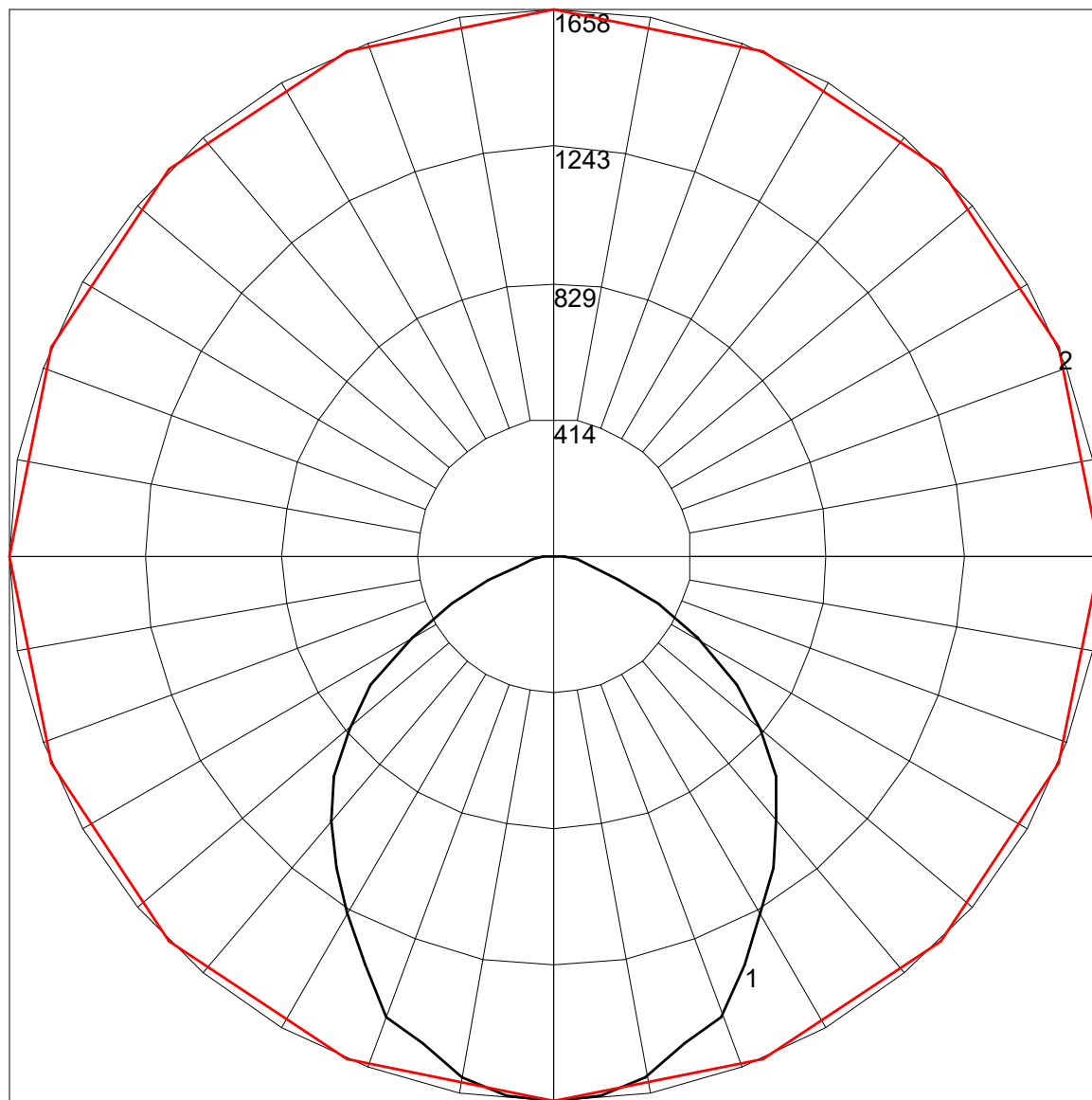
Reflectances

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	13.4	15.0	13.8	15.3	15.6	13.6	15.2	14.0	15.5	15.8
	3H	15.0	16.4	15.4	16.7	17.1	14.6	16.0	15.0	16.3	16.7
	4H	15.5	16.8	15.9	17.1	17.5	14.8	16.1	15.2	16.5	16.9
	6H	15.8	17.0	16.2	17.4	17.8	15.0	16.2	15.4	16.6	16.9
	8H	15.9	17.1	16.3	17.5	17.9	15.0	16.2	15.4	16.6	17.0
	12H	16.0	17.1	16.4	17.5	17.9	15.0	16.1	15.5	16.5	17.0
4H	2H	14.1	15.4	14.5	15.7	16.1	14.2	15.5	14.6	15.9	16.3
	3H	15.8	16.9	16.2	17.3	17.7	15.4	16.5	15.8	16.9	17.3
	4H	16.4	17.4	16.9	17.8	18.3	15.7	16.6	16.1	17.1	17.5
	6H	16.9	17.7	17.3	18.2	18.6	15.9	16.7	16.3	17.2	17.6
	8H	17.0	17.8	17.5	18.2	18.7	15.9	16.7	16.4	17.2	17.6
	12H	17.1	17.8	17.6	18.3	18.8	16.0	16.7	16.4	17.2	17.6
8H	4H	16.6	17.4	17.0	17.8	18.3	15.9	16.7	16.3	17.1	17.6
	6H	17.1	17.8	17.6	18.3	18.7	16.2	16.8	16.6	17.3	17.8
	8H	17.3	17.9	17.8	18.4	18.9	16.2	16.8	16.8	17.3	17.8
	12H	17.5	18.0	18.0	18.5	19.0	16.4	16.9	16.9	17.4	17.9
12H	4H	16.5	17.3	17.0	17.7	18.2	15.9	16.6	16.4	17.1	17.6
	6H	17.1	17.7	17.6	18.2	18.7	16.2	16.8	16.7	17.2	17.8
	8H	17.4	17.9	17.9	18.4	18.9	16.3	16.8	16.8	17.3	17.9

Maximum UGR = 19.0

POLAR GRAPH



Maximum Candela = 1657.693 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)