



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-P37-835-POE-OM-OF-CS_0 DEGREE TILT_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20448.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 12-MAR-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] GEN7 V13 LED 4" SHORT HEATSINK 4" RND ADJ DOWNLIGHT @ 0 TILT

[MORE] ACRYLIC MED TIR OPTIC & 4" OPEN ASYM SEMI-SPEC TRIM

[LUMCAT] 4AR-P37-835-PoE-OM-OF-CS_0 DEGREE TILT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Industrial, Direct, Downlight

[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3710
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	74
Total Luminaire Watts	50
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.54
Spacing Criterion (90-270)	0.54
Spacing Criterion (Diagonal)	0.48
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.33 ft (Diameter)
Luminous Width (90-270)	0.33 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1027	1027	1027
55	422	422	422
65	0	0	0
75	0	0	0
85	0	0	0

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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>
0	13697.585	13697.585	13697.585	13697.585	13697.585	13697.585	13697.585	13697.585	13697.585
5	13632.872	13497.563	13479.914	13470.109	13472.070	13517.173	13505.407	13497.563	13462.265
10	12067.994	12009.164	12071.916	12018.969	11962.100	11658.145	11677.755	11713.053	11413.020
15	7194.909	7251.778	7771.443	7518.474	7361.594	6677.205	5955.557	5981.050	5588.850
20	2515.963	2568.910	2674.804	2692.453	2547.339	2255.150	2123.763	2010.025	1902.170
25	1058.940	1096.199	1143.263	1153.068	1125.614	945.202	843.230	813.815	727.531
30	382.395	382.395	398.083	400.044	362.785	329.448	280.423	258.852	223.554
35	68.635	62.752	66.674	64.713	62.752	58.830	50.986	50.986	50.986
40	25.493	23.532	21.571	21.571	21.571	21.571	19.610	19.610	17.649
45	5.883	5.883	5.883	5.883	5.883	5.883	3.922	5.883	5.883
50	1.961	1.961	1.961	1.961	1.961	1.961	0.000	0.000	1.961
55	1.961	1.961	1.961	0.000	1.961	3.922	0.000	3.922	0.000
60	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
65	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
75	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	3104.84	N.A.	83.70
0-30	3629.77	N.A.	97.80
0-40	3702.06	N.A.	99.80
0-60	3709.63	N.A.	100.00
0-80	3709.63	N.A.	100.00
0-90	3709.63	N.A.	100.00
10-90	2477.49	N.A.	66.80
20-40	597.22	N.A.	16.10
20-50	603.65	N.A.	16.30
40-70	7.57	N.A.	0.20
60-80	0.00	N.A.	0.00
70-80	0.00	N.A.	0.00
80-90	0.00	N.A.	0.00
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	3709.63	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1232.14
10-20	1872.69
20-30	524.94
30-40	72.28
40-50	6.43
50-60	1.14
60-70	0.00
70-80	0.00
80-90	0.00
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	421	421	421	421	412	412	412	412	393	393	393	377	377	377	361	361	361	354
1	407	400	393	388	399	393	387	381	379	374	370	366	362	359	354	351	349	343
2	394	382	372	363	387	376	367	359	365	358	351	355	349	344	346	341	337	332
3	382	366	354	344	376	362	350	341	353	344	336	345	337	331	337	331	326	321
4	371	352	339	328	365	349	336	327	342	331	323	335	326	319	329	322	316	312
5	360	340	326	315	355	337	324	314	331	320	311	326	316	309	321	313	306	302
6	350	329	314	304	346	326	313	303	322	310	301	317	307	299	313	304	297	294
7	340	318	304	294	337	316	303	293	312	300	292	309	298	290	305	296	289	285
8	331	309	294	285	328	307	293	284	304	292	283	301	290	282	298	288	281	278
9	323	300	286	276	320	298	285	276	296	283	275	293	282	274	291	281	273	270
10	315	291	278	268	312	290	277	268	288	276	267	286	275	267	284	273	266	263

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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

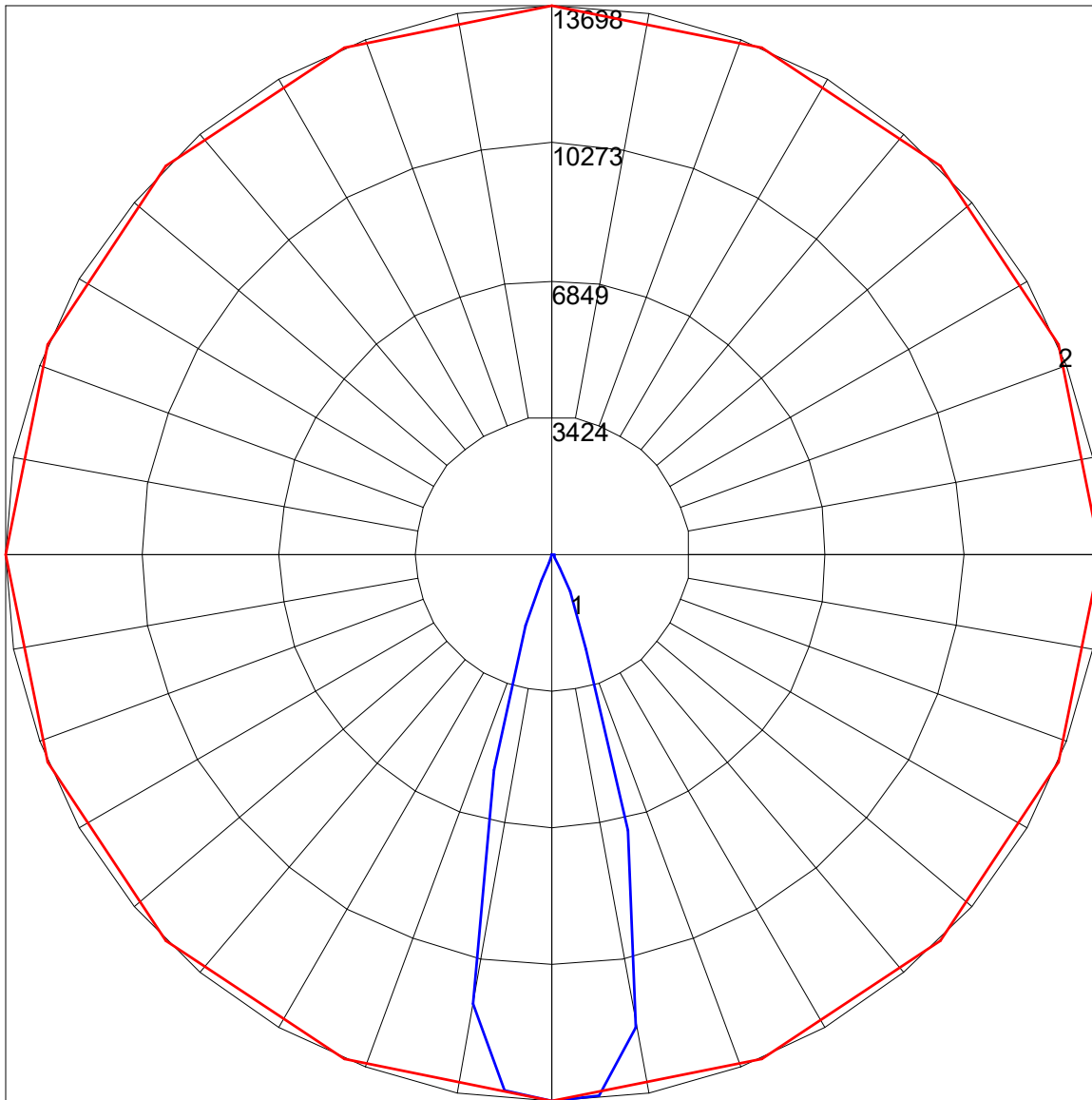
X=2H	Y=2H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	3H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	4H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	6H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	8H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	12H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

UGR Viewed Endwise

4H	2H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	3H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	4H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	6H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	8H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	12H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
8H	4H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	6H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	8H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	12H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
12H	4H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	6H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	8H	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Maximum UGR = 0.2

POLAR GRAPH



Maximum Candela = 13697.585 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.)