



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-L30-835-DIM-UNV-O-M-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] 11-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-L30-835-DIM-UNV-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	2497
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	36.9
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	691	691	691
55	284	284	284
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	9218.572	9218.572	9218.572	9218.572	9218.572	9218.572	9218.572	9218.572	9218.572
5	9175.020	9083.956	9072.078	9065.480	9066.799	9097.154	9089.235	9083.956	9060.200
10	8121.846	8082.253	8124.486	8088.852	8050.579	7846.015	7859.212	7882.968	7681.044
15	4842.225	4880.498	5230.237	5059.987	4954.405	4493.807	4008.132	4025.289	3761.336
20	1693.261	1728.895	1800.162	1812.040	1714.377	1517.732	1429.308	1352.761	1280.174
25	712.674	737.750	769.424	776.023	757.546	636.128	567.500	547.703	489.634
30	257.355	257.355	267.913	269.232	244.157	221.721	188.727	174.209	150.453
35	46.192	42.233	44.872	43.552	42.233	39.593	34.314	34.314	34.314
40	17.157	15.837	14.517	14.517	14.517	14.517	13.198	13.198	11.878
45	3.959	3.959	3.959	3.959	3.959	3.959	2.640	3.959	3.959
50	1.320	1.320	1.320	1.320	1.320	1.320	0.000	0.000	1.320
55	1.320	1.320	1.320	0.000	1.320	2.640	0.000	2.640	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

IES INDOOR REPORT**PHOTOMETRIC FILENAME : 4AR-L30-835-DIM-UNV-O-M-OF-CS_0 DEGREE TILT_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	2089.58	N.A.	83.70
0-30	2442.86	N.A.	97.80
0-40	2491.51	N.A.	99.80
0-60	2496.61	N.A.	100.00
0-80	2496.61	N.A.	100.00
0-90	2496.61	N.A.	100.00
10-90	1667.37	N.A.	66.80
20-40	401.93	N.A.	16.10
20-50	406.26	N.A.	16.30
40-70	5.10	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	2496.61	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	829.24
10-20	1260.34
20-30	353.29
30-40	48.65
40-50	4.33
50-60	0.77
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	157	157	157	157	153	153	153	153	147	147	147	140	140	140	135	135	135	132
1	152	149	147	144	149	146	144	142	141	139	138	136	135	134	132	131	130	128
2	147	142	139	135	144	140	137	134	136	133	131	132	130	128	129	127	126	124
3	143	137	132	128	140	135	131	127	132	128	125	129	126	123	126	124	122	120
4	138	131	126	122	136	130	125	122	127	123	120	125	122	119	123	120	118	116
5	134	127	121	118	132	126	121	117	123	119	116	122	118	115	120	117	114	113
6	130	122	117	113	129	122	117	113	120	115	112	118	114	112	117	113	111	109
7	127	119	113	109	126	118	113	109	116	112	109	115	111	108	114	110	108	106
8	124	115	110	106	122	114	109	106	113	109	105	112	108	105	111	107	105	103
9	120	112	106	103	119	111	106	103	110	106	102	109	105	102	108	105	102	101
10	117	109	103	100	116	108	103	100	107	103	100	106	102	99	106	102	99	98

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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

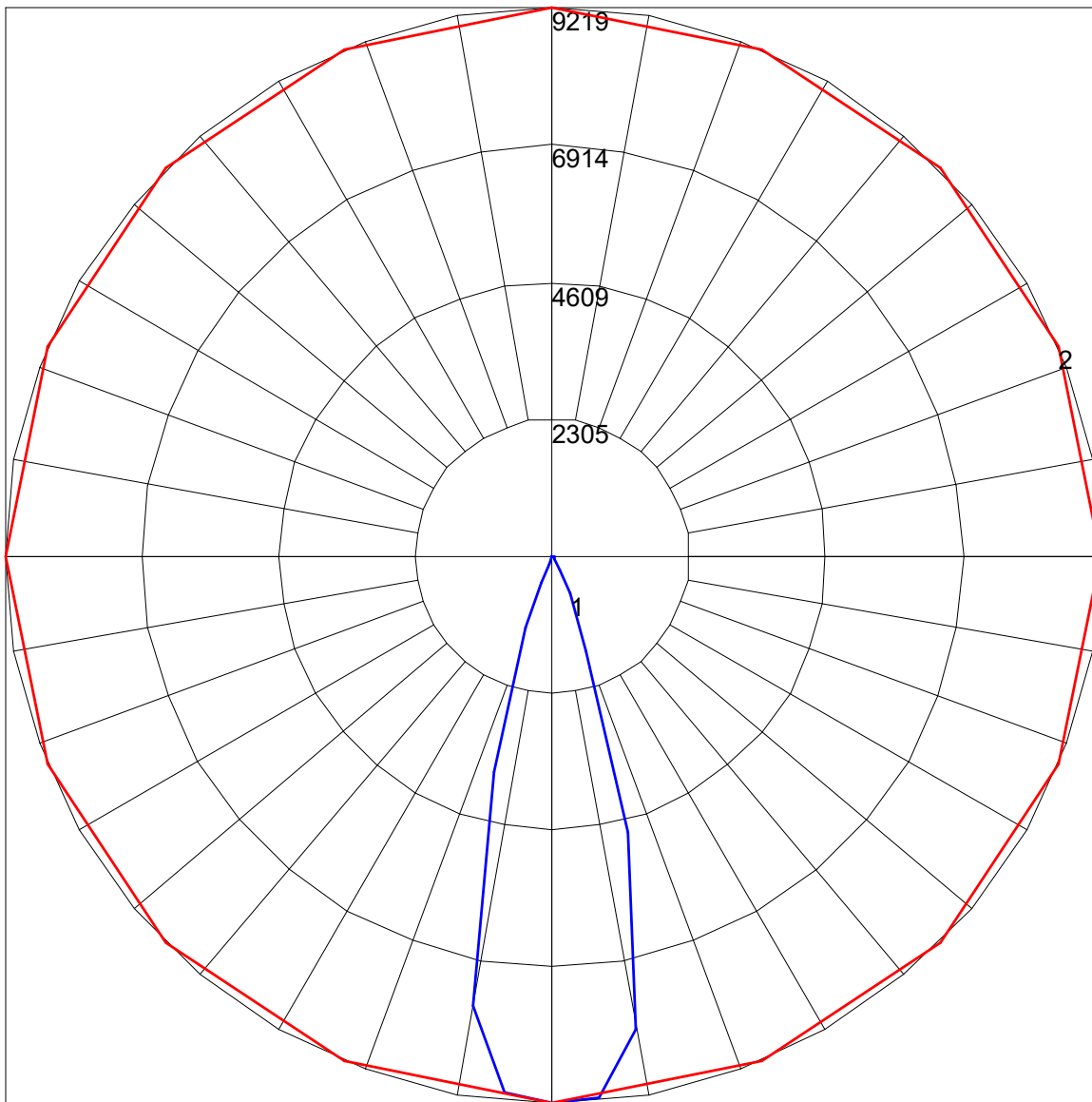
X=2H	Y=2H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	3H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	12H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2

UGR Viewed Endwise

4H	2H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	3H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	12H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
8H	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	12H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
12H	4H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	6H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
	8H	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2

Maximum UGR = 2.2

POLAR GRAPH



Maximum Candela = 9218.572 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.)