



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-L30-835-DIM-UNV-OW-OF-CS_0 DEGREE TILT_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20445.0

[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 WIDE TIR OPTIC & 4" OPEN ASYM SEMI-SPEC TRIM

[LUMCAT] 4AR-L30-835-DIM-UNV-OW-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	1532
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	42
Total Luminaire Watts	36.9
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	0.76
Spacing Criterion (90-270)	0.76
Spacing Criterion (Diagonal)	0.64
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	969	775	1551
55	956	956	956
65	973	324	324
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	2977.409	2977.409	2977.409	2977.409	2977.409	2977.409	2977.409	2977.409	2977.409
5	3070.661	3064.000	3059.560	3054.009	3051.789	3056.229	3060.670	3071.771	3065.110
10	3173.904	3161.693	3152.812	3156.142	3162.803	3187.226	3200.548	3212.760	3214.980
15	2976.299	2941.884	2926.342	2931.893	2947.435	3008.493	3050.678	3057.339	3067.331
20	2010.473	1927.212	1947.194	1851.722	1969.397	1908.339	2069.310	2112.606	2204.748
25	750.458	729.365	763.780	803.745	810.406	794.864	770.441	764.890	757.119
30	199.826	206.487	190.945	160.971	199.826	212.038	180.954	164.301	192.055
35	23.313	22.203	23.313	26.643	35.525	37.745	33.304	32.194	33.304
40	8.881	8.881	8.881	13.322	15.542	16.652	14.432	14.432	14.432
45	5.551	5.551	4.441	4.441	8.881	9.991	7.771	7.771	7.771
50	7.771	4.441	3.330	5.551	5.551	7.771	4.441	5.551	5.551
55	4.441	4.441	4.441	2.220	4.441	3.330	3.330	3.330	3.330
60	3.330	2.220	1.110	2.220	2.220	1.110	1.110	1.110	2.220
65	3.330	3.330	1.110	1.110	1.110	0.000	0.000	0.000	0.000
70	2.220	1.110	2.220	0.000	1.110	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-OW-OF-CS_0 DEGREE TILT_.IES****ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1070.84	N.A.	69.90
0-30	1482.22	N.A.	96.70
0-40	1521.6	N.A.	99.30
0-60	1531.01	N.A.	99.90
0-80	1532.31	N.A.	100.00
0-90	1532.31	N.A.	100.00
10-90	1236.93	N.A.	80.70
20-40	450.76	N.A.	29.40
20-50	456.94	N.A.	29.80
40-70	10.52	N.A.	0.70
60-80	1.30	N.A.	0.10
70-80	0.18	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	1532.31	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	295.38
10-20	775.46
20-30	411.38
30-40	39.38
40-50	6.18
50-60	3.23
60-70	1.11
70-80	0.18
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	132	132	132	132	129	129	129	129	123	123	123	118	118	118	113	113	113	111
1	127	125	122	120	125	122	120	118	118	116	115	114	113	111	110	109	108	106
2	123	118	115	112	120	116	113	110	113	110	108	110	108	106	107	105	104	102
3	118	112	108	105	116	111	107	104	108	105	102	106	103	101	103	101	99	98
4	114	107	102	99	112	106	102	98	104	100	97	102	99	96	100	97	95	93
5	110	103	97	94	108	102	97	93	100	96	93	98	95	92	96	93	91	90
6	106	98	93	89	105	97	93	89	96	92	89	95	91	88	93	90	87	86
7	102	94	89	85	101	94	89	85	92	88	85	91	87	84	90	87	84	83
8	99	91	85	82	98	90	85	82	89	85	81	88	84	81	87	83	81	80
9	96	87	82	79	95	87	82	78	86	81	78	85	81	78	84	80	78	77
10	92	84	79	76	91	84	79	76	83	78	75	82	78	75	81	78	75	74

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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

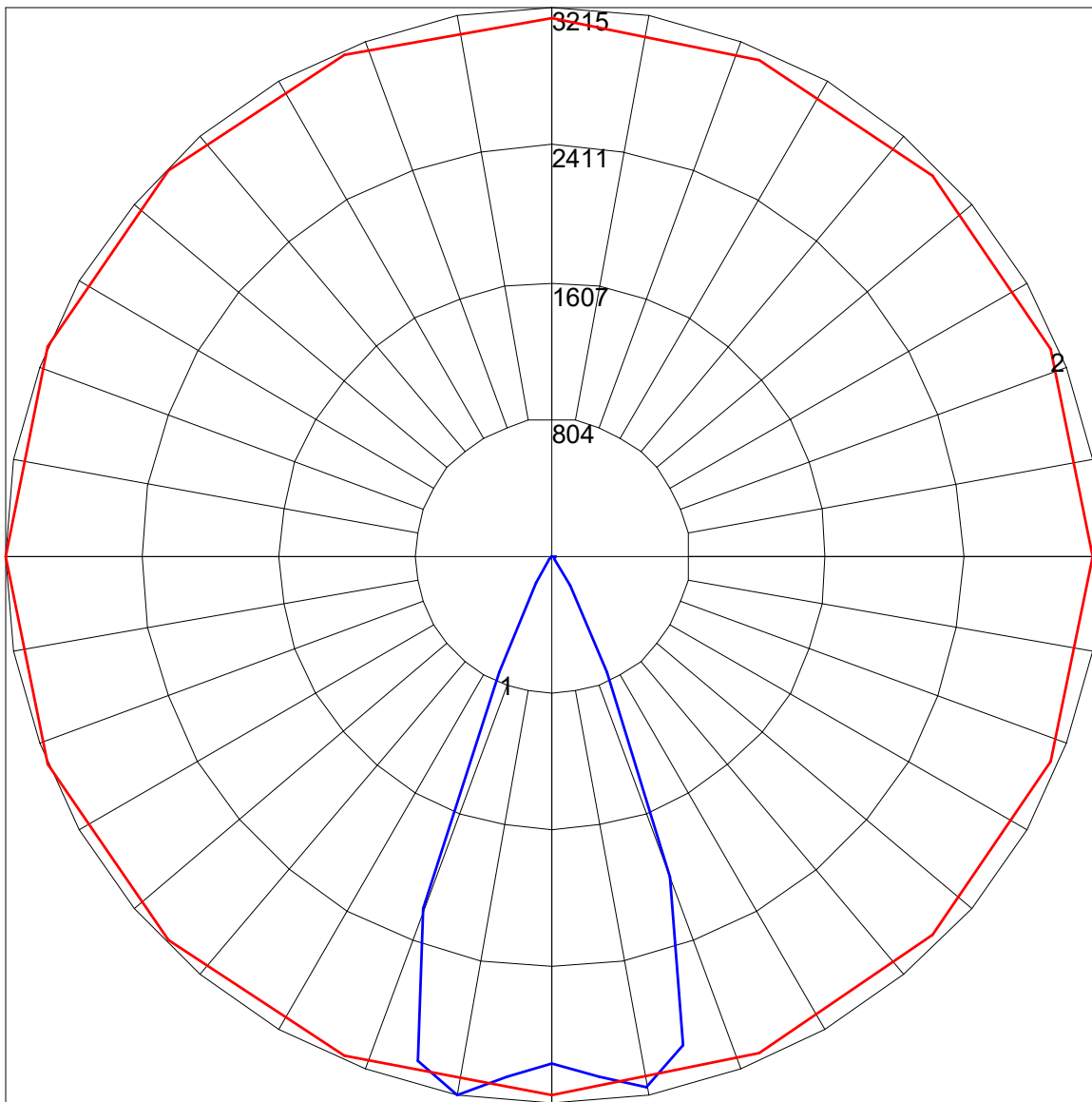
X=2H	Y=2H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

UGR Viewed Endwise

4H	2H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	3H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
8H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	12H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
12H	4H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	6H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
	8H	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Maximum UGR = 1.1

POLAR GRAPH



Maximum Candela = 3214.98 Located At Horizontal Angle = 180, Vertical Angle = 10
1 - Vertical Plane Through Horizontal Angles (180 - 0) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (10) (Through Max. Cd.)