



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4AR-L10-840-DIM-UNV-OW-OF-CS_45 DEGREE TILT.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM BALLABS TEST NO. 20474.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 05-11-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] GEN7 V18 LED 4" TALL HEATSINK 4" RND ADJ DOWNLIGHT @ 45 TILT

[MORE] ACRYLIC WIDE TIR OPTIC & 4" ALUM OPEN SEMI-SPEC REFL

[MORE] ADVANCE # XI050C140V054DSM5 @ 1220mA

[LUMCAT] 4AR-L10-840-DIM-UNV-OW-OF-CS_45 DEGREE TILT

[LAMPCAT] LAMP CODE : BXRE-35E4000

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	697
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	58
Total Luminaire Watts	12.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	2.54
Spacing Criterion (90-270)	0.42
Spacing Criterion (Diagonal)	1.04
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	269473	27221	502
55	56801	963	206
65	746	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	354.569	354.569	354.569	354.569	354.569	354.569	354.569	354.569	354.569
5	397.054	394.179	394.498	368.624	317.835	257.143	216.575	179.201	169.618
10	351.375	377.568	395.137	332.528	229.991	153.008	101.899	82.733	78.900
15	538.242	518.438	409.511	261.615	118.829	70.594	56.220	45.679	42.804
20	1047.736	881.631	408.553	149.175	57.178	37.374	30.985	27.471	27.471
25	1528.481	1224.382	389.707	85.608	30.985	21.721	19.485	18.208	18.208
30	1693.627	1451.817	371.499	54.623	16.610	12.777	12.138	12.138	12.777
35	1694.266	1508.676	338.917	26.513	10.222	7.986	8.305	7.666	7.666
40	1618.560	1488.232	272.156	12.777	5.750	4.472	4.472	4.153	4.153
45	1543.175	1284.115	155.883	6.069	2.875	2.236	2.555	2.555	2.875
50	994.710	604.045	21.082	2.555	1.597	1.597	1.917	1.917	2.555
55	263.851	103.815	4.472	1.597	0.958	1.278	1.597	1.917	2.555
60	21.402	3.833	0.000	0.000	0.000	0.000	0.639	1.278	1.278
65	2.555	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
70	1.917	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	94.39	N.A.	13.50
0-30	240.53	N.A.	34.50
0-40	454.42	N.A.	65.20
0-60	696.45	N.A.	99.90
0-80	697.11	N.A.	100.00
0-90	697.11	N.A.	100.00
10-90	670.04	N.A.	96.10
20-40	360.02	N.A.	51.60
20-50	556.81	N.A.	79.90
40-70	242.66	N.A.	34.80
60-80	0.66	N.A.	0.10
70-80	0.03	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	697.11	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	27.07
10-20	67.33
20-30	146.13
30-40	213.89
40-50	196.79
50-60	45.25
60-70	0.63
70-80	0.03
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	109	106	103	110	107	104	101	102	100	98	99	97	95	95	94	92	91
2	105	98	93	89	102	97	92	88	93	89	86	90	87	84	87	85	82	81
3	97	89	83	78	95	88	82	77	85	80	76	82	78	75	80	76	73	71
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	63
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	66	62	58	56
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	50
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	45
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	43	38	61	50	43	38	49	42	38	48	42	38	47	42	38	36
10	59	47	39	34	58	46	39	34	45	39	34	44	38	34	43	38	34	32

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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	19.2	20.5	19.6	20.8	21.1	0.0	0.0	0.0	0.0	0.0
	3H	19.1	20.2	19.4	20.5	20.9	0.0	0.0	0.0	0.0	0.0
	4H	19.0	20.1	19.4	20.4	20.8	0.0	0.0	0.0	0.0	0.0
	6H	18.9	19.9	19.3	20.3	20.7	0.0	0.0	0.0	0.0	0.0
	8H	18.9	19.8	19.3	20.2	20.6	0.0	0.0	0.0	0.0	0.0
	12H	18.8	19.7	19.2	20.1	20.5	0.0	0.0	0.0	0.0	0.0

UGR Viewed Endwise

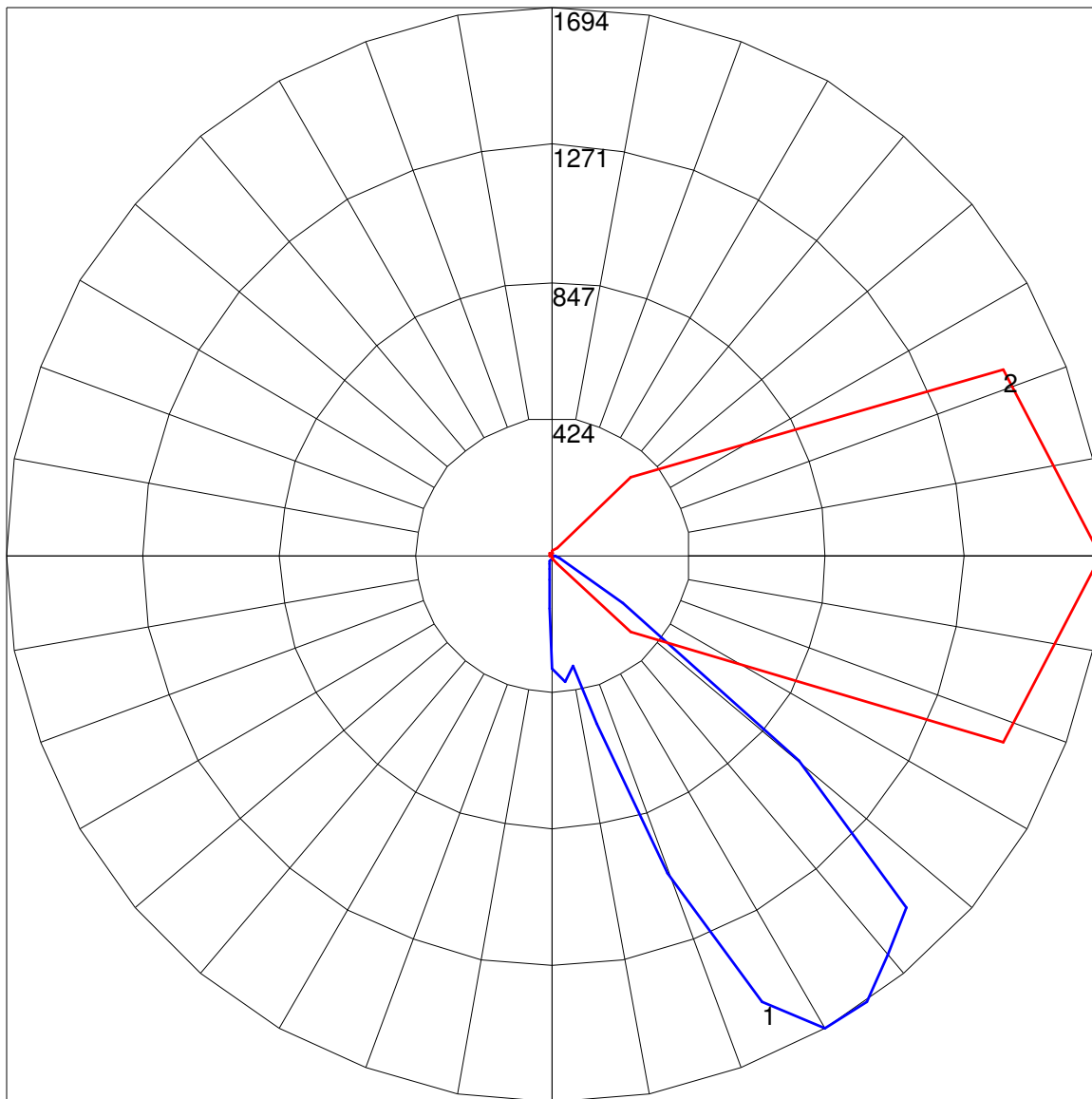
4H	2H	19.0	20.1	19.4	20.4	20.8	0.0	0.0	0.0	0.0	0.0
	3H	18.9	19.7	19.3	20.1	20.5	0.0	0.0	0.0	0.0	0.0
	4H	18.8	19.5	19.2	19.9	20.4	0.0	0.0	0.0	0.0	0.0
	6H	18.7	19.3	19.1	19.8	20.2	0.0	0.0	0.0	0.0	0.0
	8H	18.6	19.2	19.1	19.7	20.1	0.0	0.0	0.0	0.0	0.0
	12H	18.6	19.1	19.0	19.6	20.1	0.0	0.0	0.0	0.0	0.0

8H	4H	18.6	19.2	19.1	19.7	20.1	0.0	0.0	0.0	0.0	0.0
	6H	18.5	19.0	19.0	19.5	20.0	0.0	0.0	0.0	0.0	0.0
	8H	18.4	18.9	19.0	19.4	19.9	0.0	0.0	0.0	0.0	0.0
	12H	18.4	18.8	18.9	19.3	19.9	0.0	0.0	0.0	0.0	0.0

12H	4H	18.6	19.1	19.0	19.6	20.1	0.0	0.0	0.0	0.0	0.0
	6H	18.4	18.9	19.0	19.4	19.9	0.0	0.0	0.0	0.0	0.0
	8H	18.4	18.8	18.9	19.3	19.9	0.0	0.0	0.0	0.0	0.0

Maximum UGR = 21.1

POLAR GRAPH



Maximum Candela = 1694.266 Located At Horizontal Angle = 0, Vertical Angle = 35
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (35) (Through Max. Cd.)