



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 192_168_37_234-16_16_36-MERGED.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from UL #12326812.04

[TESTLAB]

[ISSUE DATE] 25-FEB-2021

[MANUFAC] WILLIAMS INDOOR

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

[LUMCAT] 8CRD-TL-P29-8TWU-P29-8TWD-xxx-PoE PR-OM-CSU-OW-CSD-WM 4000k

[LUMINAIRE] White formed aluminum housing, specular reflector, cover glass

[MORE]

[LAMP] The white LEDs, one up/ one down

[SEARCH_SOURCETYPE] LED

[SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT

[SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5173
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	103
Total Luminaire Watts	50
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.50 ft (Diameter)
Luminous Width (90-270)	0.50 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	4637	4637	4637
55	1616	1616	1616
65	337	337	337
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>	<u>202.5</u>
0	2176.153	2176.153	2176.153	2176.153	2176.153	2176.153	2176.153	2176.153	2176.153	2176.153
5	2055.111	2055.111	2055.111	2055.111	2055.111	2055.111	2055.111	2055.111	2055.111	2055.111
10	2262.054	2262.054	2262.054	2262.054	2262.054	2262.054	2262.054	2262.054	2262.054	2262.054
15	2258.149	2258.149	2258.149	2258.149	2258.149	2258.149	2258.149	2258.149	2258.149	2258.149
20	2358.367	2358.367	2358.367	2358.367	2358.367	2358.367	2358.367	2358.367	2358.367	2358.367
25	2579.627	2579.627	2579.627	2579.627	2579.627	2579.627	2579.627	2579.627	2579.627	2579.627
30	2534.073	2534.073	2534.073	2534.073	2534.073	2534.073	2534.073	2534.073	2534.073	2534.073
35	786.122	786.122	786.122	786.122	786.122	786.122	786.122	786.122	786.122	786.122
40	108.027	108.027	108.027	108.027	108.027	108.027	108.027	108.027	108.027	108.027
45	59.870	59.870	59.870	59.870	59.870	59.870	59.870	59.870	59.870	59.870
50	35.141	35.141	35.141	35.141	35.141	35.141	35.141	35.141	35.141	35.141
55	16.920	16.920	16.920	16.920	16.920	16.920	16.920	16.920	16.920	16.920
60	9.111	9.111	9.111	9.111	9.111	9.111	9.111	9.111	9.111	9.111
65	2.603	2.603	2.603	2.603	2.603	2.603	2.603	2.603	2.603	2.603
70	0.000	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	0.000
80	0.000	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	0.000
90	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121	0.121
95	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363	0.363
100	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727	0.727
105	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332	1.332
110	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664	2.664
115	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844	4.844
120	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840	8.840
125	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712	16.712
130	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455	32.455
135	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947	55.947
140	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232	140.232
145	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944	478.944
150	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614
155	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906
160	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396
165	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532
170	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467
175	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019
180	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548

Vert. Angles **Horizontal Angles**

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	2176.153	2176.153	2176.153	2176.153	2176.153	2176.153	2176.153
5	2055.111	2055.111	2055.111	2055.111	2055.111	2055.111	2055.111
10	2262.054	2262.054	2262.054	2262.054	2262.054	2262.054	2262.054
15	2258.149	2258.149	2258.149	2258.149	2258.149	2258.149	2258.149
20	2358.367	2358.367	2358.367	2358.367	2358.367	2358.367	2358.367
25	2579.627	2579.627	2579.627	2579.627	2579.627	2579.627	2579.627
30	2534.073	2534.073	2534.073	2534.073	2534.073	2534.073	2534.073
35	786.122	786.122	786.122	786.122	786.122	786.122	786.122
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45	59.870	59.870	59.870	59.870	59.870	59.870	59.870
50	35.141	35.141	35.141	35.141	35.141	35.141	35.141
55	16.920	16.920	16.920	16.920	16.920	16.920	16.920
60	9.111	9.111	9.111	9.111	9.111	9.111	9.111

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65	2.603	2.603	2.603	2.603	2.603	2.603	2.603
70	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
80	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
90	0.121	0.121	0.121	0.121	0.121	0.121	0.121
95	0.363	0.363	0.363	0.363	0.363	0.363	0.363
100	0.727	0.727	0.727	0.727	0.727	0.727	0.727
105	1.332	1.332	1.332	1.332	1.332	1.332	1.332
110	2.664	2.664	2.664	2.664	2.664	2.664	2.664
115	4.844	4.844	4.844	4.844	4.844	4.844	4.844
120	8.840	8.840	8.840	8.840	8.840	8.840	8.840
125	16.712	16.712	16.712	16.712	16.712	16.712	16.712
130	32.455	32.455	32.455	32.455	32.455	32.455	32.455
135	55.947	55.947	55.947	55.947	55.947	55.947	55.947
140	140.232	140.232	140.232	140.232	140.232	140.232	140.232
145	478.944	478.944	478.944	478.944	478.944	478.944	478.944
150	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614	1214.614
155	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906	1709.906
160	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396	2315.396
165	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532	2815.532
170	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467	3624.467
175	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019	4810.019
180	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548	4858.548

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	853.62	N.A.	16.50
0-30	2018.67	N.A.	39.00
0-40	2656.77	N.A.	51.40
0-60	2724.4	N.A.	52.70
0-80	2727.9	N.A.	52.70
0-90	2727.94	N.A.	52.70
10-90	2522.92	N.A.	48.80
20-40	1803.15	N.A.	34.90
20-50	1853.44	N.A.	35.80
40-70	71.13	N.A.	1.40
60-80	3.51	N.A.	0.10
70-80	0.00	N.A.	0.00
80-90	0.03	N.A.	0.00
90-110	2.02	N.A.	0.00
90-120	7.25	N.A.	0.10
90-130	23.85	N.A.	0.50
90-150	430.73	N.A.	8.30
90-180	2445.2	N.A.	47.30
110-180	2443.18	N.A.	47.20
0-180	5173.14	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	205.02
10-20	648.60
20-30	1165.05
30-40	638.10
40-50	50.29
50-60	17.34
60-70	3.51
70-80	0.00
80-90	0.03
90-100	0.43
100-110	1.60
110-120	5.23
120-130	16.60
130-140	54.19
140-150	352.69
150-160	792.28
160-170	804.88
170-180	417.31

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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	108	108	108	108	100	100	100	100	85	85	85	71	71	71	59	59	59	53
1	101	97	94	92	93	91	88	86	78	76	75	66	65	64	56	55	54	49
2	94	88	84	80	87	83	79	75	72	69	66	62	60	58	52	51	50	46
3	88	81	75	70	82	76	71	67	66	63	60	57	55	53	49	48	46	43
4	82	74	67	62	77	69	64	60	61	57	54	53	51	48	46	44	43	40
5	77	67	61	56	72	64	58	54	57	52	49	50	47	44	44	41	40	37
6	72	62	55	51	67	59	53	49	52	48	45	47	43	41	41	39	37	34
7	68	57	51	46	63	54	49	44	49	44	41	44	40	38	39	36	34	32
8	64	53	47	42	60	51	45	41	46	41	38	41	37	35	36	34	32	30
9	60	49	43	39	56	47	41	37	43	38	35	38	35	32	34	32	30	28
10	56	46	40	36	53	44	38	35	40	35	32	36	33	30	32	30	28	26

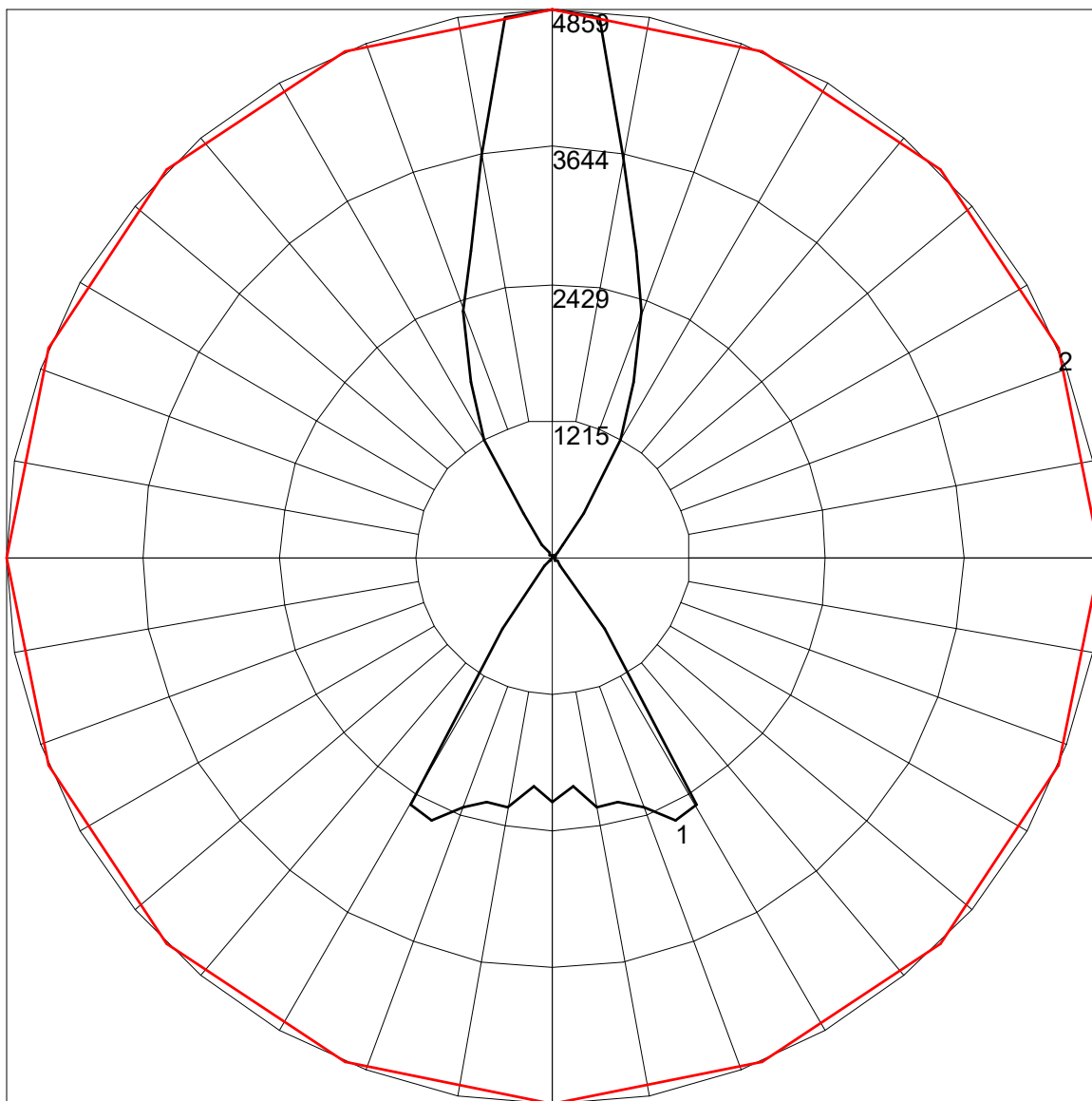
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UGR TABLE - CORRECTED

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	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	3H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
4H	2H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	3H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
8H	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	12H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
12H	4H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	6H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	8H	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7

Maximum UGR = 5.7

POLAR GRAPH



Maximum Candela = 4858.548 Located At Horizontal Angle = 0, Vertical Angle = 180
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (180) (Through Max. Cd.)