



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 76-8-L230-840-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 18634.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUE DATE] 08-03-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO.64836
 [LUMINAIRE] 8' LED STRIP LUMINAIRE
 [MORE] WHITE REFLECTOR
 [LUMCAT] 76-8-L230-840-DRV-UNV
 [LAMPCAT] HLM 80 CRI, 4000K CCT
 [SEARCH_SOURCETYPE]LED
 [SEARCH_APPLICATION]INDOOR,COMMERCIAL,INDUSTRIAL,DIRECT,LINEAR
 [SEARCH_APPLICATION]MANUFACTURING,WAREHOUSE
 [SEARCH_MOUNTING]CEILING,SURFACE,SUSPENDED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	23029
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	152.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	8.00 ft
Luminous Width (90-270)	0.38 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	28277	28077	28033
55	26861	26534	26370
65	25490	25156	24156
75	21113	19601	19601
85	13833	12755	12755

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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>
0	7936.623	7936.623	7936.623	7936.623	7936.623
5	7962.831	7962.831	7954.095	7954.095	7954.095
10	7849.263	7840.528	7840.528	7840.528	7831.792
15	7626.496	7626.496	7617.760	7613.392	7613.392
20	7512.929	7495.457	7491.089	7464.881	7473.617
25	7084.867	7080.499	7063.027	7058.659	7058.659
30	6722.324	6713.588	6700.484	6683.012	6678.644
35	6399.093	6390.358	6372.886	6355.414	6342.310
40	5918.615	5905.512	5892.408	5874.936	5874.936
45	5577.913	5573.545	5538.601	5534.233	5529.865
50	4909.612	4896.508	4883.404	4861.564	4857.196
55	4298.094	4280.622	4245.678	4228.206	4219.471
60	3594.849	3573.009	3551.169	3529.329	3498.754
65	3005.172	2992.068	2965.860	2904.708	2847.924
70	2293.191	2271.351	2227.671	2149.047	2127.207
75	1524.426	1511.322	1415.226	1380.282	1415.226
80	882.332	856.124	794.973	768.765	812.445
85	336.335	314.495	310.127	297.023	310.127
90	17.472	30.576	69.888	78.624	78.624

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2917.13	N.A.	12.70
0-30	6185.98	N.A.	26.90
0-40	10157.17	N.A.	44.10
0-60	18173.52	N.A.	78.90
0-80	22621.37	N.A.	98.20
0-90	23028.64	N.A.	100.00
10-90	22273.49	N.A.	96.70
20-40	7240.04	N.A.	31.40
20-50	11466.5	N.A.	49.80
40-70	10902.89	N.A.	47.30
60-80	4447.85	N.A.	19.30
70-80	1561.31	N.A.	6.80
80-90	407.28	N.A.	1.80
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	23028.64	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	755.15
10-20	2161.98
20-30	3268.85
30-40	3971.18
40-50	4226.46
50-60	3789.89
60-70	2886.54
70-80	1561.31
80-90	407.28
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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32	43	36	32	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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UGR TABLE - CORRECTED

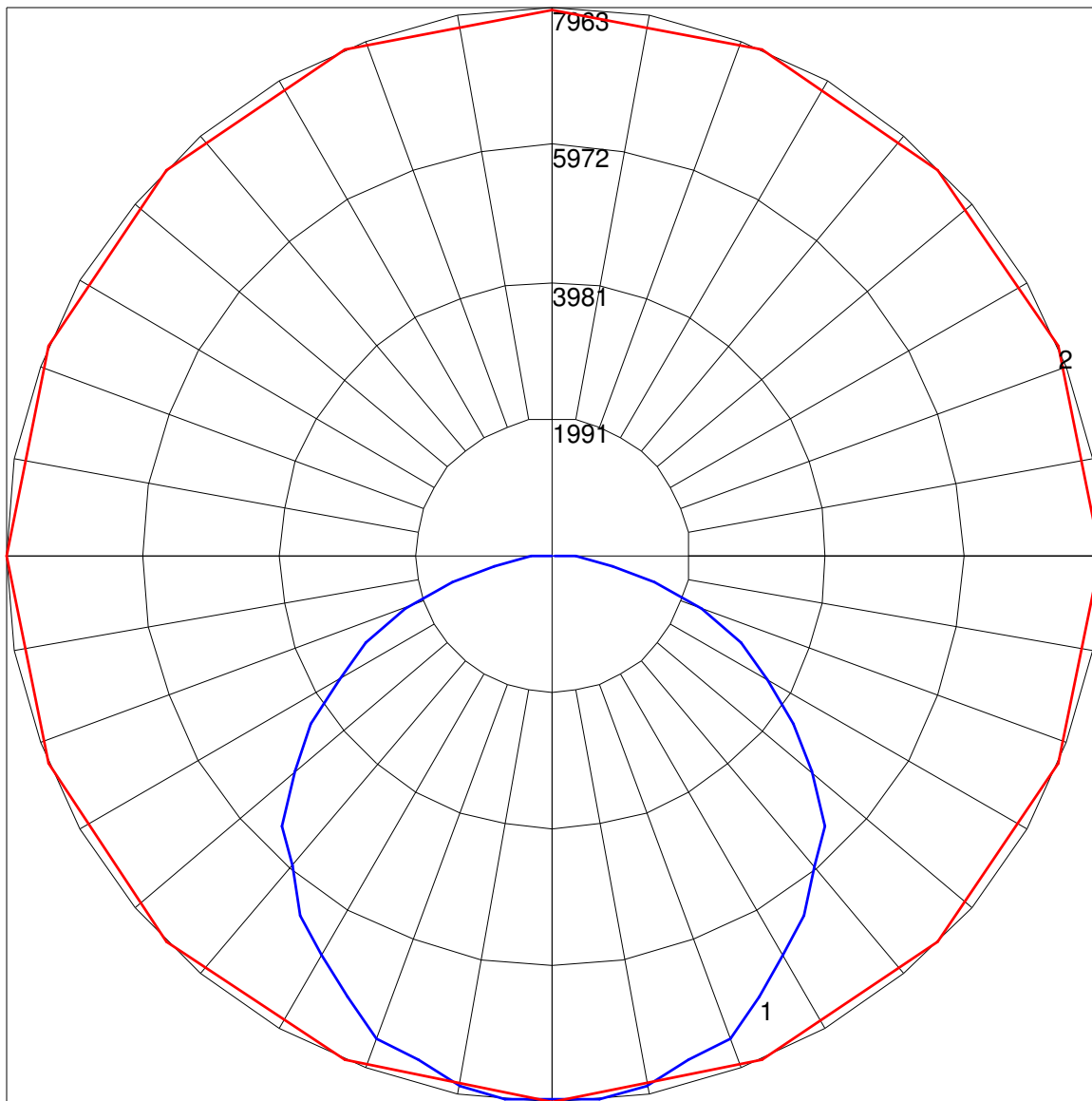
Reflectances

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	23.6	25.3	24.0	25.6	25.9	23.5	25.2	23.9	25.5	25.8
	3H	25.5	27.0	25.9	27.3	27.7	25.3	26.8	25.6	27.1	27.4
	4H	26.1	27.5	26.5	27.9	28.3	25.8	27.3	26.2	27.6	28.0
	6H	26.6	27.9	27.0	28.2	28.6	26.2	27.6	26.7	27.9	28.3
	8H	26.7	27.9	27.1	28.3	28.7	26.4	27.6	26.8	28.0	28.4
	12H	26.8	28.0	27.2	28.4	28.8	26.4	27.6	26.9	28.0	28.4
4H	2H	24.3	25.7	24.7	26.0	26.4	24.2	25.6	24.6	26.0	26.3
	3H	26.3	27.5	26.7	27.9	28.3	26.1	27.3	26.5	27.7	28.1
	4H	27.1	28.2	27.5	28.6	29.0	26.8	27.9	27.3	28.3	28.7
	6H	27.7	28.6	28.1	29.0	29.5	27.3	28.3	27.8	28.7	29.1
	8H	27.8	28.7	28.3	29.1	29.6	27.5	28.3	27.9	28.8	29.3
	12H	27.9	28.7	28.4	29.2	29.7	27.6	28.4	28.1	28.8	29.3
8H	4H	27.3	28.2	27.8	28.7	29.1	27.1	28.0	27.6	28.4	28.9
	6H	28.0	28.7	28.5	29.2	29.7	27.7	28.4	28.2	28.9	29.4
	8H	28.2	28.9	28.8	29.4	29.9	27.9	28.6	28.4	29.1	29.6
	12H	28.4	29.0	28.9	29.5	30.0	28.1	28.6	28.6	29.1	29.7
12H	4H	27.4	28.1	27.8	28.6	29.1	27.1	27.9	27.6	28.4	28.9
	6H	28.0	28.7	28.6	29.2	29.7	27.7	28.4	28.3	28.9	29.4
	8H	28.3	28.9	28.8	29.4	29.9	28.0	28.6	28.5	29.1	29.6

Maximum UGR = 30.0

POLAR GRAPH



Maximum Candela = 7962.831 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)