



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 76-4-L115-840-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] 18-NOV-2019
 [MANUFAC] WILLIAMS LINEAR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 4' STRIP LUMINAIRE
 [MORE] LED ARRAYS ON WHITE REFLECTOR
 [LUMCAT] 76-4-L115-840-DRV-UNV
 [_SEARCH_SOURCETYPE]FL
 [_SEARCH_APPLICATION]INDOOR,COMMERCIAL,INDUSTRIAL,DIRECT,LINEAR
 [_SEARCH_APPLICATION]MANUFACTURING,WAREHOUSE
 [_SEARCH_MOUNTING]CEILING,SURFACE,SUSPENDED
 [_SEARCH_CERTIFICATION]DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	11514
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	76.1
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)	4.00 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	3968.312	3968.312	3968.312	3968.312	3968.312
5	3981.416	3981.416	3977.048	3977.048	3977.048
10	3924.632	3920.264	3920.264	3920.264	3915.896
15	3813.248	3813.248	3808.880	3806.696	3806.696
20	3756.464	3747.728	3745.544	3732.441	3736.809
25	3542.433	3540.249	3531.513	3529.329	3529.329
30	3361.162	3356.794	3350.242	3341.506	3339.322
35	3199.547	3195.179	3186.443	3177.707	3171.155
40	2959.308	2952.756	2946.204	2937.468	2937.468
45	2788.956	2786.772	2769.301	2767.117	2764.933
50	2454.806	2448.254	2441.702	2430.782	2428.598
55	2149.047	2140.311	2122.839	2114.103	2109.735
60	1797.425	1786.505	1775.585	1764.665	1749.377
65	1502.586	1496.034	1482.930	1452.354	1423.962
70	1146.595	1135.675	1113.835	1074.524	1063.604
75	762.213	755.661	707.613	690.141	707.613
80	441.166	428.062	397.486	384.382	406.222
85	168.167	157.247	155.063	148.511	155.063
90	8.736	15.288	34.944	39.312	39.312

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1458.57	N.A.	12.70
0-30	3092.99	N.A.	26.90
0-40	5078.58	N.A.	44.10
0-60	9086.76	N.A.	78.90
0-80	11310.68	N.A.	98.20
0-90	11514.32	N.A.	100.00
10-90	11136.75	N.A.	96.70
20-40	3620.02	N.A.	31.40
20-50	5733.25	N.A.	49.80
40-70	5451.45	N.A.	47.30
60-80	2223.92	N.A.	19.30
70-80	780.65	N.A.	6.80
80-90	203.64	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	11514.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	377.57
10-20	1080.99
20-30	1634.43
30-40	1985.59
40-50	2113.23
50-60	1894.94
60-70	1443.27
70-80	780.65
80-90	203.64
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	253	253	253	253	247	247	247	247	236	236	236	226	226	226	217	217	217	213
1	231	221	212	204	225	216	208	200	207	200	194	199	193	188	191	187	182	178
2	210	192	178	166	204	188	175	164	181	170	160	174	164	156	167	160	153	148
3	191	169	151	137	186	165	149	136	159	145	134	153	141	131	148	138	129	124
4	175	149	130	116	170	146	129	115	141	126	114	136	123	112	131	120	111	106
5	161	133	114	100	156	131	113	99	126	110	98	122	108	97	118	106	96	91
6	148	120	101	87	144	118	100	86	114	98	86	110	96	85	107	94	84	80
7	137	109	90	77	134	107	89	76	103	87	76	100	86	75	97	84	75	70
8	128	99	81	68	125	97	80	68	95	79	68	92	78	67	89	76	67	63
9	119	91	73	61	116	89	73	61	87	72	61	85	71	60	83	70	60	56
10	112	84	67	55	109	83	66	55	80	65	55	78	65	55	77	64	55	51

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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	21.0	22.7	21.4	23.0	23.3	20.9	22.6	21.3	22.9	23.2
	3H	22.9	24.4	23.3	24.7	25.1	22.7	24.2	23.1	24.5	24.9
	4H	23.5	24.9	23.9	25.3	25.7	23.3	24.7	23.7	25.0	25.4
	6H	24.0	25.3	24.4	25.6	26.0	23.7	25.0	24.1	25.3	25.7
	8H	24.1	25.4	24.5	25.7	26.1	23.8	25.0	24.2	25.4	25.8
	12H	24.2	25.4	24.6	25.8	26.2	23.9	25.0	24.3	25.4	25.9

UGR Viewed Endwise

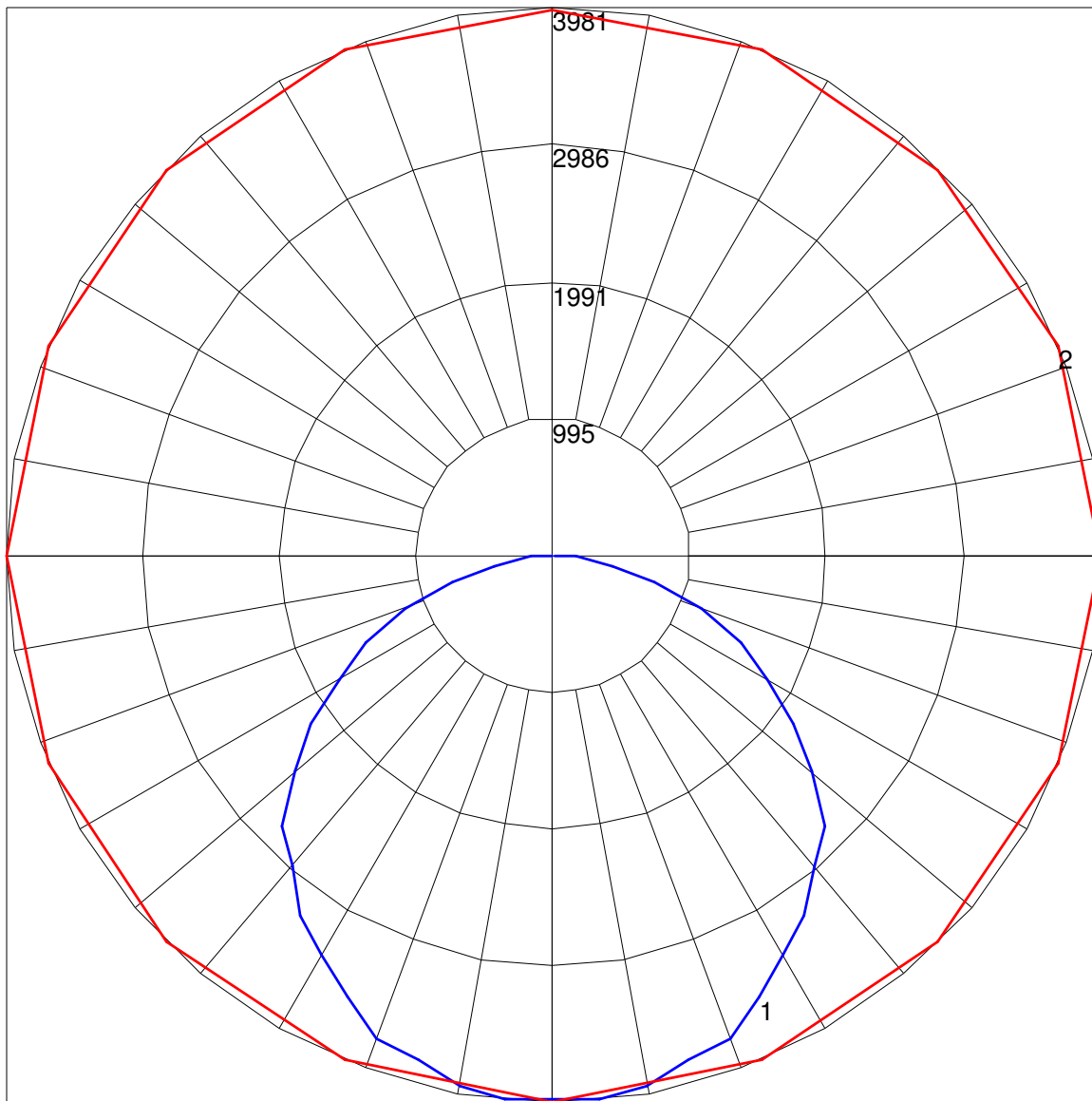
4H	2H	21.7	23.1	22.1	23.4	23.8	21.6	23.0	22.0	23.4	23.7
	3H	23.7	24.9	24.2	25.3	25.7	23.5	24.7	23.9	25.1	25.5
	4H	24.5	25.6	24.9	26.0	26.4	24.2	25.3	24.7	25.7	26.1
	6H	25.1	26.0	25.5	26.4	26.9	24.7	25.7	25.2	26.1	26.6
	8H	25.2	26.1	25.7	26.5	27.0	24.9	25.8	25.3	26.2	26.7
	12H	25.3	26.1	25.8	26.6	27.1	25.0	25.8	25.5	26.2	26.7

8H	4H	24.8	25.6	25.2	26.1	26.5	24.5	25.4	25.0	25.8	26.3
	6H	25.4	26.1	25.9	26.6	27.1	25.1	25.8	25.6	26.3	26.8
	8H	25.7	26.3	26.2	26.8	27.3	25.3	26.0	25.8	26.5	27.0
	12H	25.8	26.4	26.3	26.9	27.4	25.5	26.0	26.0	26.5	27.1

12H	4H	24.8	25.6	25.2	26.0	26.5	24.5	25.3	25.0	25.8	26.3
	6H	25.4	26.1	26.0	26.6	27.1	25.1	25.8	25.7	26.3	26.8
	8H	25.7	26.3	26.2	26.8	27.4	25.4	26.0	25.9	26.5	27.0

Maximum UGR = 27.4

POLAR GRAPH



Maximum Candela = 3981.416 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.)