



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 76-4-L53-840-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-L53-840-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	5414
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	161
Total Luminaire Watts	33.7
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	13296	13202	13181
55	12630	12476	12399
65	11985	11829	11358
75	9928	9216	9216
85	6504	5998	5998

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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>
<b>0</b>	1865.941	1865.941	1865.941	1865.941	1865.941
<b>5</b>	1872.102	1872.102	1870.049	1870.049	1870.049
<b>10</b>	1845.402	1843.348	1843.348	1843.348	1841.294
<b>15</b>	1793.028	1793.028	1790.975	1789.948	1789.948
<b>20</b>	1766.328	1762.220	1761.193	1755.032	1757.086
<b>25</b>	1665.689	1664.662	1660.554	1659.527	1659.527
<b>30</b>	1580.453	1578.399	1575.318	1571.211	1570.184
<b>35</b>	1504.460	1502.406	1498.298	1494.190	1491.110
<b>40</b>	1391.497	1388.416	1385.335	1381.228	1381.228
<b>45</b>	1311.396	1310.369	1302.154	1301.127	1300.100
<b>50</b>	1154.275	1151.194	1148.113	1142.979	1141.952
<b>55</b>	1010.504	1006.396	998.181	994.073	992.019
<b>60</b>	845.167	840.033	834.898	829.763	822.575
<b>65</b>	706.531	703.450	697.289	682.912	669.562
<b>70</b>	539.141	534.006	523.737	505.252	500.117
<b>75</b>	358.400	355.320	332.727	324.511	332.727
<b>80</b>	207.441	201.279	186.902	180.741	191.010
<b>85</b>	79.074	73.939	72.912	69.832	72.912
<b>90</b>	4.108	7.189	16.431	18.485	18.485

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	685.83	N.A.	12.70
0-30	1454.36	N.A.	26.90
0-40	2388.00	N.A.	44.10
0-60	4272.69	N.A.	78.90
0-80	5318.4	N.A.	98.20
0-90	5414.15	N.A.	100.00
10-90	5236.61	N.A.	96.70
20-40	1702.17	N.A.	31.40
20-50	2695.83	N.A.	49.80
40-70	2563.33	N.A.	47.30
60-80	1045.71	N.A.	19.30
70-80	367.07	N.A.	6.80
80-90	95.75	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	5414.15	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	177.54
10-20	508.29
20-30	768.52
30-40	933.65
40-50	993.66
50-60	891.02
60-70	678.64
70-80	367.07
80-90	95.75
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	122	122	122	122	119	119	119	119	114	114	114	109	109	109	105	105	105	103
1	112	107	102	98	109	104	100	97	100	97	94	96	93	91	92	90	88	86
2	101	93	86	80	99	91	84	79	87	82	77	84	79	75	81	77	74	71
3	92	81	73	66	90	80	72	66	77	70	65	74	68	63	71	66	62	60
4	85	72	63	56	82	71	62	56	68	61	55	66	59	54	63	58	53	51
5	78	64	55	48	75	63	54	48	61	53	47	59	52	47	57	51	46	44
6	72	58	49	42	70	57	48	42	55	47	41	53	46	41	52	45	41	38
7	66	52	43	37	65	52	43	37	50	42	37	48	41	36	47	41	36	34
8	62	48	39	33	60	47	39	33	46	38	33	44	37	32	43	37	32	30
9	58	44	35	30	56	43	35	29	42	35	29	41	34	29	40	34	29	27
10	54	40	32	27	53	40	32	27	39	32	27	38	31	26	37	31	26	25

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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	20.9	22.6	21.3	22.9	23.2	20.8	22.5	21.2	22.8	23.1
	3H	22.8	24.3	23.2	24.6	25.0	22.6	24.1	23.0	24.4	24.8
	4H	23.4	24.8	23.8	25.2	25.6	23.2	24.6	23.6	24.9	25.3
	6H	23.9	25.2	24.3	25.5	25.9	23.5	24.9	24.0	25.2	25.6
	8H	24.0	25.3	24.4	25.6	26.0	23.7	24.9	24.1	25.3	25.7
	12H	24.1	25.3	24.5	25.7	26.1	23.8	24.9	24.2	25.3	25.8

UGR Viewed Endwise

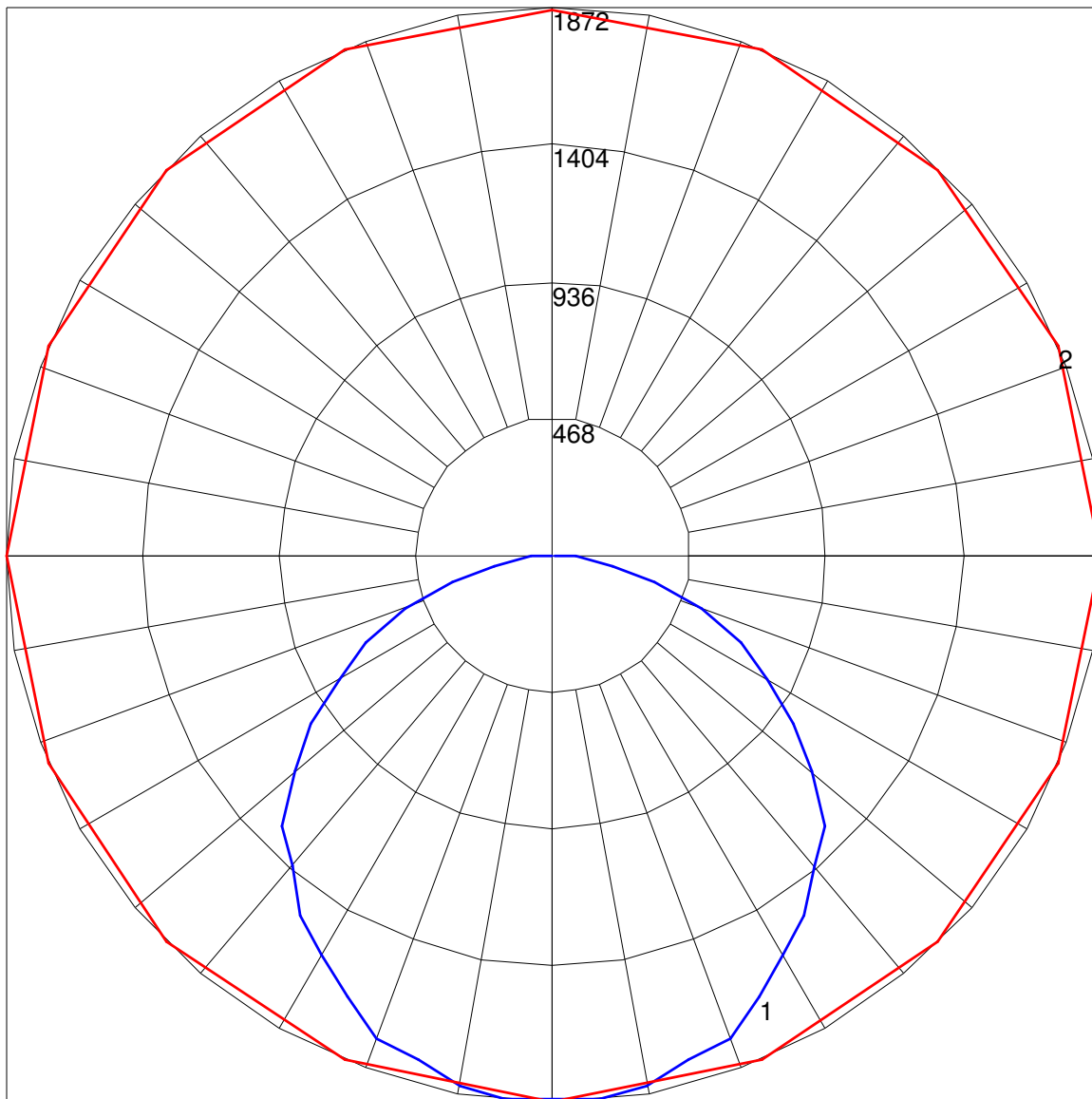
4H	2H	21.6	23.0	22.0	23.3	23.7	21.5	22.9	21.9	23.3	23.6
	3H	23.6	24.8	24.0	25.2	25.6	23.4	24.6	23.8	25.0	25.4
	4H	24.4	25.5	24.8	25.9	26.3	24.1	25.2	24.6	25.6	26.0
	6H	25.0	25.9	25.4	26.3	26.8	24.6	25.6	25.1	26.0	26.5
	8H	25.1	26.0	25.6	26.4	26.9	24.8	25.7	25.2	26.1	26.6
	12H	25.2	26.0	25.7	26.5	27.0	24.9	25.7	25.4	26.1	26.6

8H	4H	24.7	25.5	25.1	26.0	26.4	24.4	25.3	24.9	25.7	26.2
	6H	25.3	26.0	25.8	26.5	27.0	25.0	25.7	25.5	26.2	26.7
	8H	25.6	26.2	26.1	26.7	27.2	25.2	25.9	25.7	26.4	26.9
	12H	25.7	26.3	26.2	26.8	27.3	25.4	25.9	25.9	26.4	27.0

12H	4H	24.7	25.5	25.1	25.9	26.4	24.4	25.2	24.9	25.7	26.2
	6H	25.3	26.0	25.9	26.5	27.0	25.0	25.7	25.6	26.2	26.7
	8H	25.6	26.2	26.1	26.7	27.3	25.3	25.9	25.8	26.4	26.9

Maximum UGR = 27.3

POLAR GRAPH



Maximum Candela = 1872.102 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.)