



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-8-L130-840-HIAFR-DIM-UNV.IES

### DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST]GEN FROM BALLABS TEST NO. 18148.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUE DATE] 5-JUN-2020

[MANUFAC] WILLIAMS FLUORESCENT

[LUMINAIRE] 4 22" LED BOARDS 8' SUSPENDED ENCLOSED/GASKETED LUMINAIRE

[MORE] WHITE REFLECTOR w/FROSTED ACRYLIC RIBBED DROP LENS

[LUMCAT] 96-8-L130/840-HIAFR-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	13026
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	95
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.06
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	8.29 ft
Luminous Width (90-270)	0.52 ft
Luminous Height	0.19 ft

### LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	9876	7369	7556
55	8482	6726	6692
65	6633	5777	5582
75	4543	4526	4472
85	2454	3503	3494

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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>	4805.648	4805.648	4805.648	4805.648	4805.648
<b>5</b>	4854.169	4833.952	4821.821	4809.691	4807.669
<b>10</b>	4724.778	4675.246	4650.985	4622.681	4608.529
<b>15</b>	4642.898	4588.312	4499.356	4409.389	4401.302
<b>20</b>	4407.367	4334.585	4161.727	4129.380	4084.902
<b>25</b>	4137.466	4054.576	3918.109	3698.751	3623.948
<b>30</b>	3853.414	3720.990	3489.503	3338.884	3342.927
<b>35</b>	3598.676	3457.155	3187.254	3207.472	3233.754
<b>40</b>	3229.711	3075.048	2894.104	2992.157	3052.809
<b>45</b>	2841.539	2662.616	2640.377	2821.321	2900.169
<b>50</b>	2396.759	2248.162	2352.281	2565.573	2614.094
<b>55</b>	1998.478	1919.631	2134.945	2299.716	2321.955
<b>60</b>	1571.894	1594.133	1843.816	1956.022	1976.239
<b>65</b>	1169.570	1287.841	1541.568	1647.708	1671.969
<b>70</b>	820.822	1015.918	1255.493	1362.645	1392.971
<b>75</b>	507.454	716.703	942.125	1052.309	1086.679
<b>80</b>	271.922	489.258	706.594	812.735	849.126
<b>85</b>	107.152	308.314	501.389	595.399	625.725
<b>90</b>	30.326	168.814	320.444	402.324	430.628
<b>95</b>	8.087	112.206	251.705	339.650	363.911
<b>100</b>	0.000	76.826	207.227	288.096	316.400
<b>105</b>	0.000	46.500	162.749	241.597	263.836
<b>110</b>	0.000	26.282	124.336	193.075	213.292
<b>115</b>	0.000	18.196	86.934	144.554	162.749
<b>120</b>	0.000	0.000	62.674	114.228	130.401
<b>125</b>	0.000	0.000	34.369	76.826	92.999
<b>130</b>	0.000	0.000	26.282	54.587	64.695
<b>135</b>	0.000	0.000	0.000	32.348	46.500
<b>140</b>	0.000	0.000	0.000	0.000	34.369
<b>145</b>	0.000	0.000	0.000	0.000	0.000
<b>150</b>	0.000	0.000	0.000	0.000	0.000
<b>155</b>	0.000	0.000	0.000	0.000	0.000
<b>160</b>	0.000	0.000	0.000	0.000	0.000
<b>165</b>	0.000	0.000	0.000	0.000	0.000
<b>170</b>	0.000	0.000	0.000	0.000	0.000
<b>175</b>	0.000	0.000	0.000	0.000	0.000
<b>180</b>	0.000	0.000	0.000	0.000	0.000

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	1716.34	N.A.	13.20
0-30	3506.14	N.A.	26.90
0-40	5573.65	N.A.	42.80
0-60	9581.64	N.A.	73.60
0-80	11994.76	N.A.	92.10
0-90	12487.7	N.A.	95.90
10-90	12033.52	N.A.	92.40
20-40	3857.31	N.A.	29.60
20-50	5970.49	N.A.	45.80
40-70	5475.53	N.A.	42.00
60-80	2413.12	N.A.	18.50
70-80	945.58	N.A.	7.30
80-90	492.94	N.A.	3.80
90-110	403.09	N.A.	3.10
90-120	487.39	N.A.	3.70
90-130	525.22	N.A.	4.00
90-150	537.83	N.A.	4.10
90-180	537.83	N.A.	4.10
110-180	134.74	N.A.	1.00
0-180	13025.53	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	454.18
10-20	1262.16
20-30	1789.8
30-40	2067.51
40-50	2113.18
50-60	1894.8
60-70	1467.54
70-80	945.58
80-90	492.94
90-100	247.74
100-110	155.35
110-120	84.30
120-130	37.83
130-140	11.90
140-150	0.72
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	153	153	153	153	149	149	149	149	141	141	141	134	134	134	127	127	127	124
1	138	132	126	121	134	128	123	118	122	118	113	116	112	109	110	108	105	102
2	126	115	106	98	122	112	104	96	106	99	93	101	96	90	97	92	88	85
3	115	101	90	82	111	98	88	80	94	85	78	89	82	76	85	79	74	71
4	105	89	78	69	102	87	77	68	83	74	67	80	72	65	76	70	64	61
5	97	80	68	60	94	78	67	59	75	65	58	72	63	57	69	62	56	53
6	89	72	61	52	87	71	60	52	68	58	51	65	57	50	63	55	49	46
7	83	66	54	46	80	64	53	46	62	52	45	59	51	44	57	50	44	41
8	77	60	49	41	75	59	48	41	57	47	40	55	46	40	53	45	39	37
9	72	55	44	37	70	54	44	37	52	43	37	50	42	36	49	41	36	33
10	68	51	41	34	66	50	40	34	48	39	33	47	39	33	45	38	33	30

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**UGR TABLE - CORRECTED**

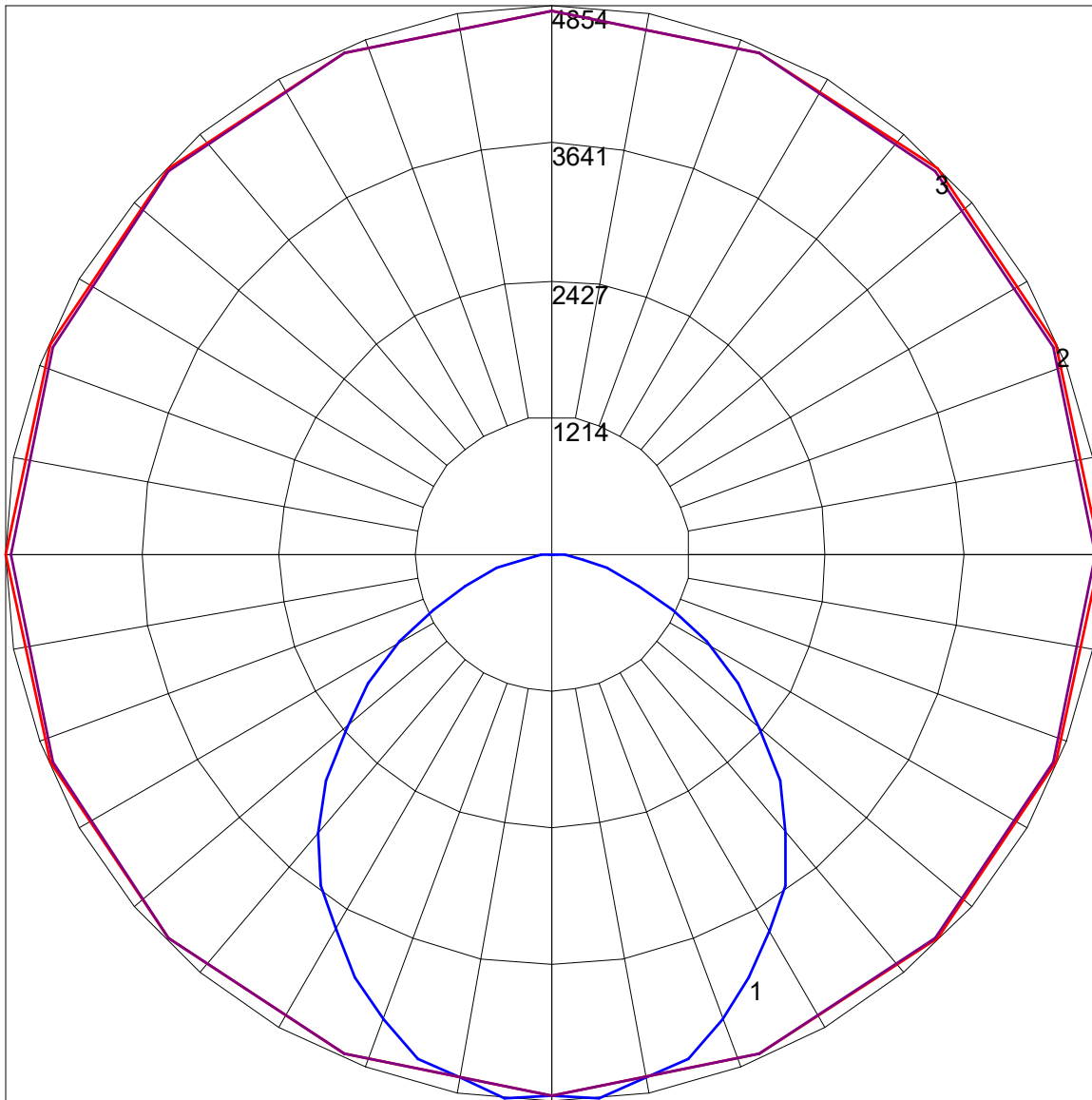
Reflectances

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	16.2	17.7	16.6	18.1	18.6	18.4	19.9	18.8	20.3	20.7
	3H	17.5	18.9	17.9	19.3	19.8	20.5	21.9	20.9	22.3	22.7
	4H	17.9	19.2	18.3	19.6	20.1	21.4	22.7	21.8	23.1	23.6
	6H	18.0	19.3	18.5	19.7	20.2	22.2	23.5	22.7	23.9	24.4
	8H	18.1	19.3	18.6	19.7	20.2	22.7	23.9	23.2	24.3	24.8
	12H	18.1	19.2	18.6	19.7	20.2	23.1	24.3	23.6	24.7	25.2
4H	2H	17.1	18.4	17.5	18.8	19.3	18.8	20.1	19.2	20.6	21.0
	3H	18.6	19.7	19.1	20.2	20.7	21.1	22.2	21.6	22.7	23.2
	4H	19.1	20.1	19.6	20.6	21.1	22.1	23.2	22.6	23.6	24.2
	6H	19.4	20.3	19.9	20.8	21.4	23.2	24.1	23.7	24.6	25.1
	8H	19.5	20.3	20.0	20.8	21.4	23.7	24.5	24.2	25.0	25.6
	12H	19.5	20.3	20.0	20.8	21.4	24.2	25.0	24.8	25.5	26.1
8H	4H	19.7	20.5	20.2	21.0	21.6	22.3	23.2	22.8	23.7	24.2
	6H	20.1	20.8	20.7	21.4	22.0	23.5	24.2	24.0	24.8	25.3
	8H	20.3	20.9	20.8	21.5	22.1	24.1	24.8	24.7	25.3	25.9
	12H	20.4	20.9	20.9	21.5	22.1	24.8	25.4	25.4	25.9	26.6
12H	4H	19.8	20.5	20.3	21.1	21.7	22.3	23.1	22.9	23.6	24.2
	6H	20.3	21.0	20.9	21.5	22.1	23.5	24.2	24.1	24.7	25.3
	8H	20.5	21.1	21.1	21.7	22.3	24.2	24.8	24.8	25.3	26.0

Maximum UGR = 26.6

POLAR GRAPH



Maximum Candela = 4854.169 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.)  
# 3 - Horizontal Cone Through Vertical Angle (0)