



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-8-L50-840-HIAFR-DRV-UNV.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20206.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 5-JUN-2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-28 LED 22" ARRAYS 8' ENCLOSED & GASKETED LUMINAIRE

[MORE] WHITE FLAT REFL w/HIAFR RIBBED ACRYLIC DROP LENS

[LUMCAT] 96-8-L80-840-HIAFR-DRV-UNV

CHARACTERISTICS

Lumens Per Lamp	1 (1 lamp)
Total Lamp Lumens	1
Luminaire Lumens	8017
Total Luminaire Efficiency	163 %
Luminaire Efficacy Rating (LER)	131
Total Luminaire Watts	61
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	8.29 ft
Luminous Width (90-270)	0.50 ft
Luminous Height	0.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6506	4894	4962
55	5357	4316	4364
65	4169	3792	3684
75	2798	2847	2832
85	1508	2212	2189

IES INDOOR REPORT
 PHOTOMETRIC FILENAME : 96-8-L50-840-HIAFR-DRV-UNV.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	3003.470	3003.470	3003.470	3003.470	3003.470
5	2980.505	2972.303	2957.540	2949.339	2952.619
10	2941.137	2918.172	2890.286	2865.681	2857.479
15	2893.567	2882.084	2834.514	2763.980	2801.708
20	2782.023	2727.892	2677.041	2565.498	2601.586
25	2649.156	2606.507	2517.928	2381.780	2439.192
30	2417.867	2309.604	2211.184	2122.605	2225.947
35	2188.219	2060.272	1989.737	1976.615	2071.755
40	1976.615	1842.106	1810.940	1851.948	1914.281
45	1809.299	1701.037	1668.230	1750.247	1804.378
50	1518.959	1481.231	1481.231	1605.897	1641.984
55	1218.776	1208.934	1295.872	1410.696	1425.459
60	938.277	980.926	1105.592	1195.811	1197.451
65	708.629	797.207	949.759	1021.934	1030.136
70	483.901	616.769	751.278	813.611	826.733
75	300.183	416.647	549.515	611.848	634.813
80	157.473	280.499	408.446	459.296	483.901
85	62.333	178.797	287.060	332.990	354.314
90	19.684	95.140	175.517	221.446	232.929
95	3.281	62.333	134.508	178.797	191.920
100	0.000	42.649	111.543	149.271	162.394
105	0.000	26.246	88.579	124.666	137.789
110	0.000	19.684	73.815	104.982	113.184
115	0.000	13.123	50.851	80.377	91.859
120	0.000	0.000	37.728	65.614	73.815
125	0.000	0.000	21.324	45.930	50.851
130	0.000	0.000	0.000	34.447	37.728
135	0.000	0.000	0.000	0.000	26.246
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-8-L50-840-HIAFR-DRV-UNV.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1073.46	107346.00	13.40
0-30	2218.17	221817.00	27.70
0-40	3499.48	349948.00	43.60
0-60	5998.48	599848.00	74.80
0-80	7448.02	744802.00	92.90
0-90	7727.5	772750.00	96.40
10-90	7446.74	744674.00	92.90
20-40	2426.02	242602.00	30.30
20-50	3752.02	375202.00	46.80
40-70	3394.4	339440.00	42.30
60-80	1449.54	144954.00	18.10
70-80	554.14	55414.00	6.90
80-90	279.48	27948.00	3.50
90-110	216.18	21618.00	2.70
90-120	264.46	26446.00	3.30
90-130	285.86	28586.00	3.60
90-150	289.82	28982.00	3.60
90-180	289.82	28982.00	3.60
110-180	73.64	7364.00	0.90
0-180	8017.32	801732.00	100.00

Total Luminaire Efficiency = 801732.00%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	280.75
10-20	792.71
20-30	1144.71
30-40	1281.31
40-50	1326.00
50-60	1173.00
60-70	895.40
70-80	554.14
80-90	279.48
90-100	133.00
100-110	83.18
110-120	48.28
120-130	21.40
130-140	3.96
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-8-L50-840-HIAFR-DRV-UNV.IES

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	193	193	193	193	188	188	188	188	178	178	178	170	170	170	161	161	161	158
1	176	167	160	153	170	163	156	150	155	150	145	148	143	139	141	137	134	130
2	160	146	134	125	155	142	132	123	135	127	119	129	122	116	123	117	112	108
3	146	128	115	104	141	125	113	103	119	109	100	114	105	98	109	102	95	91
4	133	114	99	88	129	111	98	88	106	95	86	102	92	84	98	89	82	78
5	123	102	87	76	119	100	86	76	96	84	74	92	81	73	88	79	72	68
6	114	92	77	67	110	90	76	66	86	74	65	83	72	64	80	71	63	60
7	105	83	69	59	102	82	68	59	79	67	58	76	65	57	73	64	56	53
8	98	76	62	53	95	75	62	53	72	60	52	70	59	51	67	58	51	47
9	92	70	57	48	89	69	56	48	67	55	47	64	54	46	62	53	46	43
10	86	65	52	43	84	64	51	43	62	51	43	60	50	42	58	49	42	39

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-8-L50-840-HIAFR-DRV-UNV.IES

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	13.9	15.5	14.4	15.9	16.3	16.0	17.5	16.4	17.9	18.4
	3H	15.2	16.6	15.6	17.0	17.5	18.0	19.4	18.5	19.8	20.3
	4H	15.5	16.9	16.0	17.3	17.8	18.9	20.2	19.3	20.6	21.1
	6H	15.7	16.9	16.2	17.4	17.9	19.7	20.9	20.2	21.3	21.8
	8H	15.7	16.9	16.2	17.4	17.9	20.1	21.2	20.5	21.7	22.2
	12H	15.7	16.9	16.2	17.3	17.8	20.5	21.6	21.0	22.1	22.6

UGR Viewed Endwise

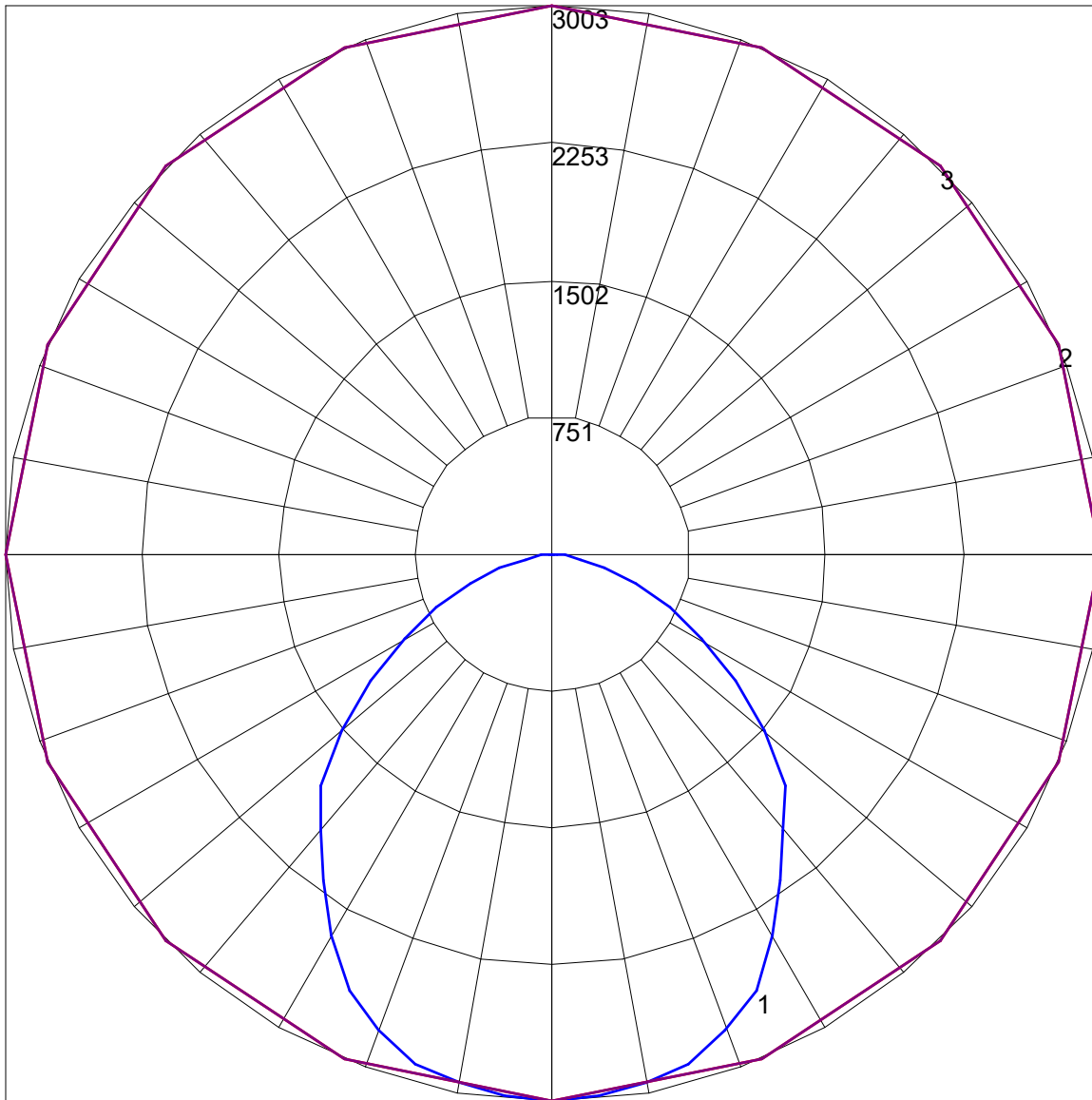
4H	2H	14.8	16.1	15.3	16.6	17.0	16.4	17.7	16.9	18.2	18.6
	3H	16.3	17.4	16.8	17.9	18.4	18.7	19.8	19.1	20.2	20.7
	4H	16.7	17.8	17.2	18.2	18.8	19.6	20.6	20.1	21.1	21.7
	6H	17.0	17.9	17.5	18.4	19.0	20.6	21.5	21.1	22.0	22.5
	8H	17.1	17.9	17.6	18.4	19.0	21.1	21.9	21.6	22.4	23.0
	12H	17.1	17.9	17.6	18.4	19.0	21.6	22.3	22.1	22.9	23.4

8H	4H	17.3	18.1	17.8	18.6	19.2	19.8	20.6	20.3	21.1	21.7
	6H	17.7	18.4	18.2	19.0	19.5	20.9	21.6	21.5	22.2	22.7
	8H	17.8	18.5	18.4	19.0	19.6	21.5	22.1	22.0	22.7	23.3
	12H	17.9	18.5	18.5	19.0	19.7	22.1	22.7	22.7	23.2	23.9

12H	4H	17.4	18.1	17.9	18.7	19.2	19.8	20.6	20.3	21.1	21.7
	6H	17.9	18.5	18.5	19.0	19.7	20.9	21.6	21.5	22.1	22.7
	8H	18.1	18.7	18.7	19.2	19.9	21.6	22.1	22.1	22.7	23.3

Maximum UGR = 23.9

POLAR GRAPH



Maximum Candela = 3003.47 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)
3 - Horizontal Cone Through Vertical Angle (0)