



IES INDOOR REPORT

PHOTOMETRIC FILENAME : A13P33F-8-L27-835-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20816.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 3-MAR-2020

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

[LUMINAIRE] 8-56 LED 22" ARRAYS 8' SUSPENDED LUMINAIRE w/WHITE REFL

[MORE] FROST INNER LENS & WHITE PERFORATED BTM w/FROST OVERLAY

[LUMCAT] A13P33F-8-L27/835-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	21807
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	173.8
Ballast Factor	1.00
CIE Type	Indirect
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	7.79 ft
Luminous Width (90-270)	0.72 ft
Luminous Height	0.12 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	897	853	879
55	707	725	787
65	424	583	677
75	243	454	617
85	181	429	657

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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	619.090	619.090	619.090	619.090	619.090
5	632.590	617.161	613.304	611.375	607.518
10	619.090	607.518	605.589	605.589	599.803
15	597.875	584.374	584.374	582.446	582.446
20	568.945	559.302	561.231	565.088	563.159
25	534.230	526.515	530.373	536.159	541.944
30	493.729	482.157	493.729	497.586	505.301
35	445.513	437.799	449.370	460.942	466.728
40	393.440	391.511	403.083	418.512	426.227
45	335.581	339.439	354.868	372.225	378.011
50	279.651	283.508	304.723	325.938	333.653
55	216.006	227.578	256.508	279.651	291.223
60	154.290	169.719	202.506	231.435	243.007
65	96.431	119.575	163.933	189.006	202.506
70	59.787	79.074	119.575	156.219	167.791
75	34.715	48.216	90.646	123.432	135.004
80	19.286	34.715	65.573	98.360	108.003
85	9.643	32.787	48.216	73.288	86.788
90	21.215	27.001	40.501	57.859	67.502
95	237.221	1739.622	952.742	289.294	260.365
100	495.657	2206.350	3598.820	3542.890	3164.878
105	773.380	2443.572	3924.758	4642.208	4833.142
110	1062.674	2696.222	4100.263	4904.501	5072.292
115	1344.254	2823.511	4185.123	4987.432	5220.796
120	1591.118	2908.371	4298.912	4997.075	5222.725
125	1857.269	2972.016	4333.627	4993.218	5197.652
130	2088.704	3000.945	4275.768	4973.932	5184.152
135	2268.066	3008.660	4177.408	4848.571	5060.720
140	2449.358	3008.660	4044.333	4667.280	4860.142
145	2586.290	2993.231	3890.043	4441.630	4632.564
150	2719.365	2987.445	3677.894	4187.051	4339.413
155	2831.226	2999.016	3486.959	3895.828	4021.189
160	2937.300	3018.303	3296.025	3579.534	3675.965
165	3020.231	3041.446	3162.950	3292.168	3361.599
170	3078.090	3066.518	3107.020	3134.020	3134.020
175	3105.091	3078.090	3078.090	3064.590	3045.304
180	3066.518	3066.518	3066.518	3066.518	3066.518

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	223.86	N.A.	1.00
0-30	468.62	N.A.	2.10
0-40	750.62	N.A.	3.40
0-60	1252.02	N.A.	5.70
0-80	1501.7	N.A.	6.90
0-90	1558.75	N.A.	7.10
10-90	1500.26	N.A.	6.90
20-40	526.77	N.A.	2.40
20-50	801.35	N.A.	3.70
40-70	657.00	N.A.	3.00
60-80	249.68	N.A.	1.10
70-80	94.08	N.A.	0.40
80-90	57.05	N.A.	0.30
90-110	4751.09	N.A.	21.80
90-120	8530.46	N.A.	39.10
90-130	12071.03	N.A.	55.40
90-150	17448.51	N.A.	80.00
90-180	20248.57	N.A.	92.90
110-180	15497.48	N.A.	71.10
0-180	21807.32	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	58.49
10-20	165.36
20-30	244.76
30-40	282.00
40-50	274.58
50-60	226.82
60-70	155.60
70-80	94.08
80-90	57.05
90-100	1211.55
100-110	3539.54
110-120	3779.37
120-130	3540.57
130-140	3034.01
140-150	2343.47
150-160	1600.03
160-170	905.63
170-180	294.39

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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	194	194	194	194	168	168	168	168	119	119	119	74	74	74	34	34	34	14
1	176	168	161	154	152	146	140	135	104	100	97	65	63	61	29	29	28	12
2	160	147	135	126	138	127	118	110	91	85	80	57	54	51	26	25	24	10
3	146	129	115	104	126	112	101	92	80	73	67	50	46	43	23	21	20	9
4	133	113	99	88	115	99	87	77	71	63	57	45	40	37	20	19	17	7
5	122	101	86	75	105	88	75	66	63	55	48	40	35	31	18	16	15	6
6	112	90	75	64	96	78	66	57	56	48	42	36	31	27	16	14	13	6
7	103	80	66	55	89	70	58	49	51	42	36	32	27	24	15	13	11	5
8	95	72	58	48	82	63	51	43	46	38	32	29	24	21	14	12	10	5
9	88	66	52	42	76	57	46	38	41	34	28	27	22	18	12	10	9	4
10	82	60	46	37	71	52	41	33	38	30	25	24	20	16	11	9	8	4

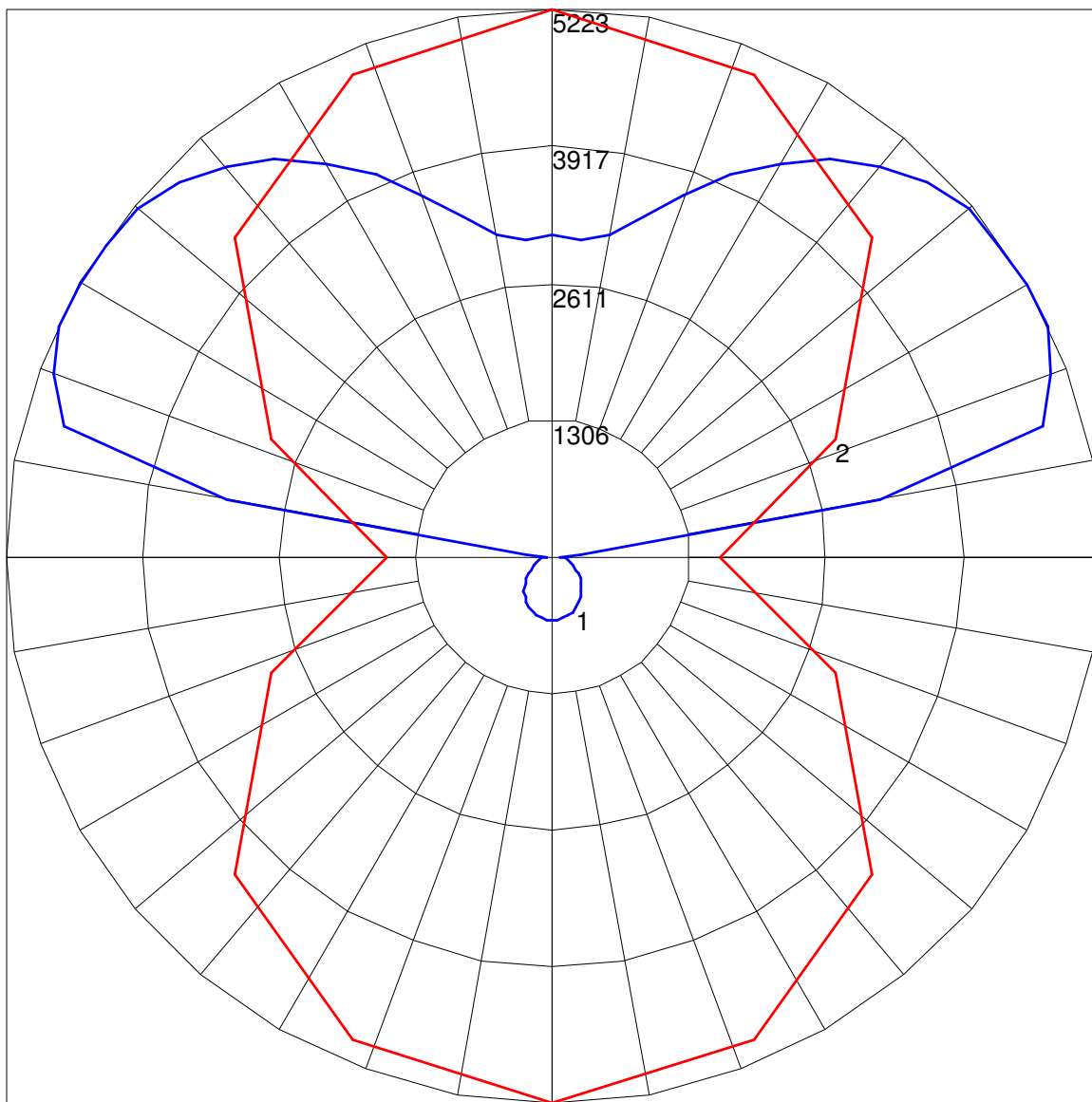
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UGR TABLE - CORRECTED

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	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	3H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	4H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	6H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	8H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	12H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
4H	2H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	3H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	4H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	6H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	8H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.6
	12H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.1
8H	4H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	6H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	8H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.9
	12H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	9.7
12H	4H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	6H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	8H	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.9

Maximum UGR = 9.7

POLAR GRAPH



Maximum Candela = 5222.725 Located At Horizontal Angle = 90, Vertical Angle = 120
1 - Vertical Plane Through Horizontal Angles (90 - 270) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (120) (Through Max. Cd.)