



## IES INDOOR REPORT

PHOTOMETRIC FILENAME : A13P33F-4-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] 4-56 LED 22" ARRAYS 4' SUSPENDED LUMINAIRE w/WHITE REFL

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

[LUMCAT] A13P33F-4-L27/835-DIM-UNV

### CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	10904
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	86.9
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)	3.79 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	907	868	904
55	711	735	809
65	421	588	696
75	237	453	634
85	160	419	675

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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	309.559	309.559	309.559	309.559	309.559
5	316.310	308.595	306.666	305.702	303.773
10	309.559	303.773	302.809	302.809	299.915
15	298.951	292.201	292.201	291.236	291.236
20	284.486	279.664	280.628	282.557	281.593
25	267.127	263.270	265.199	268.092	270.985
30	246.876	241.090	246.876	248.804	252.662
35	222.767	218.909	224.695	230.482	233.375
40	196.729	195.765	201.551	209.266	213.123
45	167.798	169.727	177.442	186.121	189.014
50	139.832	141.761	152.369	162.977	166.834
55	108.008	113.794	128.260	139.832	145.618
60	77.149	84.864	101.258	115.723	121.509
65	48.218	59.790	81.970	94.507	101.258
70	29.895	39.539	59.790	78.113	83.899
75	17.358	24.109	45.325	61.719	67.505
80	9.644	17.358	32.788	49.182	54.004
85	4.822	16.394	24.109	36.646	43.396
90	10.608	13.501	20.252	28.931	33.753
95	118.616	869.851	476.393	144.654	130.188
100	247.840	1103.226	1799.493	1771.526	1582.512
105	386.708	1221.842	1962.469	2321.210	2416.682
110	531.361	1348.173	2050.226	2452.363	2536.262
115	672.158	1411.821	2092.658	2493.831	2610.518
120	795.596	1454.252	2149.555	2498.652	2611.482
125	928.677	1486.076	2166.913	2496.724	2598.946
130	1044.400	1500.542	2137.982	2487.080	2592.195
135	1134.085	1504.399	2088.800	2424.397	2530.476
140	1224.735	1504.399	2022.259	2333.747	2430.183
145	1293.205	1496.684	1945.111	2220.917	2316.389
150	1359.745	1493.791	1839.031	2093.622	2169.806
155	1415.678	1499.577	1743.560	1948.004	2010.687
160	1468.718	1509.221	1648.088	1789.849	1838.067
165	1510.185	1520.793	1581.548	1646.160	1680.877
170	1539.116	1533.330	1553.581	1567.082	1567.082
175	1552.617	1539.116	1539.116	1532.365	1522.722
180	1533.330	1533.330	1533.330	1533.330	1533.330

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**ZONAL LUMEN SUMMARY**

Zone	Lumens	%Lamp	%Fixt
0-20	111.93	N.A.	1.00
0-30	234.32	N.A.	2.10
0-40	375.33	N.A.	3.40
0-60	626.04	N.A.	5.70
0-80	750.89	N.A.	6.90
0-90	779.41	N.A.	7.10
10-90	750.17	N.A.	6.90
20-40	263.40	N.A.	2.40
20-50	400.69	N.A.	3.70
40-70	328.51	N.A.	3.00
60-80	124.85	N.A.	1.10
70-80	47.04	N.A.	0.40
80-90	28.53	N.A.	0.30
90-110	2375.65	N.A.	21.80
90-120	4265.43	N.A.	39.10
90-130	6035.79	N.A.	55.40
90-150	8724.66	N.A.	80.00
90-180	10124.75	N.A.	92.90
110-180	7749.1	N.A.	71.10
0-180	10904.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

**ZONAL LUMEN SUMMARY**

Zone	Lumens
0-10	29.25
10-20	82.69
20-30	122.39
30-40	141.01
40-50	137.30
50-60	113.41
60-70	77.80
70-80	47.04
80-90	28.53
90-100	605.80
100-110	1769.85
110-120	1889.77
120-130	1770.36
130-140	1517.08
140-150	1171.79
150-160	800.05
160-170	452.83
170-180	147.20

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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	163	163	163	163	141	141	141	141	100	100	100	63	63	63	28	28	28	12
1	149	142	136	130	128	123	118	113	87	84	82	55	53	52	25	24	24	10
2	135	124	114	106	117	107	100	93	76	72	67	48	45	43	22	21	20	8
3	123	108	97	88	106	94	85	77	67	61	56	42	39	36	19	18	17	7
4	112	96	83	74	97	83	73	65	60	53	48	38	34	31	17	16	14	6
5	103	85	72	63	89	74	63	55	53	46	41	34	30	26	15	14	13	5
6	94	76	63	54	81	66	55	48	47	40	35	30	26	23	14	12	11	5
7	87	68	55	47	75	59	49	41	43	36	31	27	23	20	13	11	10	4
8	80	61	49	41	69	53	43	36	38	32	27	25	21	18	11	10	8	4
9	74	55	44	36	64	48	38	32	35	28	24	22	18	15	11	9	8	3
10	69	50	39	32	60	44	34	28	32	25	21	20	17	14	10	8	7	3

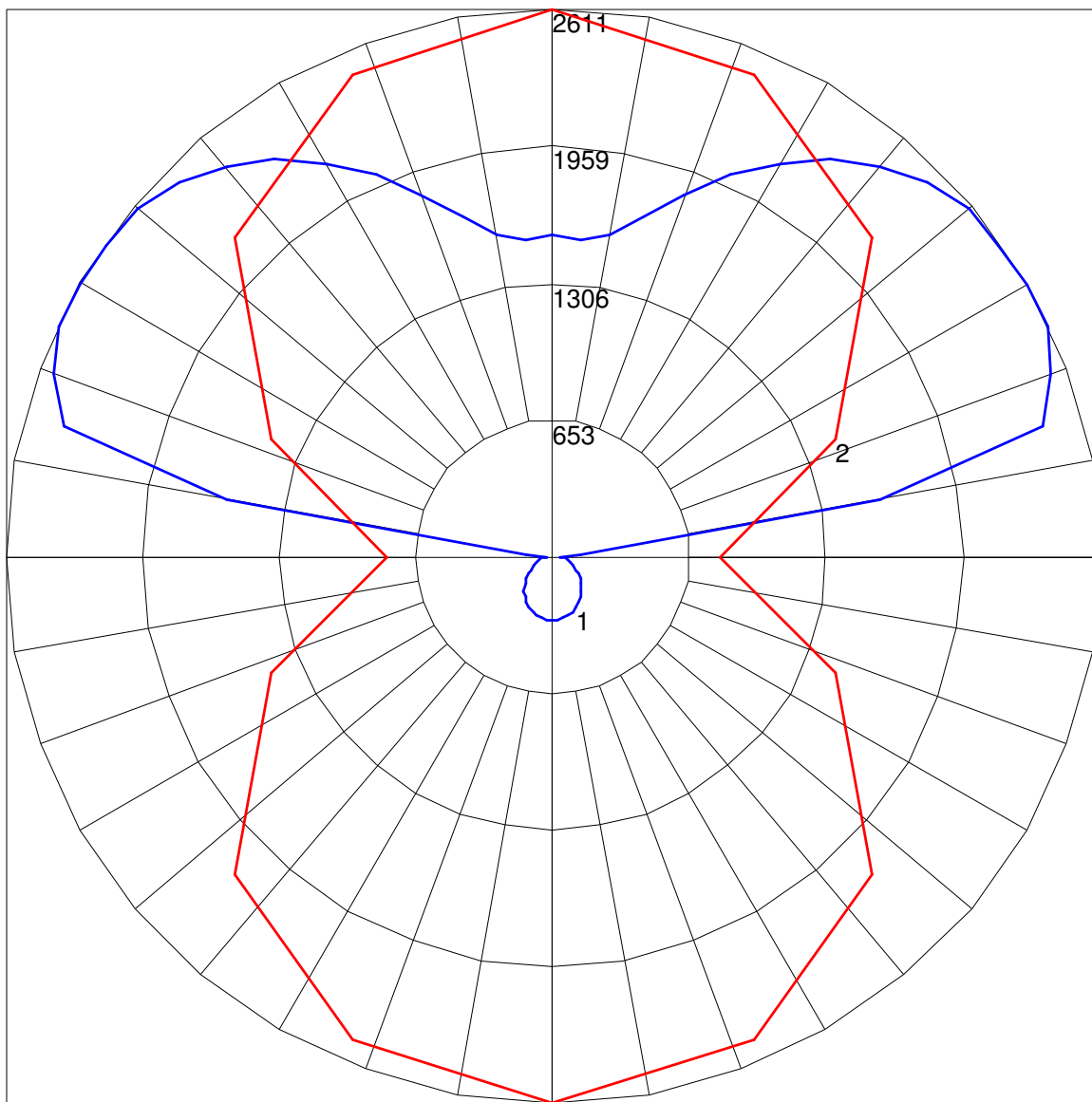
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**UGR TABLE - CORRECTED**

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	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	3H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	4H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	6H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	8H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	12H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
4H	2H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	3H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	4H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	6H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	8H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.8
	12H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	7.3
8H	4H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	6H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	8H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	7.1
	12H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	7.9
12H	4H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	6H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	8H	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	7.1

Maximum UGR = 7.9

POLAR GRAPH



Maximum Candela = 2611.482 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.)