



IES INDOOR REPORT

PHOTOMETRIC FILENAME : A13P33F-8-L16-835-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-L16/835-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	12814
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	102.6
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	527	501	517
55	416	426	462
65	249	343	398
75	143	267	363
85	106	252	386

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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	363.783	363.783	363.783	363.783	363.783
5	371.716	362.650	360.383	359.250	356.983
10	363.783	356.983	355.850	355.850	352.450
15	351.317	343.384	343.384	342.251	342.251
20	334.318	328.651	329.784	332.051	330.918
25	313.919	309.385	311.652	315.052	318.452
30	290.120	283.320	290.120	292.386	296.919
35	261.788	257.255	264.054	270.854	274.254
40	231.189	230.056	236.856	245.922	250.455
45	197.191	199.457	208.524	218.723	222.123
50	164.326	166.592	179.058	191.524	196.057
55	126.927	133.727	150.726	164.326	171.125
60	90.662	99.729	118.994	135.994	142.793
65	56.664	70.263	96.329	111.061	118.994
70	35.132	46.464	70.263	91.796	98.595
75	20.399	28.332	53.264	72.530	79.330
80	11.333	20.399	38.532	57.797	63.464
85	5.666	19.266	28.332	43.065	50.998
90	12.466	15.866	23.799	33.998	39.665
95	139.393	1022.219	559.840	169.992	152.993
100	291.253	1296.472	2114.701	2081.835	1859.713
105	454.445	1435.866	2306.225	2727.805	2840.000
110	624.437	1584.325	2409.353	2881.931	2980.527
115	789.896	1659.122	2459.218	2930.662	3067.789
120	934.956	1708.986	2526.081	2936.329	3068.922
125	1091.349	1746.385	2546.480	2934.062	3054.190
130	1227.342	1763.384	2512.482	2922.729	3046.257
135	1332.737	1767.917	2454.685	2849.066	2973.727
140	1439.266	1767.917	2376.488	2742.538	2855.866
145	1519.729	1758.851	2285.826	2609.944	2722.139
150	1597.925	1755.451	2161.165	2460.351	2549.880
155	1663.655	1762.250	2048.970	2289.226	2362.889
160	1725.985	1773.583	1936.776	2103.368	2160.032
165	1774.717	1787.183	1858.579	1934.509	1975.307
170	1808.715	1801.915	1825.714	1841.580	1841.580
175	1824.581	1808.715	1808.715	1800.782	1789.449
180	1801.915	1801.915	1801.915	1801.915	1801.915

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	131.54	N.A.	1.00
0-30	275.37	N.A.	2.10
0-40	441.07	N.A.	3.40
0-60	735.70	N.A.	5.70
0-80	882.41	N.A.	6.90
0-90	915.94	N.A.	7.10
10-90	881.57	N.A.	6.90
20-40	309.53	N.A.	2.40
20-50	470.88	N.A.	3.70
40-70	386.06	N.A.	3.00
60-80	146.71	N.A.	1.10
70-80	55.28	N.A.	0.40
80-90	33.53	N.A.	0.30
90-110	2791.78	N.A.	21.80
90-120	5012.58	N.A.	39.10
90-130	7093.05	N.A.	55.40
90-150	10252.91	N.A.	80.00
90-180	11898.25	N.A.	92.90
110-180	9106.46	N.A.	71.10
0-180	12814.19	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	34.37
10-20	97.17
20-30	143.83
30-40	165.71
40-50	161.35
50-60	133.28
60-70	91.43
70-80	55.28
80-90	33.53
90-100	711.92
100-110	2079.86
110-120	2220.8
120-130	2080.47
130-140	1782.81
140-150	1377.05
150-160	940.20
160-170	532.16
170-180	172.99

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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	57	57	57	57	49	49	49	49	35	35	35	22	22	22	10	10	10	4
1	52	49	47	45	45	43	41	40	30	29	28	19	19	18	9	8	8	3
2	47	43	40	37	41	37	35	32	27	25	24	17	16	15	8	7	7	3
3	43	38	34	31	37	33	30	27	23	21	20	15	14	13	7	6	6	3
4	39	33	29	26	34	29	25	23	21	18	17	13	12	11	6	5	5	2
5	36	30	25	22	31	26	22	19	18	16	14	12	10	9	5	5	4	2
6	33	26	22	19	28	23	19	17	17	14	12	10	9	8	5	4	4	2
7	30	24	19	16	26	21	17	14	15	12	11	9	8	7	4	4	3	1
8	28	21	17	14	24	19	15	13	13	11	9	9	7	6	4	3	3	1
9	26	19	15	12	22	17	13	11	12	10	8	8	6	5	4	3	3	1
10	24	18	14	11	21	15	12	10	11	9	7	7	6	5	3	3	2	1

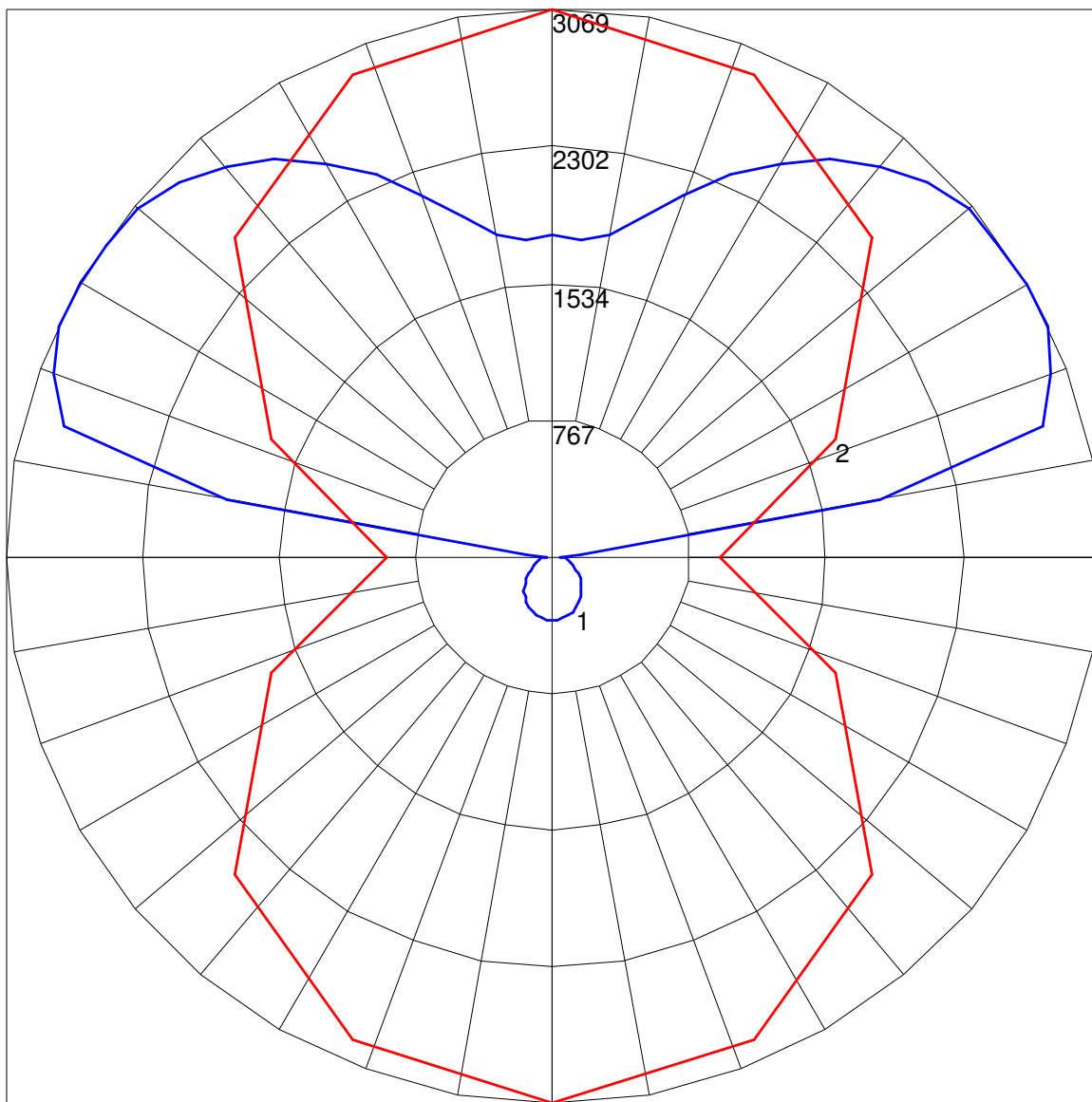
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UGR TABLE - CORRECTED

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	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	3H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	4H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	6H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	8H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	12H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
4H	2H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	3H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	4H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	6H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	8H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	12H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
8H	4H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	6H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	8H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	12H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
12H	4H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	6H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	8H	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7

Maximum UGR = 10.7

POLAR GRAPH



Maximum Candela = 3068.922 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.)