



IES INDOOR REPORT

PHOTOMETRIC FILENAME : AIWP33-4-L9-8TW-DIM-UNV 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 19744.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 21-FEB-2020

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

[LUMINAIRE] 2-56 LED 22" ARRAYS 4' WALLMOUNT ASYMMETRIC LUMINAIRE

[MORE] WHITE REFL, PERF BOTTOM w/WHITE ACRYLIC OVERLAY & CLEAR

[MORE] FROST ACRYLIC TOP LENS

[LUMCAT] AIWP33-4-L9/8TW-DIM-UNV 4000k

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3913
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	68
Total Luminaire Watts	57.4
Ballast Factor	1.00
CIE Type	Semi-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)	0.31 ft
Luminous Width (90-270)	4.00 ft
Luminous Height	0.19 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2225	1827	780
55	2212	1742	566
65	2127	1586	298
75	1873	1318	152
85	1567	936	0

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	127.788	127.788	127.788	127.788	127.788	127.788	127.788	127.788	127.788
5	142.584	162.761	158.726	149.310	134.514	118.372	106.266	108.956	92.814
10	174.868	181.593	174.868	157.381	126.443	100.885	91.469	90.124	82.053
15	207.151	205.806	185.629	162.761	119.717	87.434	80.708	76.673	87.434
20	225.983	221.947	197.735	166.797	111.646	75.328	68.602	64.567	82.053
25	244.815	239.434	207.151	168.142	103.575	63.221	63.221	51.115	64.567
30	267.682	255.576	216.567	166.797	95.505	52.460	53.805	40.354	51.115
35	281.133	266.337	221.947	164.107	90.124	40.354	43.044	29.593	39.009
40	291.895	273.063	224.638	157.381	82.053	34.974	29.593	21.522	26.903
45	293.240	271.717	219.257	147.965	67.257	25.558	17.487	14.796	16.142
50	287.859	263.647	208.496	135.859	52.460	18.832	10.761	6.726	9.416
55	274.408	251.540	192.354	119.717	40.354	10.761	5.381	1.345	2.690
60	259.611	238.089	176.213	99.540	28.248	5.381	1.345	0.000	0.000
65	239.434	217.912	154.691	79.363	16.142	1.345	0.000	0.000	0.000
70	213.877	189.664	131.823	59.186	9.416	0.000	0.000	0.000	0.000
75	182.939	160.071	107.611	39.009	5.381	0.000	0.000	0.000	0.000
80	154.691	129.133	82.053	24.212	0.000	0.000	0.000	0.000	0.000
85	125.098	100.885	59.186	14.796	0.000	0.000	0.000	0.000	0.000
90	110.301	99.540	64.567	25.558	0.000	4.035	1.345	0.000	2.690
95	305.346	304.001	220.602	99.540	43.044	41.699	48.425	45.735	44.389
100	520.568	520.568	383.364	207.151	119.717	91.469	91.469	103.575	96.850
105	746.551	722.338	548.816	328.213	199.080	165.452	154.691	161.416	143.930
110	932.179	879.719	686.019	434.479	266.337	248.850	235.399	223.293	207.151
115	1055.932	1000.781	799.011	535.364	340.319	329.558	314.762	293.240	274.408
120	1140.675	1084.180	883.754	617.417	416.992	399.505	380.674	363.187	340.319
125	1195.826	1137.985	946.976	676.603	480.214	466.762	433.134	425.063	402.196
130	1229.454	1168.923	987.330	723.683	534.019	528.638	481.559	485.594	450.621
135	1240.215	1186.410	1008.852	761.347	579.754	579.754	532.674	539.400	501.736
140	1236.180	1183.720	1011.542	781.524	624.143	621.453	585.134	582.444	555.541
145	1199.861	1158.162	998.091	790.940	668.533	665.842	641.630	625.488	603.966
150	1150.091	1107.047	971.188	799.011	700.816	700.816	687.365	665.842	642.975
155	1069.383	1039.790	932.179	801.701	729.064	730.409	729.064	708.887	676.603
160	975.224	968.498	887.790	800.356	749.241	754.621	760.002	746.551	719.648
165	886.445	887.790	844.745	793.630	764.037	768.073	774.798	769.418	760.002
170	819.188	813.807	807.082	785.559	772.108	777.489	777.489	777.489	777.489
175	778.834	777.489	782.869	776.143	773.453	780.179	776.143	772.108	768.073
180	772.108	772.108	772.108	772.108	772.108	772.108	772.108	772.108	772.108

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	50.14	N.A.	1.30
0-30	110.90	N.A.	2.80
0-40	190.41	N.A.	4.90
0-60	364.18	N.A.	9.30
0-80	490.47	N.A.	12.50
0-90	525.89	N.A.	13.40
10-90	513.36	N.A.	13.10
20-40	140.27	N.A.	3.60
20-50	228.84	N.A.	5.80
40-70	246.67	N.A.	6.30
60-80	126.29	N.A.	3.20
70-80	53.38	N.A.	1.40
80-90	35.42	N.A.	0.90
90-110	494.37	N.A.	12.60
90-120	1020.42	N.A.	26.10
90-130	1618.75	N.A.	41.40
90-150	2707.27	N.A.	69.20
90-180	3387.51	N.A.	86.60
110-180	2893.14	N.A.	73.90
0-180	3913.4	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	12.53
10-20	37.61
20-30	60.76
30-40	79.52
40-50	88.57
50-60	85.20
60-70	72.90
70-80	53.38
80-90	35.42
90-100	137.32
100-110	357.05
110-120	526.06
120-130	598.32
130-140	583.99
140-150	504.53
150-160	378.00
160-170	227.74
170-180	74.50

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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	156	156	156	156	136	136	136	136	100	100	100	66	66	66	36	36	36	21
1	141	135	129	123	123	118	113	108	86	83	80	57	55	54	30	30	29	17
2	128	117	108	100	112	102	95	88	75	70	66	50	47	44	26	25	24	13
3	117	102	91	82	101	90	80	73	66	60	55	44	40	37	23	21	20	11
4	106	90	78	69	92	79	69	61	58	51	46	39	34	31	20	18	17	9
5	97	80	68	59	85	70	60	52	52	45	39	34	30	27	18	16	14	8
6	89	71	59	50	78	62	52	45	46	39	34	31	26	23	16	14	12	7
7	82	64	52	43	71	56	46	39	41	34	29	28	23	20	15	13	11	6
8	76	57	46	38	66	51	41	34	37	30	26	25	21	17	13	11	10	5
9	70	52	41	33	61	46	36	30	34	27	22	23	19	15	12	10	8	5
10	65	47	37	29	57	42	32	26	31	24	20	21	17	14	11	9	8	4

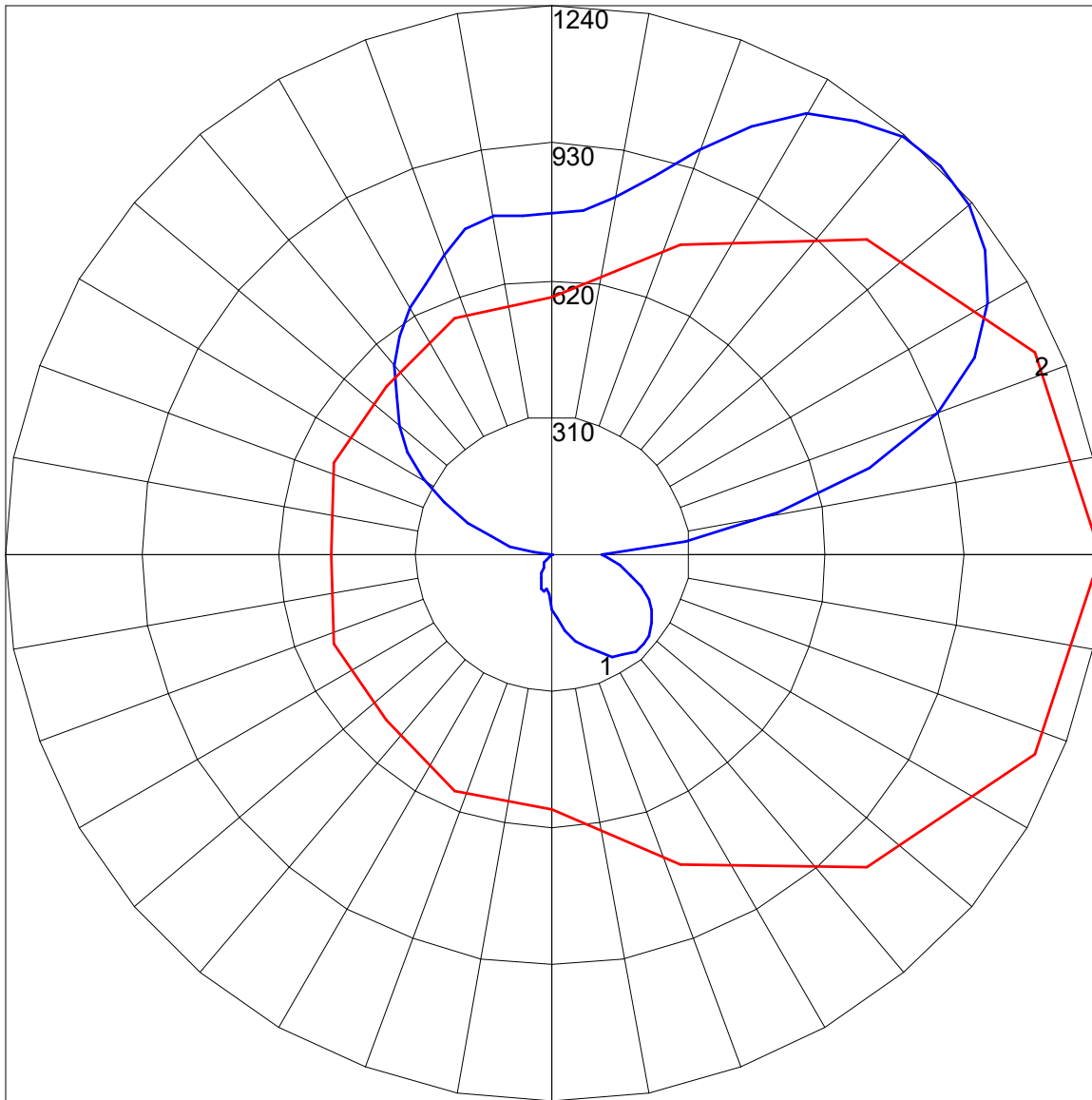
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UGR TABLE - CORRECTED

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	7.6	8.2	8.8	9.4	11.1	3.1	3.1	3.1	3.1	3.1
	3H	9.9	10.4	11.1	11.6	13.4	3.1	3.1	3.1	3.1	3.1
	4H	10.8	11.4	12.1	12.6	14.3	3.1	3.1	3.1	3.1	3.1
	6H	11.7	12.2	12.9	13.4	15.1	3.1	3.1	3.1	3.1	3.1
	8H	12.0	12.5	13.3	13.7	15.4	3.1	3.1	3.1	3.1	3.1
	12H	12.4	12.8	13.6	14.0	15.8	3.1	3.1	3.1	3.1	3.1
4H	2H	7.9	8.4	9.1	9.6	11.3	3.1	3.1	3.1	3.1	4.5
	3H	10.4	10.9	11.7	12.1	13.8	3.1	3.1	3.3	3.7	5.4
	4H	11.6	12.0	12.8	13.2	14.9	3.1	3.1	3.4	3.8	5.5
	6H	12.6	12.9	13.8	14.2	15.9	3.1	3.1	3.4	3.7	5.5
	8H	13.0	13.4	14.3	14.6	16.4	3.1	3.1	3.3	3.7	5.4
	12H	13.4	13.7	14.7	15.0	16.7	3.1	3.1	3.3	3.6	5.3
8H	4H	11.7	12.0	12.9	13.2	15.0	3.8	4.2	5.1	5.4	7.2
	6H	12.9	13.1	14.1	14.4	16.2	4.1	4.3	5.3	5.6	7.4
	8H	13.5	13.7	14.7	14.9	16.7	4.1	4.3	5.3	5.6	7.3
	12H	14.0	14.2	15.3	15.5	17.3	4.0	4.2	5.3	5.5	7.3
12H	4H	11.6	11.9	12.9	13.1	14.9	4.3	4.6	5.5	5.8	7.6
	6H	12.9	13.1	14.1	14.3	16.1	4.7	4.9	5.9	6.2	8.0
	8H	13.5	13.7	14.8	15.0	16.8	4.8	5.0	6.1	6.2	8.1

Maximum UGR = 17.3

POLAR GRAPH



Maximum Candela = 1240.215 Located At Horizontal Angle = 0, Vertical Angle = 135
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (135) (Through Max. Cd.)