

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L110-935-PCFR-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20009.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 08-04-2023
[MANUFAC] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-56 LED 22"ARRAYS 4'VAPORTITE LUMINAIRE
[MORE] WHITE FLAT REFLECTOR w/PCFR LENS
[LUMCAT] 96-4-L110/935-PCFR-DIM-UNV
[LAMPCAT] 10560223

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8063
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	92
Total Luminaire Watts	88
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.30
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.25 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	11008	9183	9246
55	9388	8053	8549
65	7471	6935	7774
75	5147	5811	6891
85	1649	4859	6053

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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	2818.343	2818.343	2818.343	2818.343	2818.343
5	2862.251	2803.249	2781.295	2771.690	2767.574
10	2810.110	2755.225	2726.410	2700.340	2697.596
15	2736.015	2675.642	2645.455	2626.245	2615.268
20	2618.013	2546.662	2534.313	2483.544	2482.172
25	2460.218	2397.101	2373.774	2351.820	2346.332
30	2274.982	2229.701	2202.259	2188.538	2188.538
35	2066.419	2038.976	2007.417	2026.627	2034.860
40	1834.530	1824.925	1813.948	1867.461	1879.810
45	1598.524	1605.385	1621.851	1704.178	1723.388
50	1361.147	1387.217	1443.474	1543.639	1576.570
55	1123.770	1178.654	1256.866	1383.101	1431.125
60	895.997	964.603	1079.862	1222.562	1271.959
65	676.457	761.529	906.974	1068.885	1114.165
70	481.616	584.525	743.691	912.462	949.510
75	301.867	422.614	590.013	753.296	791.716
80	146.817	285.402	455.545	602.362	633.921
85	41.164	174.260	336.170	470.639	502.197
90	12.349	105.654	252.471	363.613	406.149
95	10.977	69.978	193.469	297.751	337.542
100	9.605	41.164	150.934	242.866	278.541
105	4.116	16.465	108.398	190.725	225.028
110	4.116	4.116	76.839	146.817	179.748
115	2.744	1.372	48.024	108.398	137.212
120	0.000	0.000	19.210	74.095	100.165
125	0.000	0.000	4.116	42.536	67.234
130	0.000	0.000	0.000	17.838	37.047
135	0.000	0.000	0.000	2.744	12.349
140	0.000	0.000	0.000	1.372	1.372
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

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1011.77	N.A.	12.50
0-30	2108.2	N.A.	26.10
0-40	3379.13	N.A.	41.90
0-60	5793.9	N.A.	71.90
0-80	7311.18	N.A.	90.70
0-90	7663.53	N.A.	95.00
10-90	7398.74	N.A.	91.80
20-40	2367.36	N.A.	29.40
20-50	3641.57	N.A.	45.20
40-70	3317.07	N.A.	41.10
60-80	1517.28	N.A.	18.80
70-80	614.98	N.A.	7.60
80-90	352.35	N.A.	4.40
90-110	319.88	N.A.	4.00
90-120	377.09	N.A.	4.70
90-130	396.35	N.A.	4.90
90-150	399.23	N.A.	5.00
90-180	399.23	N.A.	5.00
110-180	79.36	N.A.	1.00
0-180	8062.77	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	264.79
10-20	746.98
20-30	1096.43
30-40	1270.93
40-50	1274.21
50-60	1140.56
60-70	902.30
70-80	614.98
80-90	352.35
90-100	203.37
100-110	116.51
110-120	57.21
120-130	19.26
130-140	2.80
140-150	0.09
150-160	0.00
160-170	0.00
170-180	0.00

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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	118	118	118	118	115	115	115	115	108	108	108	103	103	103	97	97	97	95
1	107	101	97	92	103	99	94	90	93	90	87	89	86	83	84	82	80	77
2	97	88	81	75	94	86	79	74	81	76	71	77	73	69	74	70	66	64
3	88	77	69	62	85	75	68	61	72	65	60	68	63	58	65	60	56	54
4	81	68	60	53	78	67	58	52	64	56	51	61	55	50	58	53	48	46
5	74	61	52	45	72	60	51	45	57	50	44	55	48	43	52	47	42	40
6	69	55	46	40	66	54	46	39	52	44	39	50	43	38	47	42	37	35
7	64	50	41	35	62	49	41	35	47	40	34	45	39	34	43	38	33	31
8	59	46	37	31	57	45	37	31	43	36	31	41	35	30	40	34	30	28
9	55	42	34	28	54	41	33	28	40	33	28	38	32	27	37	31	27	25
10	52	39	31	26	50	38	31	26	37	30	25	36	29	25	34	29	24	23

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UGR TABLE - CORRECTED

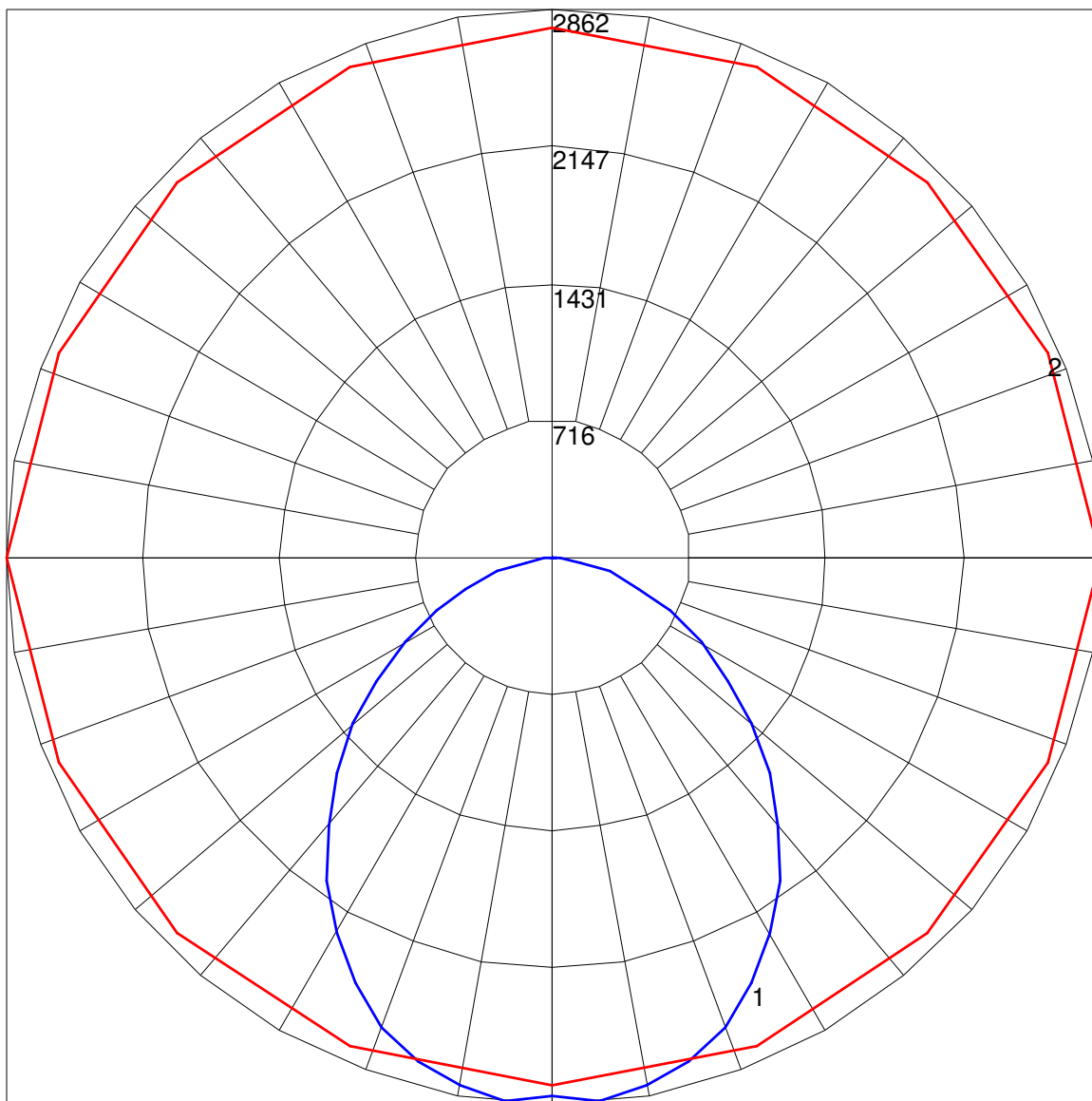
Reflectances

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	17.8	19.3	18.2	19.7	20.2	20.0	21.6	20.5	22.0	22.4
	3H	19.0	20.4	19.5	20.8	21.3	22.4	23.8	22.8	24.2	24.7
	4H	19.4	20.7	19.8	21.1	21.6	23.4	24.8	23.9	25.2	25.7
	6H	19.5	20.8	20.0	21.2	21.7	24.5	25.7	25.0	26.2	26.7
	8H	19.6	20.7	20.1	21.2	21.7	25.0	26.2	25.5	26.7	27.2
	12H	19.6	20.7	20.1	21.2	21.7	25.5	26.7	26.0	27.1	27.7
4H	2H	18.6	19.9	19.1	20.4	20.9	20.4	21.7	20.9	22.2	22.6
	3H	20.1	21.2	20.6	21.7	22.2	23.0	24.1	23.5	24.6	25.1
	4H	20.6	21.6	21.1	22.1	22.6	24.2	25.2	24.7	25.7	26.3
	6H	20.9	21.8	21.4	22.3	22.9	25.4	26.4	26.0	26.9	27.4
	8H	20.9	21.8	21.4	22.3	22.9	26.1	26.9	26.6	27.4	28.0
	12H	20.9	21.7	21.5	22.3	22.8	26.7	27.5	27.3	28.1	28.6
8H	4H	21.2	22.1	21.7	22.6	23.2	24.4	25.2	24.9	25.8	26.3
	6H	21.7	22.4	22.2	23.0	23.6	25.8	26.5	26.4	27.1	27.7
	8H	21.8	22.5	22.4	23.0	23.6	26.5	27.2	27.1	27.8	28.4
	12H	21.9	22.5	22.5	23.0	23.7	27.4	27.9	27.9	28.5	29.2
12H	4H	21.4	22.2	21.9	22.7	23.3	24.4	25.1	24.9	25.7	26.3
	6H	21.9	22.6	22.5	23.1	23.8	25.8	26.5	26.4	27.0	27.7
	8H	22.2	22.7	22.7	23.3	24.0	26.6	27.2	27.2	27.8	28.4

Maximum UGR = 29.2

POLAR GRAPH



Maximum Candela = 2862.251 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)