



IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-4-L81-840-PCFR-DRV-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] 21-JULY-2020
[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-L81-840-PCFR-DRV-UNV
[LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7390
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	114
Total Luminaire Watts	65
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	10089	8417	8475
55	8605	7382	7836
65	6847	6356	7125
75	4718	5327	6316
85	1512	4454	5548

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-4-L81-840-PCFR-DRV-UNV_.IES

CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	2583.230	2583.230	2583.230	2583.230	2583.230
5	2623.475	2569.395	2549.273	2540.469	2536.696
10	2575.684	2525.377	2498.966	2475.071	2472.556
15	2507.770	2452.433	2424.765	2407.157	2397.096
20	2399.611	2334.213	2322.894	2276.361	2275.103
25	2254.981	2197.129	2175.748	2155.626	2150.595
30	2085.197	2043.694	2018.541	2005.965	2005.965
35	1894.033	1868.880	1839.954	1857.561	1865.107
40	1681.489	1672.685	1662.624	1711.673	1722.991
45	1465.172	1471.460	1486.552	1562.011	1579.618
50	1247.597	1271.492	1323.056	1414.865	1445.049
55	1030.022	1080.328	1152.015	1267.719	1311.737
60	821.251	884.134	989.777	1120.573	1165.849
65	620.025	698.000	831.312	979.716	1021.218
70	441.438	535.762	681.651	836.343	870.299
75	276.685	387.359	540.793	690.454	725.669
80	134.569	261.593	417.542	552.112	581.038
85	37.730	159.723	308.126	431.377	460.303
90	11.319	96.840	231.409	333.279	372.267
95	10.061	64.141	177.330	272.912	309.384
100	8.804	37.730	138.342	222.605	255.305
105	3.773	15.092	99.355	174.814	206.256
110	3.773	3.773	70.429	134.569	164.753
115	2.515	1.258	44.018	99.355	125.766
120	0.000	0.000	17.607	67.914	91.809
125	0.000	0.000	3.773	38.987	61.625
130	0.000	0.000	0.000	16.350	33.957
135	0.000	0.000	0.000	2.515	11.319
140	0.000	0.000	0.000	1.258	1.258
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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-4-L81-840-PCFR-DRV-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	927.36	N.A.	12.50
0-30	1932.33	N.A.	26.10
0-40	3097.24	N.A.	41.90
0-60	5310.55	N.A.	71.90
0-80	6701.26	N.A.	90.70
0-90	7024.22	N.A.	95.00
10-90	6781.52	N.A.	91.80
20-40	2169.87	N.A.	29.40
20-50	3337.78	N.A.	45.20
40-70	3040.35	N.A.	41.10
60-80	1390.71	N.A.	18.80
70-80	563.68	N.A.	7.60
80-90	322.96	N.A.	4.40
90-110	293.19	N.A.	4.00
90-120	345.63	N.A.	4.70
90-130	363.29	N.A.	4.90
90-150	365.93	N.A.	5.00
90-180	365.93	N.A.	5.00
110-180	72.74	N.A.	1.00
0-180	7390.15	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	242.70
10-20	684.67
20-30	1004.96
30-40	1164.91
40-50	1167.91
50-60	1045.41
60-70	827.03
70-80	563.68
80-90	322.96
90-100	186.40
100-110	106.79
110-120	52.44
120-130	17.66
130-140	2.56
140-150	0.08
150-160	0.00
160-170	0.00
170-180	0.00

IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-4-L81-840-PCFR-DRV-UNV_.IES

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	59	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

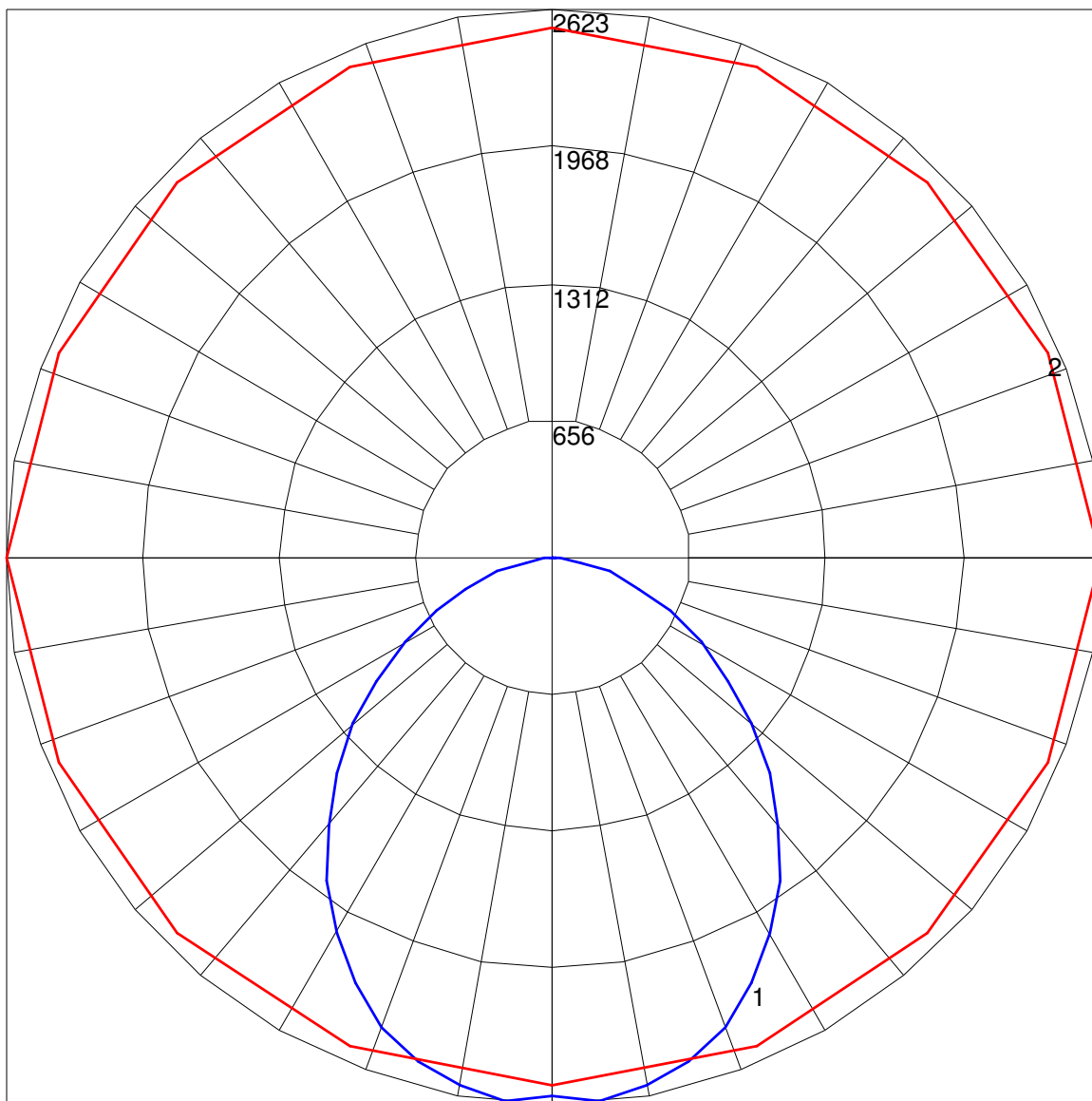
IES INDOOR REPORT
PHOTOMETRIC FILENAME : 96-4-L81-840-PCFR-DRV-UNV_.IES

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	17.4	18.9	17.8	19.3	19.8	19.6	21.2	20.1	21.6	22.0
	3H	18.6	20.0	19.1	20.4	20.9	21.9	23.4	22.4	23.8	24.3
	4H	19.0	20.3	19.4	20.7	21.2	23.0	24.4	23.5	24.8	25.3
	6H	19.1	20.4	19.6	20.8	21.3	24.1	25.3	24.6	25.8	26.3
	8H	19.2	20.3	19.7	20.8	21.3	24.6	25.8	25.1	26.3	26.8
	12H	19.2	20.3	19.7	20.8	21.3	25.1	26.3	25.6	26.7	27.3
4H	2H	18.2	19.5	18.7	20.0	20.5	20.0	21.3	20.5	21.8	22.2
	3H	19.7	20.8	20.2	21.3	21.8	22.6	23.7	23.1	24.2	24.7
	4H	20.2	21.2	20.7	21.7	22.2	23.8	24.8	24.3	25.3	25.9
	6H	20.5	21.4	21.0	21.9	22.5	25.0	26.0	25.6	26.5	27.0
	8H	20.5	21.4	21.0	21.9	22.5	25.7	26.5	26.2	27.0	27.6
	12H	20.5	21.3	21.1	21.9	22.4	26.3	27.1	26.9	27.7	28.2
8H	4H	20.8	21.7	21.3	22.2	22.8	24.0	24.8	24.5	25.4	25.9
	6H	21.3	22.0	21.8	22.6	23.2	25.4	26.1	26.0	26.7	27.3
	8H	21.4	22.1	22.0	22.6	23.2	26.1	26.8	26.7	27.4	28.0
	12H	21.5	22.1	22.1	22.6	23.3	27.0	27.5	27.5	28.1	28.8
12H	4H	21.0	21.8	21.5	22.3	22.9	24.0	24.7	24.5	25.3	25.9
	6H	21.5	22.2	22.1	22.7	23.4	25.4	26.1	26.0	26.6	27.3
	8H	21.8	22.3	22.3	22.9	23.6	26.2	26.8	26.8	27.4	28.0

Maximum UGR = 28.8

POLAR GRAPH



Maximum Candela = 2623.475 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.)