



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-4-L40-850-HIAFR-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST]GEN FROM BALLABS TEST NO. 20205.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUE DATE] 10-07-2021
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-56 LED 22"ARRAYS 4'ENCLOSED & GASKETED LUMINAIRE
[MORE] WHITE FLAT REFL w/HIAFR RIBBED ACRYLIC DROP LENS
[MORE] OT150/120-277/1A4 DIM-1-G2 #57452
[LUMCAT] 96-4-L40-850-HIAFR-DIM-UNV
[LAMPCAT] HLM2256_5630 REV A 10560223

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4209
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	30
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.32
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	6404	5091	4834
55	5292	4276	4315
65	4202	3537	3773
75	2701	2911	3219
85	1122	2373	2642

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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	1507.479	1507.479	1507.479	1507.479	1507.479
5	1537.416	1499.753	1490.096	1476.576	1470.782
10	1515.205	1474.645	1457.262	1436.982	1429.256
15	1475.610	1430.222	1408.976	1374.210	1366.485
20	1422.496	1372.279	1339.445	1302.748	1290.193
25	1357.793	1299.851	1245.771	1214.868	1205.211
30	1278.605	1218.731	1156.925	1148.233	1150.165
35	1184.931	1119.262	1076.771	1089.325	1089.325
40	1067.114	1002.411	997.582	1000.479	999.514
45	929.982	881.697	899.079	892.319	901.011
50	778.365	760.017	782.228	787.057	810.234
55	633.508	641.234	667.308	689.520	722.354
60	505.068	523.417	556.251	600.674	629.645
65	380.491	406.565	462.577	519.554	540.800
70	261.708	299.371	377.594	443.263	454.851
75	158.377	206.663	295.508	357.314	369.868
80	76.291	137.131	220.183	276.194	290.680
85	28.006	87.880	164.171	212.457	219.217
90	10.623	55.046	119.748	158.377	166.103
95	10.623	37.663	95.606	129.406	134.234
100	8.691	21.246	75.326	103.331	109.126
105	6.760	12.554	55.046	82.086	85.949
110	5.794	6.760	39.594	64.703	67.600
115	3.863	2.897	25.109	47.320	55.046
120	2.897	0.966	13.520	34.766	39.594
125	0.000	0.000	2.897	21.246	26.074
130	0.000	0.000	0.000	10.623	13.520
135	0.000	0.000	0.000	0.966	5.794
140	0.000	0.000	0.000	0.000	0.000
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	538.43	N.A.	12.80
0-30	1120.88	N.A.	26.60
0-40	1810.84	N.A.	43.00
0-60	3102.54	N.A.	73.70
0-80	3862.04	N.A.	91.80
0-90	4026.61	N.A.	95.70
10-90	3885.11	N.A.	92.30
20-40	1272.42	N.A.	30.20
20-50	1964.33	N.A.	46.70
40-70	1751.35	N.A.	41.60
60-80	759.51	N.A.	18.00
70-80	299.85	N.A.	7.10
80-90	164.56	N.A.	3.90
90-110	145.03	N.A.	3.40
90-120	171.67	N.A.	4.10
90-130	180.86	N.A.	4.30
90-150	182.11	N.A.	4.30
90-180	182.11	N.A.	4.30
110-180	37.08	N.A.	0.90
0-180	4208.72	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	141.50
10-20	396.93
20-30	582.45
30-40	689.96
40-50	691.91
50-60	599.78
60-70	459.66
70-80	299.85
80-90	164.56
90-100	92.14
100-110	52.89
110-120	26.64
120-130	9.19
130-140	1.25
140-150	0.00
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	109	109	109	103	103	103	98	98	98	96
1	107	102	97	93	104	99	95	91	94	91	88	89	87	84	85	83	81	78
2	97	89	82	76	94	86	80	75	82	77	72	78	74	70	75	71	68	65
3	89	78	70	63	86	76	68	62	72	66	61	69	64	59	66	61	57	55
4	81	69	60	54	79	68	59	53	64	57	52	62	56	51	59	54	49	47
5	75	62	53	46	72	61	52	46	58	51	45	55	49	44	53	48	43	41
6	69	56	47	40	67	55	46	40	52	45	39	50	44	39	48	43	38	36
7	64	51	42	36	62	50	41	35	48	40	35	46	39	34	44	38	34	32
8	60	46	38	32	58	45	37	32	44	36	31	42	36	31	41	35	30	28
9	56	42	34	29	54	42	34	29	40	33	28	39	32	28	38	32	27	26
10	52	39	31	26	51	39	31	26	37	30	26	36	30	25	35	29	25	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

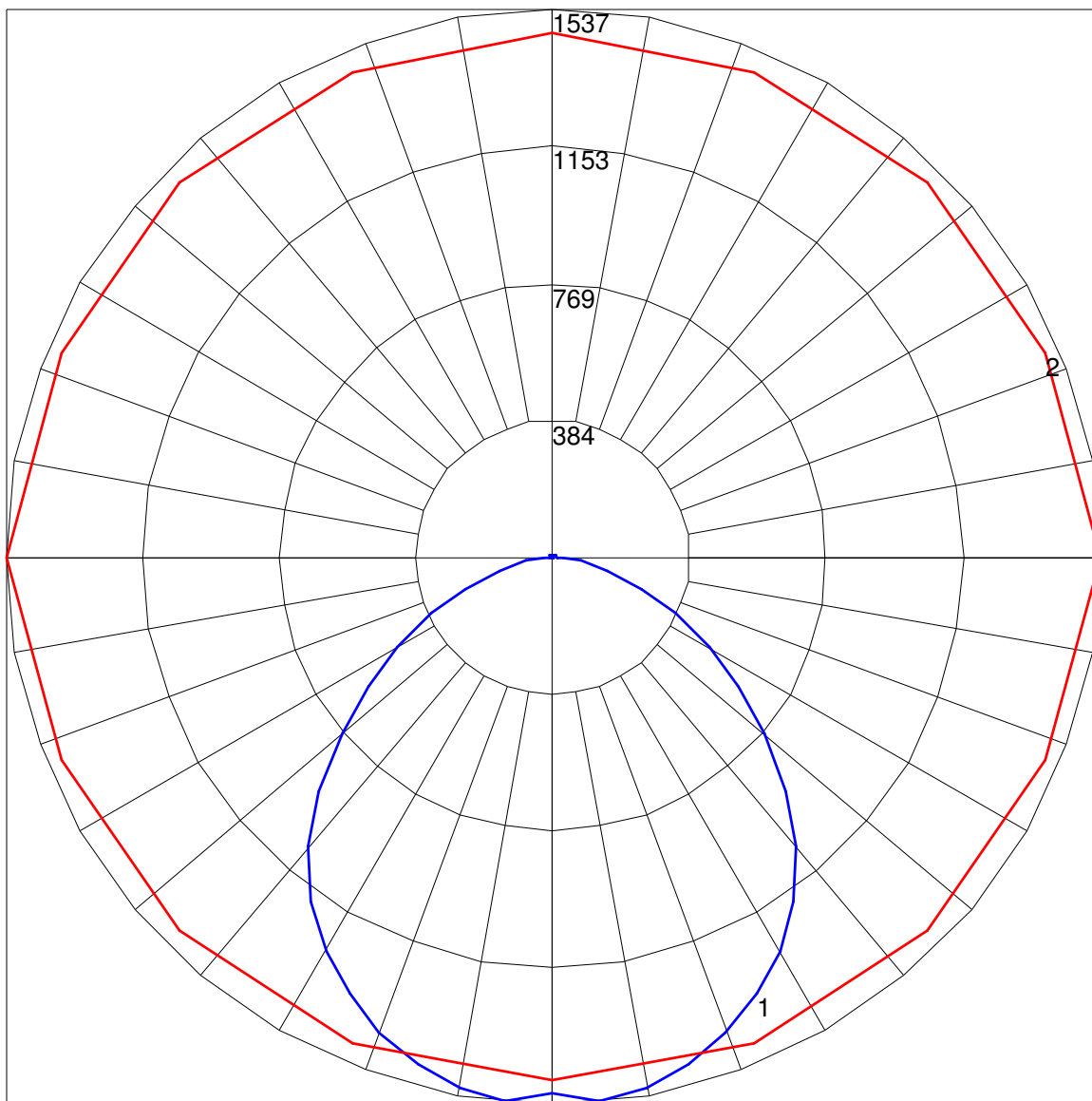
X=2H	Y=2H	15.8	17.4	16.3	17.8	18.2	17.4	18.9	17.8	19.3	19.8
	3H	17.0	18.4	17.5	18.8	19.3	19.6	21.1	20.1	21.5	21.9
	4H	17.3	18.7	17.8	19.1	19.6	20.7	22.0	21.1	22.4	22.9
	6H	17.5	18.7	18.0	19.2	19.7	21.6	22.9	22.1	23.3	23.8
	8H	17.5	18.7	18.0	19.2	19.6	22.1	23.3	22.6	23.7	24.2
	12H	17.5	18.6	18.0	19.1	19.6	22.5	23.7	23.0	24.2	24.7

UGR Viewed Endwise

4H	2H	16.5	17.9	17.0	18.3	18.8	17.8	19.1	18.3	19.6	20.0
	3H	18.0	19.1	18.4	19.6	20.1	20.3	21.4	20.8	21.9	22.4
	4H	18.4	19.4	18.9	19.9	20.4	21.5	22.5	22.0	23.0	23.5
	6H	18.6	19.6	19.2	20.1	20.6	22.6	23.5	23.1	24.0	24.5
	8H	18.7	19.5	19.2	20.1	20.6	23.2	24.0	23.7	24.5	25.1
	12H	18.7	19.5	19.3	20.0	20.6	23.7	24.5	24.3	25.0	25.6
8H	4H	19.0	19.8	19.5	20.3	20.9	21.6	22.5	22.2	23.0	23.5
	6H	19.4	20.1	19.9	20.6	21.2	22.9	23.6	23.5	24.2	24.8
	8H	19.5	20.1	20.1	20.7	21.3	23.6	24.2	24.2	24.8	25.4
	12H	19.5	20.1	20.1	20.7	21.3	24.3	24.9	24.9	25.5	26.1
12H	4H	19.1	19.9	19.6	20.4	21.0	21.6	22.4	22.2	22.9	23.5
	6H	19.6	20.2	20.1	20.8	21.4	22.9	23.6	23.5	24.1	24.7
	8H	19.8	20.4	20.3	20.9	21.6	23.7	24.3	24.2	24.8	25.5

Maximum UGR = 26.1

POLAR GRAPH



Maximum Candela = 1537.416 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.)