



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-8-L160-835-HIAFR-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20206.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 25-APR-2022

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 8' ENCLOSED & GASKETED LED LUMINAIRE

[MORE] WHITE FLAT REFL w/HIAFR RIBBED ACRYLIC DROP LENS

[LUMCAT] 96-8-L160-835-HIAFR-DRV-UNV

[LAMPCAT] HLM 80 CRI 3500K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Industrial, Manufacturing, Direct, Linear, Hose Down, Wet Location

[_SEARCH_MOUNTING] Surface, Suspended, Wall

[_SEARCH_CLASSIFICATION] IP65, IP66, IP67

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	15701
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	123
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.12
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	8.29 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	12741	9584	9716
55	10492	8453	8547
65	8165	7427	7214
75	5479	5575	5546
85	2953	4332	4286

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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	5881.826	5881.826	5881.826	5881.826	5881.826
5	5836.853	5820.791	5791.880	5775.818	5782.243
10	5759.756	5714.783	5660.173	5611.988	5595.926
15	5666.598	5644.111	5550.953	5412.822	5486.706
20	5448.158	5342.150	5242.567	5024.126	5094.798
25	5187.957	5104.435	4930.968	4664.342	4776.775
30	4735.014	4522.999	4330.257	4156.790	4359.169
35	4285.284	4034.720	3896.589	3870.890	4057.207
40	3870.890	3607.477	3546.442	3626.751	3748.821
45	3543.230	3331.214	3266.967	3427.585	3533.593
50	2974.643	2900.758	2900.758	3144.898	3215.569
55	2386.781	2367.507	2537.762	2762.627	2791.538
60	1837.468	1920.990	2165.129	2341.808	2345.021
65	1387.738	1561.206	1859.955	2001.298	2017.360
70	947.645	1207.846	1471.260	1593.329	1619.028
75	587.861	815.939	1076.140	1198.209	1243.182
80	308.386	549.313	799.877	899.460	947.645
85	122.070	350.147	562.162	652.108	693.869
90	38.548	186.317	343.722	433.668	456.155
95	6.425	122.070	263.413	350.147	375.846
100	0.000	83.521	218.440	292.324	318.023
105	0.000	51.398	173.467	244.139	269.838
110	0.000	38.548	144.556	205.591	221.653
115	0.000	25.699	99.583	157.405	179.892
120	0.000	0.000	73.884	128.494	144.556
125	0.000	0.000	41.761	89.946	99.583
130	0.000	0.000	0.000	67.459	73.884
135	0.000	0.000	0.000	0.000	51.398
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	2102.21	N.A.	13.40
0-30	4343.93	N.A.	27.70
0-40	6853.18	N.A.	43.60
0-60	11747.08	N.A.	74.80
0-80	14585.78	N.A.	92.90
0-90	15133.09	N.A.	96.40
10-90	14583.28	N.A.	92.90
20-40	4750.97	N.A.	30.30
20-50	7347.74	N.A.	46.80
40-70	6647.4	N.A.	42.30
60-80	2838.7	N.A.	18.10
70-80	1085.2	N.A.	6.90
80-90	547.31	N.A.	3.50
90-110	423.36	N.A.	2.70
90-120	517.91	N.A.	3.30
90-130	559.81	N.A.	3.60
90-150	567.57	N.A.	3.60
90-180	567.57	N.A.	3.60
110-180	144.21	N.A.	0.90
0-180	15700.66	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	549.81
10-20	1552.4
20-30	2241.73
30-40	2509.25
40-50	2596.77
50-60	2297.13
60-70	1753.5
70-80	1085.2
80-90	547.31
90-100	260.47
100-110	162.89
110-120	94.55
120-130	41.90
130-140	7.76
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	104	104	104	99	99	99	96
1	107	102	98	94	104	100	96	92	95	91	88	90	88	85	86	84	82	80
2	98	89	82	76	95	87	81	75	83	78	73	79	75	71	75	72	69	66
3	89	78	70	64	86	77	69	63	73	67	61	70	64	60	67	62	58	56
4	82	70	61	54	79	68	60	54	65	58	52	62	56	51	60	55	50	48
5	75	62	53	47	73	61	53	46	58	51	45	56	50	45	54	48	44	42
6	70	56	47	41	67	55	47	41	53	45	40	51	44	39	49	43	39	37
7	65	51	42	36	63	50	42	36	48	41	35	46	40	35	45	39	34	32
8	60	47	38	32	58	46	38	32	44	37	32	43	36	31	41	35	31	29
9	56	43	35	29	55	42	34	29	41	34	29	39	33	28	38	32	28	26
10	53	40	32	27	51	39	31	26	38	31	26	37	30	26	35	30	26	24

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UGR TABLE - CORRECTED

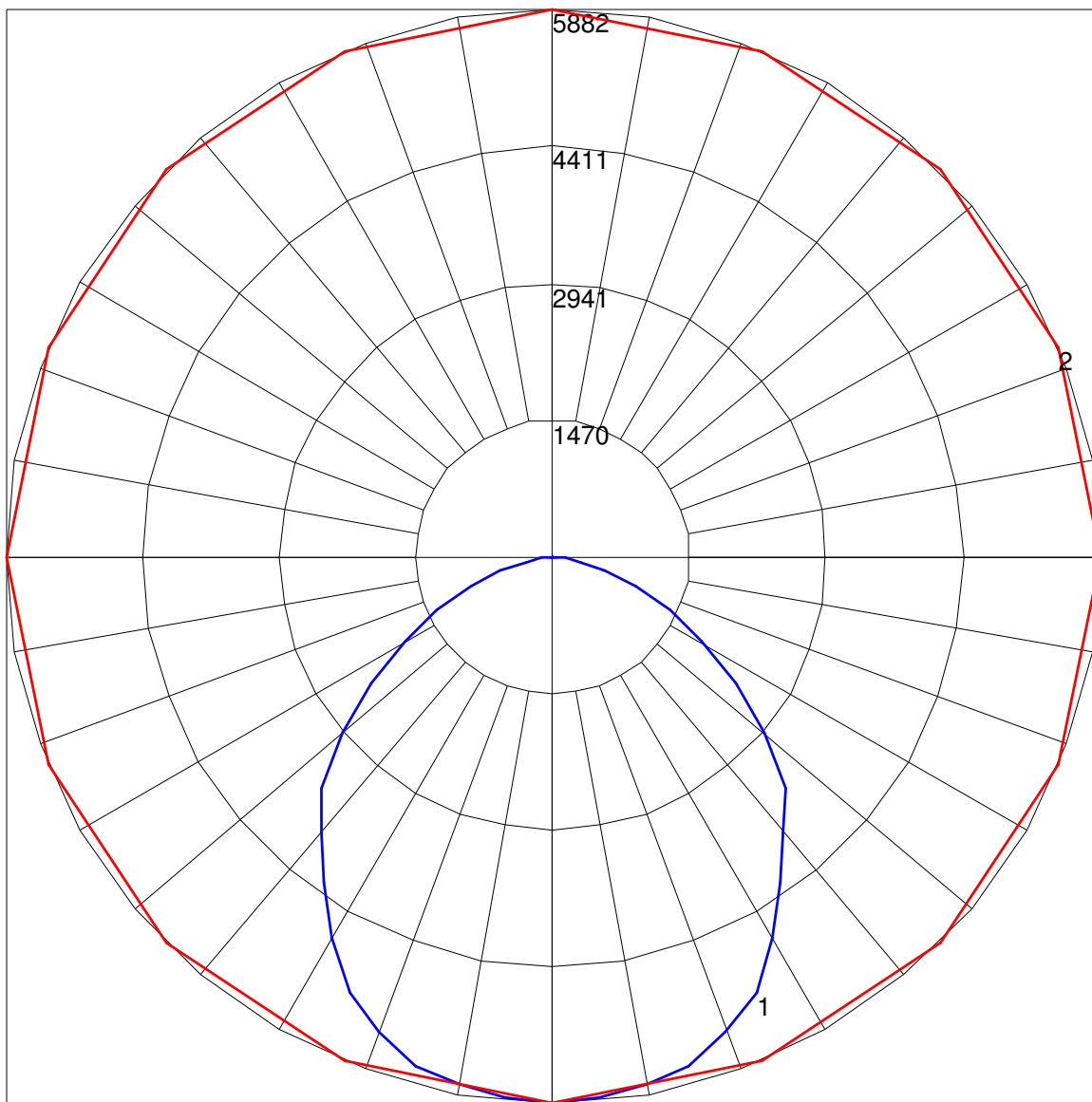
Reflectances

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	18.1	19.6	18.5	20.0	20.4	20.1	21.7	20.6	22.1	22.5
	3H	19.3	20.7	19.8	21.1	21.6	22.2	23.6	22.6	24.0	24.4
	4H	19.7	21.0	20.1	21.4	21.9	23.0	24.3	23.5	24.7	25.2
	6H	19.8	21.1	20.3	21.5	22.0	23.8	25.0	24.3	25.5	26.0
	8H	19.9	21.0	20.4	21.5	22.0	24.2	25.4	24.7	25.8	26.3
	12H	19.9	21.0	20.3	21.4	22.0	24.6	25.7	25.1	26.2	26.7
4H	2H	18.9	20.2	19.4	20.7	21.1	20.5	21.9	21.0	22.3	22.8
	3H	20.4	21.5	20.9	22.0	22.5	22.8	23.9	23.3	24.4	24.9
	4H	20.9	21.9	21.4	22.4	22.9	23.7	24.8	24.2	25.2	25.8
	6H	21.1	22.0	21.7	22.5	23.1	24.7	25.6	25.2	26.1	26.7
	8H	21.2	22.0	21.7	22.6	23.1	25.2	26.0	25.7	26.5	27.1
	12H	21.2	22.0	21.8	22.5	23.1	25.7	26.4	26.3	27.0	27.6
8H	4H	21.4	22.2	21.9	22.7	23.3	23.9	24.8	24.5	25.3	25.8
	6H	21.8	22.5	22.4	23.1	23.6	25.0	25.7	25.6	26.3	26.8
	8H	22.0	22.6	22.5	23.2	23.7	25.6	26.2	26.2	26.8	27.4
	12H	22.0	22.6	22.6	23.2	23.8	26.2	26.8	26.8	27.4	28.0
12H	4H	21.5	22.2	22.0	22.8	23.4	23.9	24.7	24.5	25.2	25.8
	6H	22.0	22.6	22.6	23.2	23.8	25.0	25.7	25.6	26.2	26.8
	8H	22.2	22.8	22.8	23.3	24.0	25.7	26.2	26.3	26.8	27.4

Maximum UGR = 28.0

POLAR GRAPH



Maximum Candela = 5881.826 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)