

IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-8-L160-835-HIAFR-(L150)-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] 08-31-2023

[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-(L150)-DIM-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	14696
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	102.33
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	11925	8970	9095
55	9820	7912	8000
65	7642	6952	6752
75	5129	5218	5191
85	2764	4054	4012

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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	5505.361	5505.361	5505.361	5505.361	5505.361
5	5463.267	5448.233	5421.172	5406.138	5412.152
10	5391.105	5349.010	5297.895	5252.794	5237.760
15	5303.909	5282.862	5195.666	5066.376	5135.531
20	5099.450	5000.227	4907.018	4702.559	4768.707
25	4855.903	4777.727	4615.363	4365.803	4471.039
30	4431.951	4233.505	4053.100	3890.736	4080.161
35	4011.006	3776.479	3647.189	3623.135	3797.527
40	3623.135	3376.581	3319.453	3394.622	3508.878
45	3316.446	3118.001	3057.866	3208.203	3307.426
50	2784.251	2715.096	2715.096	2943.609	3009.758
55	2234.016	2215.976	2375.333	2585.806	2612.867
60	1719.862	1798.037	2026.550	2191.922	2194.928
65	1298.916	1461.281	1740.909	1873.206	1888.240
70	886.992	1130.538	1377.092	1491.349	1515.403
75	550.235	763.715	1007.262	1121.518	1163.613
80	288.648	514.154	748.681	841.890	886.992
85	114.257	327.736	526.181	610.370	649.458
90	36.081	174.392	321.722	405.911	426.959
95	6.014	114.257	246.554	327.736	351.790
100	0.000	78.176	204.459	273.614	297.668
105	0.000	48.108	162.365	228.513	252.567
110	0.000	36.081	135.304	192.432	207.466
115	0.000	24.054	93.209	147.331	168.378
120	0.000	0.000	69.155	120.270	135.304
125	0.000	0.000	39.088	84.189	93.209
130	0.000	0.000	0.000	63.142	69.155
135	0.000	0.000	0.000	0.000	48.108
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	1967.66	N.A.	13.40
0-30	4065.9	N.A.	27.70
0-40	6414.54	N.A.	43.60
0-60	10995.21	N.A.	74.80
0-80	13652.22	N.A.	92.90
0-90	14164.5	N.A.	96.40
10-90	13649.88	N.A.	92.90
20-40	4446.89	N.A.	30.30
20-50	6877.45	N.A.	46.80
40-70	6221.93	N.A.	42.30
60-80	2657.01	N.A.	18.10
70-80	1015.74	N.A.	6.90
80-90	512.28	N.A.	3.50
90-110	396.26	N.A.	2.70
90-120	484.76	N.A.	3.30
90-130	523.98	N.A.	3.60
90-150	531.24	N.A.	3.60
90-180	531.24	N.A.	3.60
110-180	134.98	N.A.	0.90
0-180	14695.75	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	514.62
10-20	1453.03
20-30	2098.25
30-40	2348.64
40-50	2430.56
50-60	2150.1
60-70	1641.26
70-80	1015.74
80-90	512.28
90-100	243.80
100-110	152.47
110-120	88.50
120-130	39.22
130-140	7.26
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

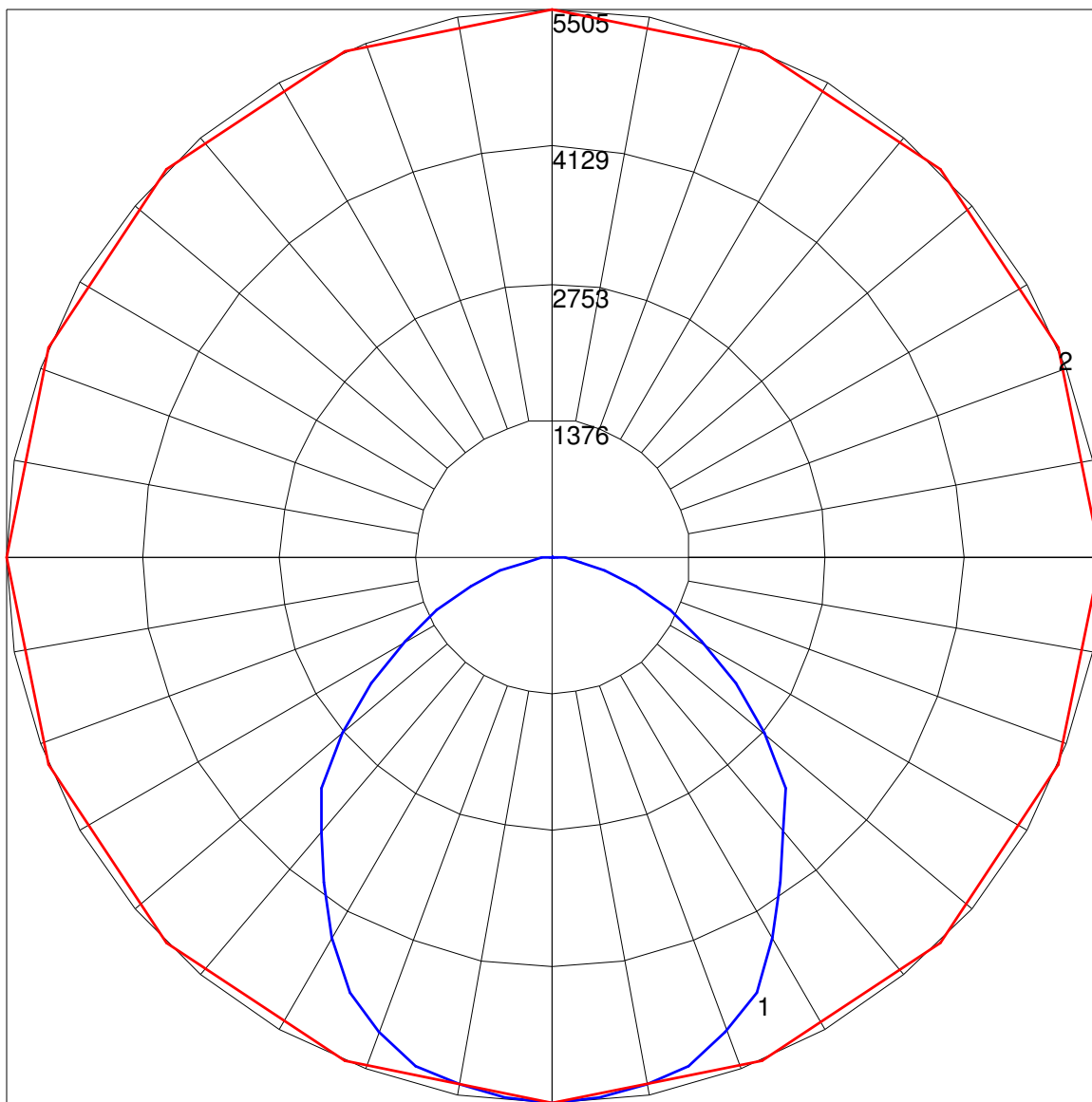
X=2H	Y=2H	17.8	19.3	18.2	19.7	20.1	19.8	21.4	20.3	21.8	22.2
	3H	19.0	20.4	19.5	20.8	21.3	21.9	23.3	22.3	23.7	24.1
	4H	19.4	20.7	19.8	21.1	21.6	22.7	24.0	23.2	24.4	24.9
	6H	19.5	20.8	20.0	21.2	21.7	23.5	24.7	24.0	25.2	25.7
	8H	19.6	20.7	20.1	21.2	21.7	23.9	25.1	24.4	25.5	26.0
	12H	19.6	20.7	20.0	21.1	21.7	24.3	25.4	24.8	25.9	26.4

UGR Viewed Endwise

4H	2H	18.6	19.9	19.1	20.4	20.8	20.2	21.6	20.7	22.0	22.5
	3H	20.1	21.2	20.6	21.7	22.2	22.5	23.6	23.0	24.1	24.6
	4H	20.6	21.6	21.1	22.1	22.6	23.4	24.5	23.9	24.9	25.5
	6H	20.8	21.7	21.4	22.2	22.8	24.4	25.3	24.9	25.8	26.4
	8H	20.9	21.7	21.4	22.3	22.8	24.9	25.7	25.4	26.2	26.8
	12H	20.9	21.7	21.5	22.2	22.8	25.4	26.1	26.0	26.7	27.3
8H	4H	21.1	21.9	21.6	22.4	23.0	23.6	24.5	24.2	25.0	25.5
	6H	21.5	22.2	22.1	22.8	23.3	24.7	25.4	25.3	26.0	26.5
	8H	21.7	22.3	22.2	22.9	23.4	25.3	25.9	25.9	26.5	27.1
	12H	21.7	22.3	22.3	22.9	23.5	25.9	26.5	26.5	27.1	27.7
12H	4H	21.2	21.9	21.7	22.5	23.1	23.6	24.4	24.2	24.9	25.5
	6H	21.7	22.3	22.3	22.9	23.5	24.7	25.4	25.3	25.9	26.5
	8H	21.9	22.5	22.5	23.0	23.7	25.4	25.9	26.0	26.5	27.1

Maximum UGR = 27.7

POLAR GRAPH



Maximum Candela = 5505.361 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.)