



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 96-8-L220-850-HIAFR-DRV-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] 10-SEP-2021
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 8' ENCLOSED & GASKETED LED LUMINAIRE
 [MORE] w/HIAFR RIBBED ACRYLIC DROP LENS
 [LUMCAT] 96-8-L220-850-HIAFR-DRV-UNV
 [LAMPCAT] HLM 80 CRI 5000K 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	22715
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	137
Total Luminaire Watts	166
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	18433	13866	14057
55	15179	12229	12365
65	11812	10745	10437
75	7927	8065	8023
85	4272	6267	6201

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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	8509.580	8509.580	8509.580	8509.580	8509.580
5	8444.515	8421.277	8379.449	8356.212	8365.507
10	8332.974	8267.909	8188.902	8119.189	8095.952
15	8198.197	8165.664	8030.887	7831.044	7937.937
20	7882.167	7728.799	7584.726	7268.696	7370.941
25	7505.719	7384.884	7133.918	6748.176	6910.838
30	6850.421	6543.685	6264.835	6013.870	6306.663
35	6199.770	5837.265	5637.422	5600.242	5869.797
40	5600.242	5219.147	5130.844	5247.032	5423.637
45	5126.197	4819.461	4726.511	4958.887	5112.254
50	4303.589	4196.696	4196.696	4549.906	4652.151
55	3453.095	3425.210	3671.528	3996.853	4038.681
60	2658.372	2779.207	3132.418	3388.030	3392.678
65	2007.722	2258.687	2690.905	2895.395	2918.632
70	1371.014	1747.461	2128.557	2305.162	2342.342
75	850.493	1180.466	1556.914	1733.519	1798.584
80	446.160	794.723	1157.228	1301.301	1371.014
85	176.605	506.578	813.313	943.443	1003.861
90	55.770	269.555	497.283	627.413	659.946
95	9.295	176.605	381.095	506.578	543.758
100	0.000	120.835	316.030	422.923	460.103
105	0.000	74.360	250.965	353.210	390.390
110	0.000	55.770	209.138	297.440	320.678
115	0.000	37.180	144.073	227.728	260.260
120	0.000	0.000	106.893	185.900	209.138
125	0.000	0.000	60.418	130.130	144.073
130	0.000	0.000	0.000	97.598	106.893
135	0.000	0.000	0.000	0.000	74.360
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	3041.38	N.A.	13.40
0-30	6284.62	N.A.	27.70
0-40	9914.89	N.A.	43.60
0-60	16995.18	N.A.	74.80
0-80	21102.09	N.A.	92.90
0-90	21893.92	N.A.	96.40
10-90	21098.48	N.A.	92.90
20-40	6873.51	N.A.	30.30
20-50	10630.41	N.A.	46.80
40-70	9617.18	N.A.	42.30
60-80	4106.91	N.A.	18.10
70-80	1570.02	N.A.	6.90
80-90	791.83	N.A.	3.50
90-110	612.50	N.A.	2.70
90-120	749.29	N.A.	3.30
90-130	809.91	N.A.	3.60
90-150	821.14	N.A.	3.60
90-180	821.14	N.A.	3.60
110-180	208.64	N.A.	0.90
0-180	22715.06	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	795.44
10-20	2245.94
20-30	3243.24
30-40	3630.27
40-50	3756.9
50-60	3323.39
60-70	2536.89
70-80	1570.02
80-90	791.83
90-100	376.83
100-110	235.67
110-120	136.79
120-130	60.62
130-140	11.23
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

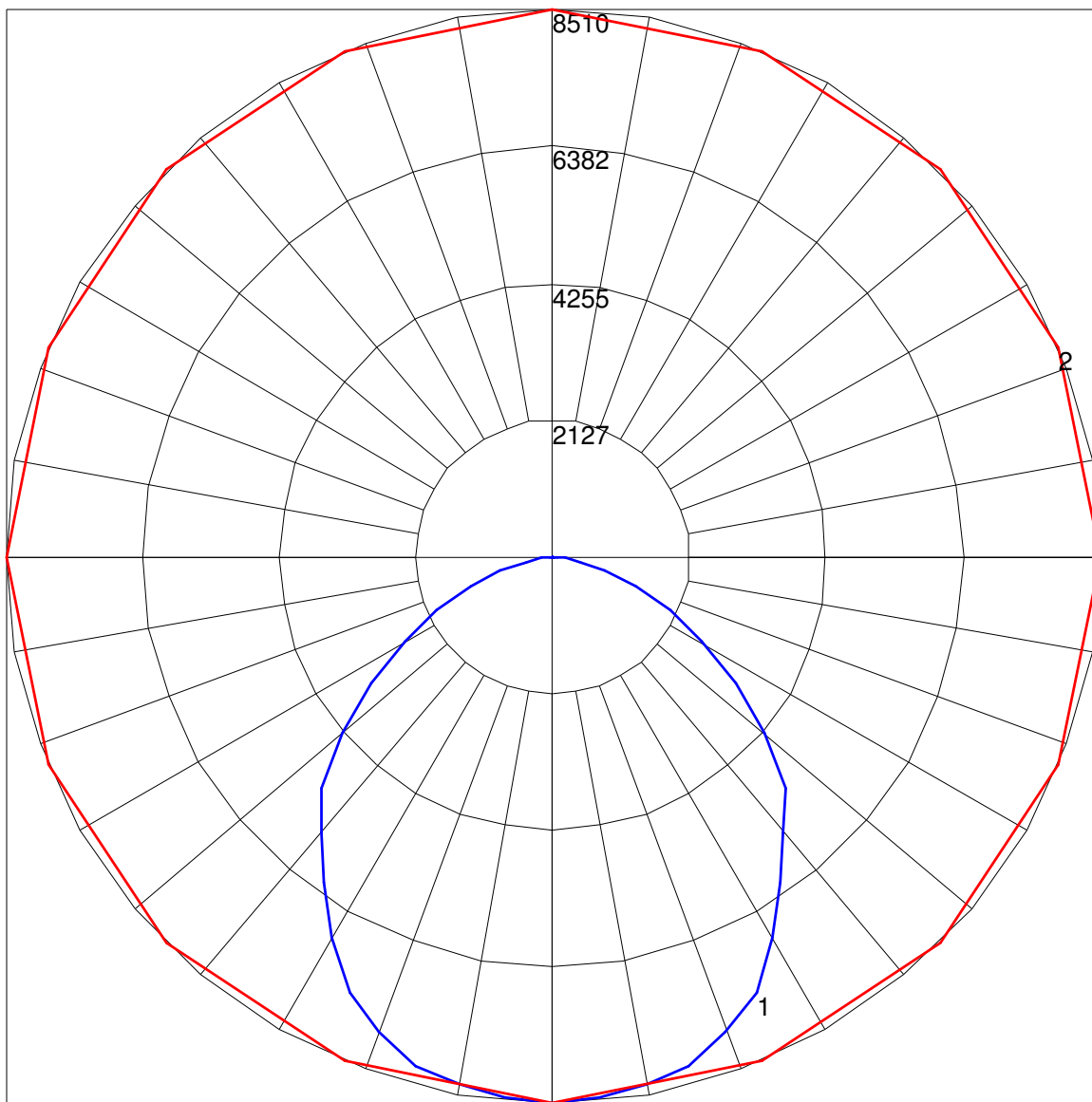
X=2H	Y=2H	19.4	20.9	19.8	21.3	21.7	21.4	23.0	21.9	23.4	23.8
	3H	20.6	22.0	21.1	22.4	22.9	23.5	24.9	23.9	25.3	25.7
	4H	21.0	22.3	21.4	22.7	23.2	24.3	25.6	24.8	26.0	26.5
	6H	21.1	22.4	21.6	22.8	23.3	25.1	26.3	25.6	26.8	27.3
	8H	21.2	22.3	21.7	22.8	23.3	25.5	26.7	26.0	27.1	27.6
	12H	21.2	22.3	21.6	22.7	23.3	25.9	27.0	26.4	27.5	28.0

UGR Viewed Endwise

4H	2H	20.2	21.5	20.7	22.0	22.4	21.8	23.2	22.3	23.6	24.1
	3H	21.7	22.8	22.2	23.3	23.8	24.1	25.2	24.6	25.7	26.2
	4H	22.2	23.2	22.7	23.7	24.2	25.0	26.1	25.5	26.5	27.1
	6H	22.4	23.3	23.0	23.8	24.4	26.0	26.9	26.5	27.4	28.0
	8H	22.5	23.3	23.0	23.9	24.4	26.5	27.3	27.0	27.8	28.4
	12H	22.5	23.3	23.1	23.8	24.4	27.0	27.7	27.6	28.3	28.9
8H	4H	22.7	23.5	23.2	24.0	24.6	25.2	26.1	25.8	26.6	27.1
	6H	23.1	23.8	23.7	24.4	24.9	26.3	27.0	26.9	27.6	28.1
	8H	23.3	23.9	23.8	24.5	25.0	26.9	27.5	27.5	28.1	28.7
	12H	23.3	23.9	23.9	24.5	25.1	27.5	28.1	28.1	28.7	29.3
12H	4H	22.8	23.5	23.3	24.1	24.7	25.2	26.0	25.8	26.5	27.1
	6H	23.3	23.9	23.9	24.5	25.1	26.4	27.0	27.0	27.5	28.1
	8H	23.5	24.1	24.1	24.6	25.3	27.0	27.5	27.6	28.1	28.7

Maximum UGR = 29.3

POLAR GRAPH



Maximum Candela = 8509.58 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.)