



IES INDOOR REPORT
PHOTOMETRIC FILENAME : MD4EG-4-L80-840-A-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST]GEN FROM BALLABS TEST NO. 20050.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 24-JUN-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2-84 LED(EXAM) 4' MEDICAL ASYM TROFFER
 [MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED LENS IN DOOR & CLEAR
 [MORE] ACRYLIC LENS
 [LUMCAT] MD4EG-L80-840-A-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	8062
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	71.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.76
Spacing Criterion (90-270)	1.28
Spacing Criterion (Diagonal)	1.38
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.44 ft
Luminous Width (90-270)	3.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	31906	28155	18119
55	30564	26913	15322
65	20384	22894	11772
75	6890	11165	6607
85	0	315	315

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>
0	3097.143	3097.143	3097.143	3097.143	3097.143	3097.143	3097.143	3097.143	3097.143
5	3320.474	3319.070	3271.313	3231.985	3140.686	2970.729	2851.338	2778.299	2946.851
10	3519.928	3512.905	3428.629	3305.024	3111.189	2824.651	2604.128	2491.760	2630.816
15	3678.647	3637.914	3535.378	3335.925	3052.196	2675.763	2366.751	2198.199	2345.682
20	3800.848	3746.068	3604.204	3333.116	2958.088	2480.524	2080.213	1901.828	2025.433
25	3858.436	3809.275	3611.227	3278.336	2821.841	2283.880	1848.454	1660.237	1730.467
30	3859.841	3810.680	3576.112	3192.656	2649.076	2087.236	1646.191	1443.929	1476.235
35	3799.443	3751.687	3479.194	3036.745	2442.599	1873.736	1413.028	1220.597	1240.262
40	3674.434	3621.059	3305.024	2837.292	2216.459	1660.237	1199.528	1029.572	1033.786
45	3465.148	3417.392	3057.814	2602.724	1967.845	1432.692	1016.930	872.257	852.592
50	3150.518	3137.876	2741.779	2306.353	1667.260	1189.696	823.096	720.560	703.705
55	2692.618	2772.680	2370.965	1932.730	1349.821	948.105	639.093	580.100	580.100
60	2053.525	2265.620	1969.249	1525.396	1049.236	698.086	487.396	441.044	448.067
65	1323.133	1571.747	1486.067	1170.032	764.102	455.090	338.509	290.752	287.943
70	720.560	894.730	945.296	806.240	498.633	285.134	195.239	154.506	160.124
75	273.897	373.624	443.854	410.143	262.660	160.124	84.276	67.421	82.871
80	58.993	82.871	110.963	115.177	88.490	50.566	30.901	26.687	32.306
85	0.000	4.214	4.214	2.809	4.214	4.214	2.809	1.405	4.214
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1132.88	N.A.	14.10
0-30	2407.56	N.A.	29.90
0-40	3950.46	N.A.	49.00
0-60	6898.87	N.A.	85.60
0-80	8041.01	N.A.	99.70
0-90	8061.51	N.A.	100.00
10-90	7768.24	N.A.	96.40
20-40	2817.58	N.A.	35.00
20-50	4405.88	N.A.	54.70
40-70	3803.28	N.A.	47.20
60-80	1142.14	N.A.	14.20
70-80	287.27	N.A.	3.60
80-90	20.50	N.A.	0.30
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	8061.51	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	293.27
10-20	839.61
20-30	1274.68
30-40	1542.9
40-50	1588.29
50-60	1360.12
60-70	854.87
70-80	287.27
80-90	20.50
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
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	181	181	181	181	177	177	177	177	169	169	169	162	162	162	155	155	155	152
1	167	161	155	150	163	158	152	148	151	147	143	145	142	139	140	137	135	131
2	153	142	132	124	149	139	130	123	134	126	120	129	123	117	124	119	115	112
3	140	125	114	104	137	123	112	104	118	109	102	114	107	100	111	104	98	95
4	129	111	99	89	125	109	98	88	106	95	87	102	93	86	99	91	85	82
5	118	100	87	77	115	98	86	77	95	84	76	92	82	75	89	81	74	71
6	109	90	77	67	107	88	76	67	86	75	66	83	73	66	81	72	65	62
7	102	82	69	60	99	80	68	59	78	67	59	76	66	58	74	65	58	55
8	95	74	62	53	92	73	61	53	71	60	53	70	60	52	68	59	52	49
9	88	68	56	48	86	67	56	48	66	55	47	64	54	47	63	54	47	44
10	83	63	51	43	81	62	51	43	61	50	43	59	50	43	58	49	43	40

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UGR TABLE - CORRECTED

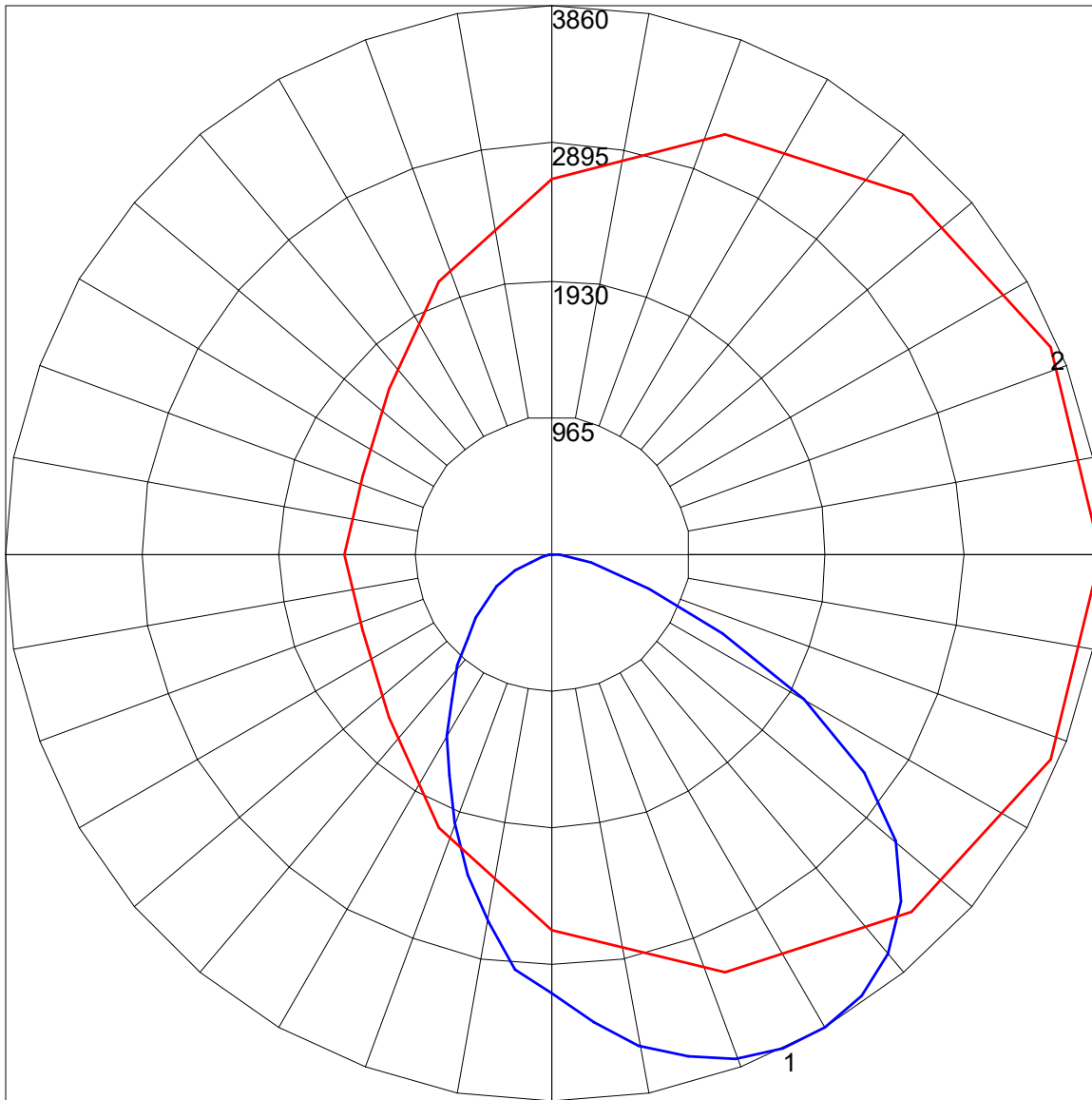
Reflectances

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	24.8	26.4	25.2	26.7	27.0	20.4	21.9	20.7	22.3	22.6
	3H	25.6	27.0	26.0	27.4	27.7	21.5	22.9	21.9	23.2	23.6
	4H	25.7	27.0	26.1	27.4	27.8	21.7	23.0	22.1	23.4	23.8
	6H	25.7	26.9	26.1	27.3	27.7	21.8	23.0	22.2	23.4	23.8
	8H	25.7	26.8	26.1	27.2	27.6	21.8	22.9	22.2	23.3	23.7
	12H	25.6	26.7	26.0	27.1	27.5	21.7	22.8	22.2	23.2	23.7
4H	2H	25.2	26.5	25.6	26.9	27.2	21.2	22.5	21.6	22.8	23.2
	3H	26.2	27.3	26.6	27.7	28.1	22.4	23.5	22.9	23.9	24.3
	4H	26.3	27.3	26.7	27.7	28.1	22.7	23.7	23.2	24.1	24.6
	6H	26.3	27.1	26.7	27.6	28.0	22.8	23.7	23.3	24.1	24.6
	8H	26.3	27.0	26.7	27.5	28.0	22.8	23.6	23.3	24.0	24.5
	12H	26.2	26.9	26.7	27.4	27.9	22.8	23.5	23.3	24.0	24.4
8H	4H	26.3	27.1	26.8	27.6	28.0	22.9	23.6	23.3	24.1	24.6
	6H	26.3	27.0	26.8	27.5	27.9	23.0	23.6	23.5	24.1	24.6
	8H	26.3	26.9	26.8	27.4	27.9	22.9	23.5	23.5	24.0	24.5
	12H	26.3	26.8	26.8	27.3	27.8	22.9	23.4	23.4	23.9	24.5
12H	4H	26.3	27.0	26.8	27.5	28.0	22.8	23.5	23.3	24.0	24.5
	6H	26.3	26.9	26.8	27.3	27.9	22.9	23.5	23.5	24.0	24.5
	8H	26.3	26.8	26.8	27.3	27.8	22.9	23.4	23.4	23.9	24.5

Maximum UGR = 28.1

POLAR GRAPH



Maximum Candela = 3859.841 Located At Horizontal Angle = 0, Vertical Angle = 30
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (30) (Through Max. Cd.)