



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MD2G-4-L30-8TW-A-CHA118-DIM-UNV 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from BALLABS TEST NO. 16991.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 3-MAR-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC. - CARTHAGE, MO.
 [LUMINAIRE] 4' LINEAR RECESSED ASYMMETRIC LUMINAIRE
 [MORE] WHITE REFL w/FROSTED ACRYLIC RIBBED ASYMMETRIC DIFFUSER &
 [MORE] CLEAR ACRYLIC LENS
 [LUMCAT] MD2-4-L30-8TW-A/CHA118-DIM-UNV
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] INDOOR, HEALTHCARE, LINEAR, DIRECT
 [_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2862
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	86
Total Luminaire Watts	33.1
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.44
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.35 ft
Luminous Width (90-270)	3.84 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	10374	11399	8356
55	6510	8576	6714
65	3744	5607	5257
75	2018	2891	3343
85	984	1252	1342

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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	1366.330	1366.330	1366.330	1366.330	1366.330	1366.330	1366.330	1366.330	1366.330
5	1434.404	1418.844	1400.367	1369.248	1340.073	1317.706	1283.670	1261.303	1254.495
10	1494.697	1474.275	1438.294	1383.835	1318.679	1256.440	1196.147	1156.275	1136.826
15	1471.358	1454.826	1409.119	1337.156	1246.716	1159.193	1072.642	1015.266	990.954
20	1575.413	1546.238	1485.945	1384.807	1253.523	1119.321	996.789	911.211	885.927
25	1476.220	1455.798	1393.560	1288.532	1144.605	996.789	869.394	782.844	757.560
30	1425.651	1404.257	1346.881	1225.321	1059.027	885.927	750.752	665.174	636.000
35	1303.119	1307.009	1264.220	1142.660	967.615	794.514	657.394	576.679	549.450
40	1105.706	1128.073	1130.991	1015.266	841.193	668.092	541.670	466.789	447.339
45	915.101	960.807	1005.541	915.101	737.138	567.927	455.119	389.963	374.404
50	671.982	727.413	802.294	759.505	603.908	458.037	369.541	318.000	302.440
55	465.816	508.605	613.633	613.633	480.404	363.706	289.798	247.982	232.422
60	308.275	342.312	441.505	472.624	372.459	281.046	222.697	186.716	177.963
65	197.413	227.560	295.633	339.394	277.156	203.248	156.569	133.229	130.312
70	119.615	133.229	176.991	217.835	183.798	133.229	102.110	91.413	89.468
75	65.156	71.963	93.358	119.615	107.945	71.963	57.376	53.486	50.569
80	32.092	33.064	40.844	51.541	49.596	32.092	28.202	25.284	25.284
85	10.697	10.697	13.615	14.587	14.587	9.725	9.725	9.725	9.725
90	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	483.80	N.A.	16.90
0-30	1008.1	N.A.	35.20
0-40	1598.95	N.A.	55.90
0-60	2531.49	N.A.	88.40
0-80	2845.92	N.A.	99.40
0-90	2862.08	N.A.	100.00
10-90	2734.57	N.A.	95.50
20-40	1115.15	N.A.	39.00
20-50	1656.24	N.A.	57.90
40-70	1158.05	N.A.	40.50
60-80	314.43	N.A.	11.00
70-80	88.92	N.A.	3.10
80-90	16.16	N.A.	0.60
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	2862.08	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	127.51
10-20	356.29
20-30	524.30
30-40	590.85
40-50	541.10
50-60	391.45
60-70	225.51
70-80	88.92
80-90	16.16
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	120	120	120	120	118	118	118	118	112	112	112	108	108	108	103	103	103	101
1	112	108	104	101	109	106	102	99	101	99	96	97	95	93	94	92	90	88
2	103	96	90	85	101	94	89	84	90	86	82	87	83	80	84	81	78	76
3	95	86	78	72	93	84	77	72	81	75	71	78	73	69	76	72	68	66
4	88	77	69	63	85	75	68	62	73	67	61	71	65	61	69	64	60	58
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	48	60	53	48	59	52	48	57	52	47	45
7	70	57	49	43	68	57	49	43	55	48	43	54	47	43	52	47	42	41
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38	37
9	61	49	41	35	60	48	40	35	47	40	35	46	40	35	45	39	35	33
10	58	45	37	32	56	44	37	32	43	37	32	43	36	32	42	36	32	30

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UGR TABLE - CORRECTED

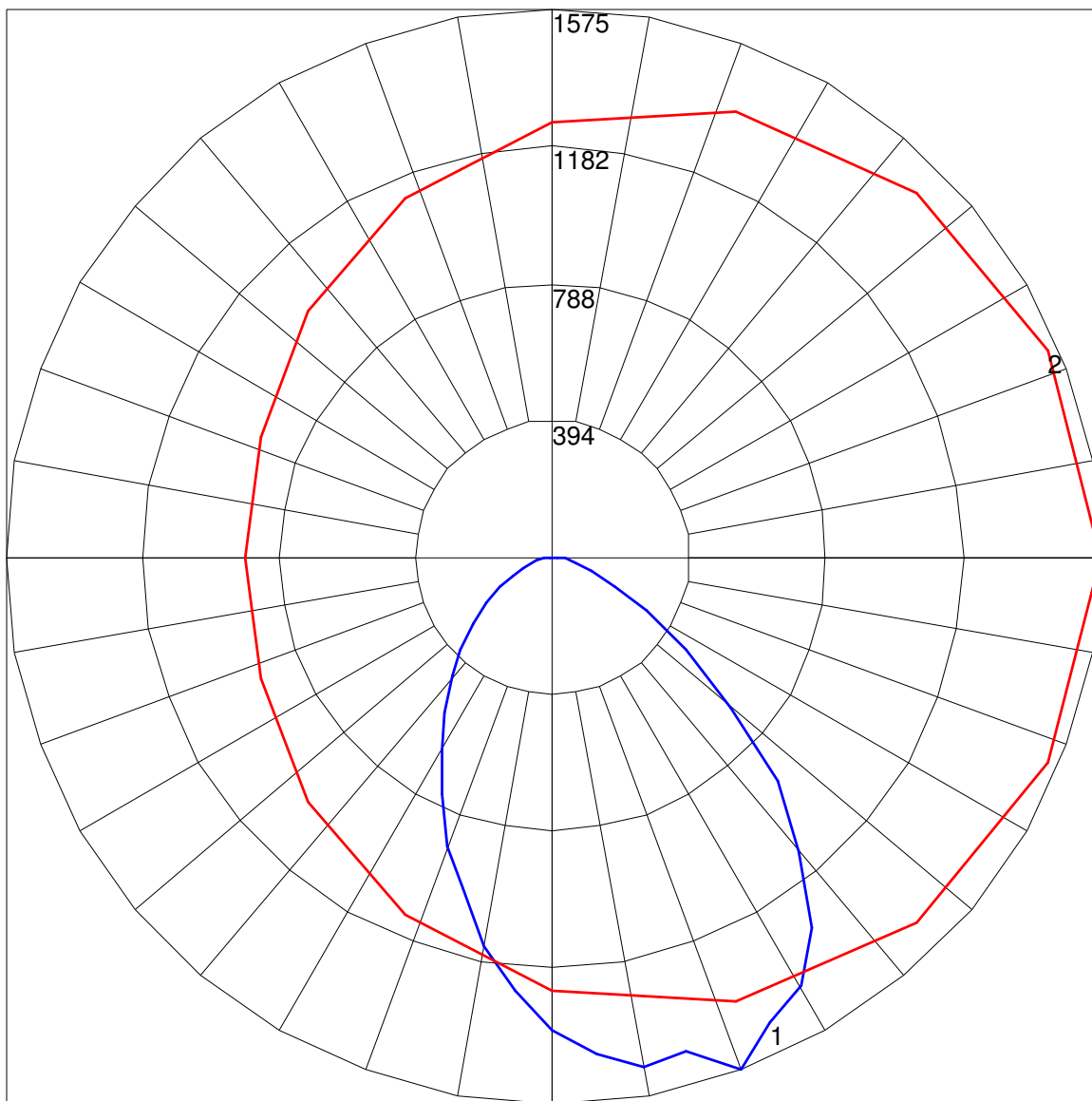
Reflectances

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	18.2	19.7	18.6	20.0	20.3	18.6	20.1	19.0	20.4	20.7
	3H	18.9	20.2	19.2	20.5	20.9	19.7	21.0	20.1	21.4	21.7
	4H	19.0	20.2	19.4	20.6	21.0	20.0	21.3	20.4	21.6	22.0
	6H	19.1	20.2	19.5	20.6	21.0	20.2	21.3	20.6	21.7	22.1
	8H	19.0	20.1	19.5	20.5	20.9	20.2	21.3	20.6	21.7	22.1
	12H	19.0	20.1	19.5	20.5	20.9	20.2	21.2	20.6	21.6	22.0
4H	2H	18.8	20.0	19.2	20.4	20.8	18.9	20.1	19.3	20.5	20.8
	3H	19.6	20.6	20.0	21.0	21.4	20.2	21.2	20.6	21.6	22.0
	4H	19.8	20.7	20.2	21.1	21.5	20.5	21.4	21.0	21.9	22.3
	6H	19.9	20.7	20.3	21.1	21.6	20.7	21.5	21.2	22.0	22.4
	8H	19.9	20.6	20.3	21.0	21.5	20.8	21.5	21.2	22.0	22.4
	12H	19.9	20.5	20.3	21.0	21.5	20.8	21.4	21.3	21.9	22.4
8H	4H	19.9	20.6	20.4	21.1	21.6	20.5	21.3	21.0	21.7	22.2
	6H	20.0	20.6	20.5	21.1	21.6	20.8	21.4	21.3	21.9	22.4
	8H	20.0	20.6	20.6	21.1	21.6	20.8	21.4	21.3	21.9	22.4
	12H	20.0	20.5	20.6	21.0	21.6	20.9	21.3	21.4	21.8	22.4
12H	4H	19.9	20.6	20.4	21.0	21.5	20.5	21.2	21.0	21.7	22.1
	6H	20.0	20.6	20.5	21.0	21.6	20.8	21.3	21.3	21.8	22.3
	8H	20.1	20.6	20.6	21.0	21.6	20.8	21.3	21.3	21.8	22.4

Maximum UGR = 22.4

POLAR GRAPH



Maximum Candela = 1575.413 Located At Horizontal Angle = 0, Vertical Angle = 20
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (20) (Through Max. Cd.)