



IES INDOOR REPORT

PHOTOMETRIC FILENAME : MDSG-14-L70-940-SYM-ASY-(L67)-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 20261.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 25-NOV-2020
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
 [LUMINAIRE] 2-56 LED 22"ARRAYS 1x4'RECESSED LUMINAIRE
 [MORE] WHITE ASYM REFL w/FROSTED PAT12 ACRYLIC LENS
 [LUMCAT] MDSG-14-L70-940-SYM-ASY-(L67)-DIM-UNV
 [LAMPCAT] HLM 90 CRI 4000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Healthcare, Direct
 [_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5667
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	107
Total Luminaire Watts	53
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.48
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	0.68 ft
Luminous Width (90-270)	3.68 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	11170	11009	8656
55	9075	8989	7155
65	6882	6794	5658
75	5480	4925	4351
85	3039	2584	2300

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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	2396.265	2396.265	2396.265	2396.265	2396.265	2396.265	2396.265	2396.265	2396.265
5	2504.346	2508.969	2493.942	2480.071	2442.503	2360.431	2298.588	2250.617	2218.250
10	2591.041	2587.573	2554.629	2502.034	2420.540	2285.295	2179.526	2103.812	2053.529
15	2633.233	2630.921	2580.060	2497.410	2372.568	2195.709	2032.144	1940.247	1867.422
20	2645.370	2632.077	2571.390	2455.218	2286.451	2061.042	1843.148	1740.847	1648.372
25	2604.913	2573.702	2513.015	2374.880	2170.857	1909.036	1644.904	1542.025	1450.706
30	2506.658	2477.759	2415.916	2270.268	2035.034	1723.508	1426.431	1322.396	1247.838
35	2350.606	2339.624	2276.625	2125.775	1861.065	1522.374	1230.499	1131.666	1061.732
40	2138.490	2130.977	2073.180	1908.458	1656.463	1319.506	1049.594	952.495	887.763
45	1844.304	1860.487	1817.717	1647.216	1429.321	1106.235	873.891	773.324	730.555
50	1525.264	1555.896	1515.438	1383.661	1189.463	907.414	713.793	616.116	589.530
55	1215.472	1238.013	1203.912	1123.574	958.275	736.912	581.438	495.899	478.559
60	928.798	960.587	917.817	880.827	747.316	583.750	463.532	401.111	391.864
65	679.115	740.958	670.446	659.464	558.319	435.212	361.231	320.774	313.260
70	483.183	537.512	464.110	469.312	397.066	315.572	267.600	246.793	243.904
75	331.177	351.984	297.655	309.214	262.977	217.317	188.996	171.657	179.171
80	192.464	199.978	165.300	178.015	146.227	125.420	110.392	93.053	107.502
85	61.843	69.934	52.595	62.421	46.816	38.146	31.788	18.495	28.321
90	0.000	0.000	1.156	0.000	0.000	0.000	0.000	0.000	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	878.96	N.A.	15.50
0-30	1842.2	N.A.	32.50
0-40	2948.54	N.A.	52.00
0-60	4796.67	N.A.	84.60
0-80	5602.39	N.A.	98.90
0-90	5667.02	N.A.	100.00
10-90	5439.08	N.A.	96.00
20-40	2069.58	N.A.	36.50
20-50	3109.62	N.A.	54.90
40-70	2378.86	N.A.	42.00
60-80	805.72	N.A.	14.20
70-80	274.98	N.A.	4.90
80-90	64.63	N.A.	1.10
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	5667.02	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	227.94
10-20	651.03
20-30	963.24
30-40	1106.34
40-50	1040.04
50-60	808.09
60-70	530.74
70-80	274.98
80-90	64.63
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	102	98	107	103	100	96	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	85	81	88	83	79	85	80	77	82	78	75	73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63
4	85	74	66	59	83	72	65	59	70	63	58	68	62	57	66	61	57	54
5	79	66	58	52	77	65	57	51	63	56	51	61	55	50	59	54	50	48
6	73	60	52	45	71	59	51	45	57	50	45	56	49	45	54	49	44	42
7	68	55	46	41	66	54	46	40	52	45	40	51	45	40	50	44	40	38
8	63	50	42	36	62	49	42	36	48	41	36	47	41	36	46	40	36	34
9	59	46	38	33	58	46	38	33	44	38	33	43	37	33	42	37	32	31
10	55	43	35	30	54	42	35	30	41	34	30	40	34	30	39	34	30	28

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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	20.3	21.9	20.7	22.2	22.5	UGR Viewed Endwise	18.5	20.1	18.9	20.4	20.7
	3H	21.7	23.0	22.0	23.4	23.7		19.9	21.3	20.3	21.6	22.0
	4H	22.1	23.4	22.5	23.8	24.2		20.4	21.7	20.8	22.0	22.4
	6H	22.5	23.7	22.9	24.0	24.4		20.7	21.9	21.1	22.3	22.6
	8H	22.5	23.7	23.0	24.1	24.5		20.8	21.9	21.2	22.3	22.7
	12H	22.6	23.7	23.0	24.1	24.5		20.8	21.9	21.2	22.3	22.7

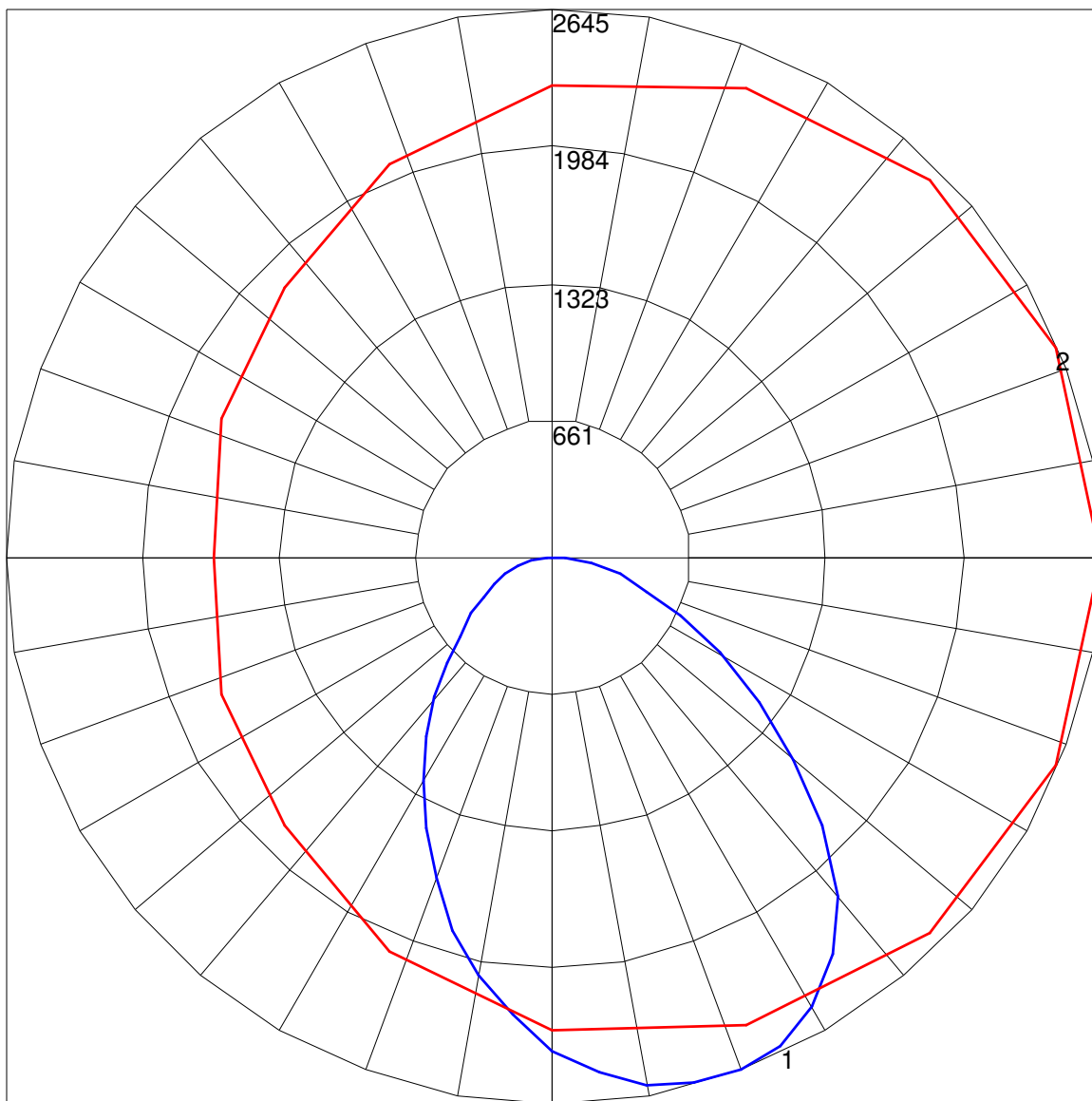
4H	2H	20.7	22.0	21.1	22.4	22.7	19.0	20.3	19.4	20.6	21.0
	3H	22.3	23.4	22.7	23.8	24.2	20.6	21.6	21.0	22.0	22.4
	4H	22.9	23.9	23.3	24.3	24.7	21.1	22.1	21.6	22.5	23.0
	6H	23.4	24.2	23.8	24.6	25.1	21.6	22.4	22.0	22.9	23.3
	8H	23.5	24.3	23.9	24.7	25.2	21.7	22.5	22.2	22.9	23.4
	12H	23.6	24.3	24.0	24.7	25.2	21.8	22.5	22.3	23.0	23.4

8H	4H	23.1	23.9	23.5	24.3	24.8	21.3	22.1	21.8	22.6	23.0
	6H	23.6	24.3	24.1	24.8	25.2	21.9	22.5	22.4	23.0	23.5
	8H	23.8	24.4	24.3	24.9	25.4	22.1	22.7	22.6	23.2	23.7
	12H	23.9	24.4	24.4	24.9	25.5	22.2	22.7	22.7	23.2	23.8

12H	4H	23.1	23.8	23.5	24.2	24.7	21.4	22.1	21.8	22.5	23.0
	6H	23.6	24.2	24.1	24.7	25.2	21.9	22.5	22.4	23.0	23.5
	8H	23.9	24.4	24.4	24.9	25.4	22.1	22.7	22.6	23.1	23.7

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 2645.37 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.)