



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 80-4-L53-840-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18635.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 21-SEP-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO

[LUMINAIRE] 4-32 LED 22" ARRAYS 4' INDUSTRIAL LUMINAIRE

[MORE] WHITE REFLECTOR w/OPEN BOTTOM

[LUMCAT] 80-4-L53-840-DIM-UNV

[LAMPCAT] 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5327
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	156
Total Luminaire Watts	34.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.88 ft
Luminous Height	0.00 ft



LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5779	5639	5624
55	5569	5446	5423
65	5304	5187	2772
75	4265	2369	454
85	1916	838	629

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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	2001.872	2001.872	2001.872	2001.872	2001.872
5	1978.090	1971.296	1965.350	1972.994	1981.488
10	1938.172	1931.377	1961.953	1967.049	1947.514
15	1893.157	1912.692	1891.459	1876.171	1876.171
20	1836.252	1878.719	1818.416	1809.074	1809.074
25	1762.360	1771.703	1741.976	1736.880	1736.880
30	1668.085	1653.646	1642.605	1636.659	1634.961
35	1567.864	1553.425	1540.685	1538.987	1535.589
40	1457.451	1433.670	1426.875	1424.327	1422.628
45	1330.051	1302.873	1297.777	1296.078	1294.379
50	1181.418	1161.884	1155.939	1154.240	1154.240
55	1039.580	1018.347	1016.648	1012.402	1012.402
60	878.208	862.070	860.372	856.974	854.426
65	729.575	715.136	713.437	549.517	381.349
70	557.161	544.421	435.706	295.567	301.512
75	359.267	359.267	199.593	172.414	38.220
80	190.250	123.153	34.823	28.877	28.877
85	54.357	28.877	23.781	17.836	17.836
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	722.63	N.A.	13.60
0-30	1528.13	N.A.	28.70
0-40	2494.98	N.A.	46.80
0-60	4406.77	N.A.	82.70
0-80	5292.71	N.A.	99.30
0-90	5327.38	N.A.	100.00
10-90	5139.53	N.A.	96.50
20-40	1772.35	N.A.	33.30
20-50	2776.00	N.A.	52.10
40-70	2543.5	N.A.	47.70
60-80	885.93	N.A.	16.60
70-80	254.23	N.A.	4.80
80-90	34.67	N.A.	0.70
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	5327.38	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	187.85
10-20	534.77
20-30	805.50
30-40	966.85
40-50	1003.65
50-60	908.15
60-70	631.70
70-80	254.23
80-90	34.67
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	190	190	190	190	186	186	186	186	178	178	178	170	170	170	163	163	163	160
1	175	168	162	156	171	165	159	154	158	153	149	152	148	144	146	143	140	137
2	160	147	137	128	156	144	135	127	139	131	124	134	127	121	129	123	118	115
3	146	130	117	107	142	127	116	106	123	113	104	118	110	103	114	107	101	97
4	134	115	101	91	130	113	100	90	109	98	89	105	96	88	102	94	87	83
5	123	103	89	78	120	101	88	78	98	86	77	95	84	76	92	83	75	72
6	114	93	79	68	111	91	78	68	88	76	68	86	75	67	83	74	66	63
7	105	84	70	60	103	83	70	60	80	68	60	78	67	59	76	66	59	56
8	98	77	63	54	96	76	63	54	73	62	53	71	61	53	70	60	53	50
9	92	70	57	49	89	69	57	48	68	56	48	66	55	48	64	55	48	45
10	86	65	52	44	84	64	52	44	62	51	44	61	51	43	60	50	43	41

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UGR TABLE - CORRECTED

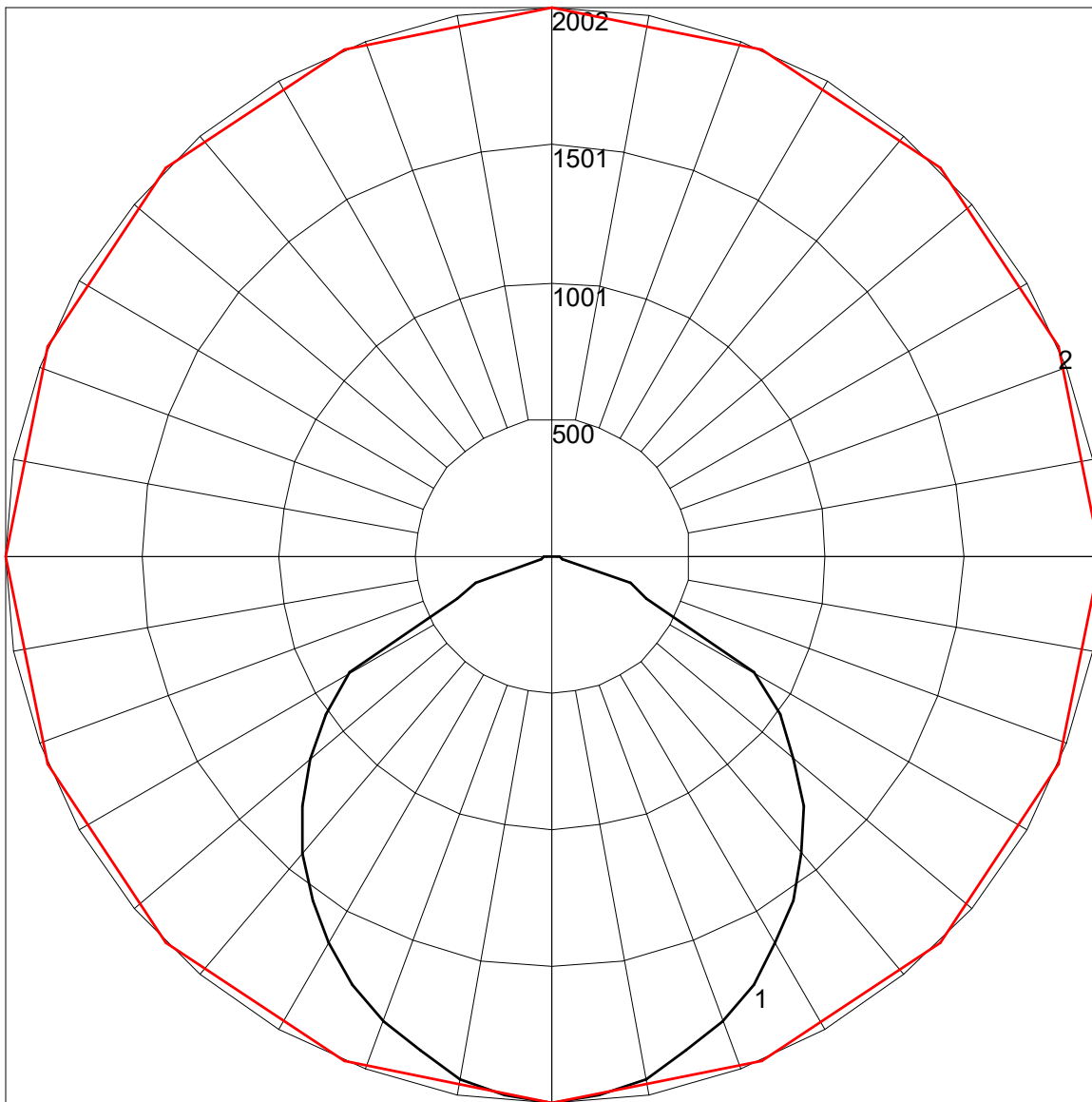
Reflectances

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	16.7	18.3	17.1	18.6	18.9	16.6	18.2	17.0	18.6	18.9
	3H	18.6	20.0	19.0	20.4	20.7	17.3	18.8	17.7	19.1	19.5
	4H	19.2	20.6	19.6	20.9	21.3	17.4	18.7	17.8	19.1	19.5
	6H	19.6	20.8	20.0	21.2	21.6	17.3	18.6	17.8	19.0	19.3
	8H	19.6	20.8	20.1	21.2	21.6	17.3	18.5	17.7	18.9	19.3
	12H	19.7	20.8	20.1	21.2	21.6	17.3	18.4	17.7	18.8	19.2
4H	2H	17.4	18.7	17.8	19.1	19.5	17.3	18.7	17.7	19.0	19.4
	3H	19.4	20.5	19.8	20.9	21.3	18.1	19.3	18.6	19.7	20.1
	4H	20.1	21.1	20.5	21.5	22.0	18.3	19.3	18.7	19.7	20.1
	6H	20.5	21.4	21.0	21.8	22.3	18.2	19.1	18.7	19.6	20.0
	8H	20.6	21.4	21.1	21.9	22.3	18.2	19.1	18.7	19.5	20.0
	12H	20.7	21.4	21.1	21.9	22.3	18.2	18.9	18.7	19.4	19.9
8H	4H	20.2	21.0	20.6	21.4	21.9	18.5	19.3	18.9	19.7	20.2
	6H	20.6	21.2	21.1	21.7	22.2	18.4	19.1	18.9	19.6	20.1
	8H	20.7	21.3	21.2	21.8	22.3	18.4	19.0	18.9	19.5	20.0
	12H	20.7	21.3	21.3	21.8	22.3	18.4	18.9	18.9	19.4	20.0
12H	4H	20.1	20.9	20.6	21.3	21.8	18.4	19.2	18.9	19.7	20.1
	6H	20.6	21.2	21.1	21.6	22.2	18.4	19.0	19.0	19.5	20.0
	8H	20.7	21.2	21.2	21.7	22.3	18.4	18.9	18.9	19.4	20.0

Maximum UGR = 22.3

POLAR GRAPH



Maximum Candela = 2001.872 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)