



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 17-4-L55-840-AF-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 20112.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 03-17-2020

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 4' LED NARROW LOW PROFILE WRAP LED LUMINAIRE

[MORE] WITH FROSTED PRISMATIC ACRYLIC DIFFUSER

[LUMCAT] 17-4-L55-840-AF-DIM-UNV

[LAMPCAT] HLM 80 CRI 4000K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Industrial, Manufacturing, Office, Direct

[_SEARCH_MOUNTING] Pendant, Surface, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6125
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	145
Total Luminaire Watts	42.3
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	0.88 ft
Luminous Height	0.15 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5503	5127	5220
55	4555	4357	4556
65	3565	3536	3814
75	2677	2718	3169
85	1296	1781	2515

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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	2194.402	2194.402	2194.402	2194.402	2194.402
5	2219.375	2191.145	2173.772	2168.343	2165.085
10	2184.630	2156.399	2140.112	2136.855	2127.082
15	2133.597	2108.624	2092.337	2089.079	2082.564
20	2056.505	2031.532	2016.331	2026.103	2014.159
25	1956.612	1939.239	1922.952	1939.239	1928.381
30	1833.916	1823.058	1810.029	1827.401	1826.316
35	1684.076	1688.419	1671.046	1702.534	1707.963
40	1504.919	1512.519	1509.262	1551.608	1564.638
45	1312.732	1323.590	1349.649	1380.052	1401.768
50	1102.087	1115.117	1170.492	1194.380	1222.611
55	894.699	910.986	980.477	1020.652	1053.226
60	701.427	725.314	801.320	842.581	883.841
65	528.785	562.444	636.279	679.711	712.285
70	382.202	416.947	485.353	536.385	560.273
75	256.249	285.565	351.799	413.690	433.234
80	147.669	178.071	237.790	298.595	317.054
85	52.118	81.435	133.553	203.045	207.388
90	0.000	24.973	73.834	128.124	141.154
95	0.000	24.973	71.663	117.266	133.553
100	0.000	26.059	70.577	111.837	124.867
105	0.000	24.973	69.491	104.237	116.181
110	0.000	28.231	67.320	99.894	109.666
115	0.000	26.059	64.062	94.465	104.237
120	0.000	29.317	60.805	86.864	96.636
125	0.000	26.059	55.376	79.263	87.950
130	0.000	24.973	48.861	69.491	78.178
135	0.000	23.888	45.604	61.891	68.405
140	0.000	22.802	40.175	55.376	61.891
145	0.000	0.000	34.746	49.947	54.290
150	0.000	0.000	31.488	40.175	46.689
155	0.000	0.000	28.231	36.917	34.746
160	0.000	0.000	24.973	30.402	30.402
165	0.000	0.000	0.000	23.888	28.231
170	0.000	0.000	0.000	0.000	23.888
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	799.19	N.A.	13.00
0-30	1690.53	N.A.	27.60
0-40	2744.37	N.A.	44.80
0-60	4656.27	N.A.	76.00
0-80	5652.12	N.A.	92.30
0-90	5811.51	N.A.	94.90
10-90	5604.35	N.A.	91.50
20-40	1945.18	N.A.	31.80
20-50	2986.21	N.A.	48.80
40-70	2535.02	N.A.	41.40
60-80	995.85	N.A.	16.30
70-80	372.72	N.A.	6.10
80-90	159.39	N.A.	2.60
90-110	145.48	N.A.	2.40
90-120	204.39	N.A.	3.30
90-130	250.28	N.A.	4.10
90-150	300.94	N.A.	4.90
90-180	313.65	N.A.	5.10
110-180	168.17	N.A.	2.70
0-180	6125.16	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	207.16
10-20	592.03
20-30	891.34
30-40	1053.85
40-50	1041.03
50-60	870.87
60-70	623.13
70-80	372.72
80-90	159.39
90-100	77.05
100-110	68.43
110-120	58.91
120-130	45.89
130-140	32.16
140-150	18.51
150-160	9.63
160-170	2.98
170-180	0.11

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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	114	114	114	114	108	108	108	103	103	103	97	97	97	95
1	108	103	99	95	104	100	96	93	95	92	89	90	88	85	86	84	82	79
2	98	90	83	78	95	88	81	76	83	78	74	79	75	71	75	72	69	67
3	90	79	71	65	87	77	70	64	74	67	62	70	65	60	67	63	59	56
4	82	70	62	55	79	69	61	55	66	59	53	63	57	52	60	55	51	48
5	76	63	54	48	73	62	53	47	59	52	46	56	50	45	54	49	44	42
6	70	57	48	42	68	56	47	41	53	46	41	51	45	40	49	44	39	37
7	65	52	43	37	63	51	42	37	49	41	36	47	40	35	45	39	35	33
8	60	47	39	33	59	46	38	33	45	37	32	43	37	32	41	36	31	29
9	57	43	35	30	55	43	35	30	41	34	29	40	33	29	38	33	28	27
10	53	40	32	27	51	39	32	27	38	31	27	37	31	26	36	30	26	24

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UGR TABLE - CORRECTED

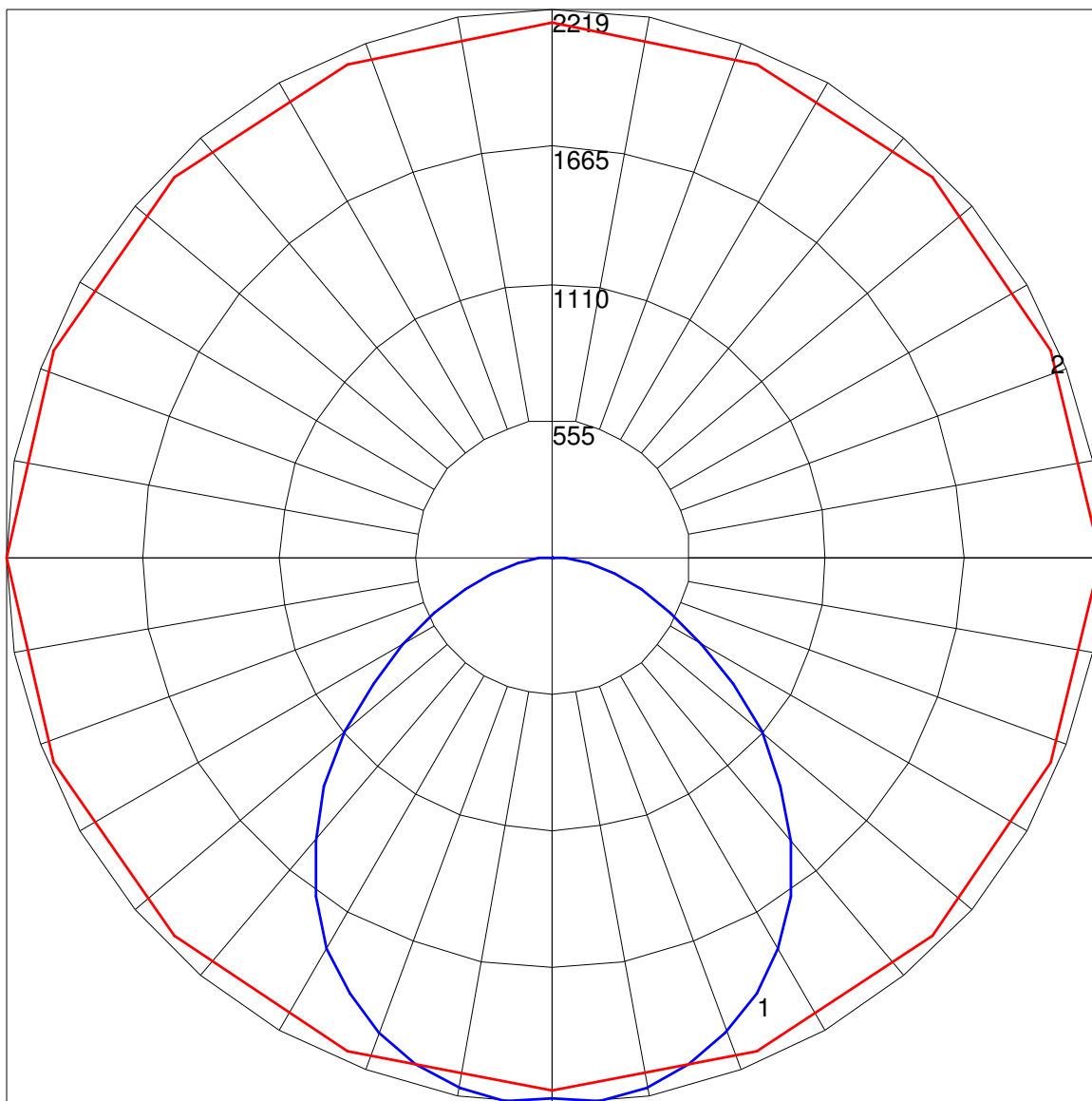
Reflectances

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					UGR Viewed Endwise				
X=2H	Y=2H	15.8	17.3	16.2	17.7	18.1	17.2	18.7	17.6	19.1	19.5
	3H	17.1	18.4	17.5	18.9	19.3	19.0	20.3	19.4	20.7	21.2
	4H	17.5	18.8	18.0	19.2	19.7	19.7	21.0	20.2	21.5	22.0
	6H	17.7	18.9	18.2	19.4	19.9	20.5	21.6	20.9	22.1	22.6
	8H	17.8	18.9	18.3	19.4	19.9	20.8	21.9	21.3	22.4	22.9
	12H	17.8	18.9	18.3	19.4	19.9	21.1	22.1	21.6	22.6	23.2
4H	2H	16.5	17.7	16.9	18.2	18.7	17.6	18.8	18.1	19.3	19.8
	3H	18.0	19.0	18.5	19.5	20.1	19.6	20.7	20.1	21.2	21.7
	4H	18.5	19.4	19.0	20.0	20.5	20.5	21.5	21.0	22.0	22.5
	6H	18.8	19.7	19.4	20.2	20.8	21.4	22.2	21.9	22.8	23.3
	8H	18.9	19.7	19.5	20.2	20.8	21.8	22.6	22.3	23.1	23.7
	12H	19.0	19.7	19.5	20.2	20.8	22.2	22.9	22.7	23.5	24.0
8H	4H	18.9	19.7	19.4	20.2	20.8	20.7	21.5	21.2	22.0	22.6
	6H	19.3	20.0	19.9	20.6	21.2	21.7	22.4	22.3	22.9	23.5
	8H	19.5	20.1	20.1	20.7	21.3	22.2	22.8	22.8	23.4	24.0
	12H	19.6	20.1	20.1	20.7	21.3	22.7	23.3	23.3	23.8	24.5
12H	4H	19.0	19.7	19.5	20.2	20.8	20.7	21.4	21.3	22.0	22.6
	6H	19.5	20.1	20.1	20.6	21.3	21.7	22.3	22.3	22.9	23.5
	8H	19.7	20.2	20.2	20.8	21.4	22.3	22.8	22.9	23.4	24.1

Maximum UGR = 24.5

POLAR GRAPH



Maximum Candela = 2219.375 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)