



IES INDOOR REPORT

PHOTOMETRIC FILENAME : LPT-22-L27-935-SAF12095-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN FROM BALLABS TEST NO. 18557.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 31 MARCH 2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4-56 LED 22"ARRAYS 2x4'RECESSED GRID LUMINAIRE

[MORE] WHITE INTERNAL REFLECTORS w/.095"PAT12 ACRYLIC LENS

[LUMCAT] LPT-22-L27-935-SAF12095-DIM-UNV

[LAMPCAT] HLM 90 CRI 3500K CCT

[_SEARCH_SOURCETYPE]LED

[_SEARCH_APPLICATION] INDOOR, COMMERCIAL, OFFICE

[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2236
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	102
Total Luminaire Watts	22
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.26
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.77 ft
Luminous Width (90-270)	1.77 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2635	2603	2571
55	2034	1923	1838
65	1590	1449	1458
75	1317	1237	1403
85	1482	1547	1826

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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	1009.946	1009.946	1009.946	1009.946	1009.946
5	1010.489	1009.946	1009.946	1009.946	1009.946
10	989.313	988.227	987.684	988.227	987.141
15	957.820	956.734	957.820	957.820	958.906
20	922.526	922.526	923.612	924.698	926.327
25	855.197	854.111	855.197	857.369	859.540
30	786.781	786.781	786.781	787.867	789.496
35	721.080	720.537	720.537	720.537	722.709
40	624.972	622.257	622.257	620.628	622.257
45	540.267	537.552	533.751	527.236	527.236
50	434.386	430.585	421.354	409.408	407.779
55	338.278	331.762	319.816	308.414	305.699
60	258.459	249.772	239.998	232.396	231.310
65	194.931	186.243	177.555	177.555	178.641
70	140.632	135.203	127.058	135.203	138.460
75	98.823	97.737	92.850	101.538	105.339
80	69.502	68.416	68.959	74.389	79.818
85	37.466	36.923	39.095	45.610	46.153
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	366.11	N.A.	16.40
0-30	760.76	N.A.	34.00
0-40	1206.94	N.A.	54.00
0-60	1904.65	N.A.	85.20
0-80	2194.15	N.A.	98.10
0-90	2235.89	N.A.	100.00
10-90	2140.27	N.A.	95.70
20-40	840.83	N.A.	37.60
20-50	1247.44	N.A.	55.80
40-70	880.83	N.A.	39.40
60-80	289.49	N.A.	12.90
70-80	106.38	N.A.	4.80
80-90	41.75	N.A.	1.90
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	2235.89	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	95.63
10-20	270.48
20-30	394.65
30-40	446.18
40-50	406.61
50-60	291.10
60-70	183.11
70-80	106.38
80-90	41.75
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	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	93	83	76	70	90	81	75	69	79	73	68	76	71	67	73	69	65	63
4	86	74	66	60	83	73	66	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	41	53	46	41	52	46	41	51	45	41	39
8	64	51	43	37	62	50	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	58	46	39	34	45	38	34	44	38	34	43	38	33	32
10	56	44	36	31	55	43	36	31	42	35	31	41	35	31	40	35	31	29

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UGR TABLE - CORRECTED

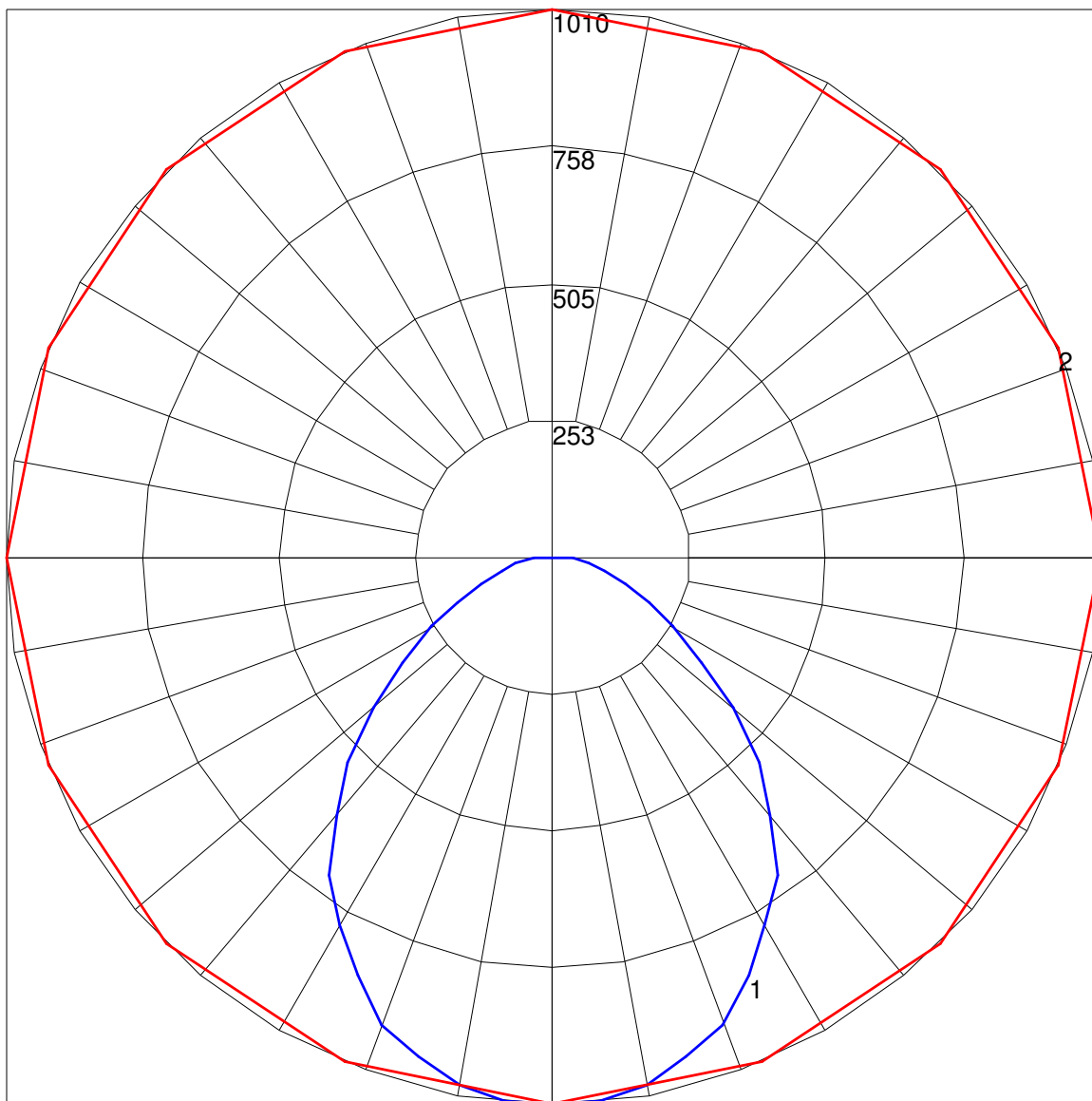
Reflectances

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	13.7	15.2	14.0	15.5	15.8	13.1	14.6	13.5	15.0	15.3
	3H	15.0	16.4	15.4	16.7	17.1	14.6	16.0	15.0	16.3	16.7
	4H	15.6	16.9	16.0	17.2	17.6	15.3	16.6	15.7	16.9	17.3
	6H	16.1	17.3	16.5	17.6	18.0	16.0	17.1	16.4	17.5	17.9
	8H	16.3	17.4	16.7	17.8	18.2	16.2	17.4	16.7	17.8	18.2
	12H	16.5	17.5	16.9	17.9	18.4	16.5	17.6	17.0	18.0	18.4
4H	2H	14.1	15.3	14.5	15.7	16.1	13.6	14.9	14.0	15.2	15.6
	3H	15.6	16.7	16.0	17.1	17.5	15.3	16.4	15.7	16.8	17.2
	4H	16.3	17.3	16.8	17.7	18.1	16.1	17.1	16.6	17.5	17.9
	6H	17.0	17.8	17.4	18.3	18.7	17.0	17.8	17.4	18.3	18.7
	8H	17.3	18.1	17.7	18.5	19.0	17.4	18.2	17.8	18.6	19.1
	12H	17.5	18.2	18.0	18.7	19.2	17.7	18.4	18.2	18.9	19.4
8H	4H	16.6	17.4	17.0	17.8	18.3	16.4	17.2	16.9	17.6	18.1
	6H	17.4	18.1	17.9	18.6	19.0	17.4	18.1	17.9	18.6	19.0
	8H	17.8	18.4	18.3	18.9	19.4	17.9	18.5	18.4	19.0	19.5
	12H	18.2	18.7	18.7	19.2	19.7	18.5	19.0	19.0	19.5	20.0
12H	4H	16.6	17.3	17.1	17.8	18.3	16.4	17.1	16.9	17.6	18.1
	6H	17.5	18.1	18.0	18.6	19.1	17.5	18.1	18.0	18.6	19.1
	8H	18.0	18.5	18.5	19.0	19.5	18.1	18.6	18.6	19.1	19.7

Maximum UGR = 20.0

POLAR GRAPH



Maximum Candela = 1010.489 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.)