H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L61-830-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L61-830-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	6193
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	123
Total Luminaire Watts	50.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5536	5455	5378
55	4975	5020	5159
65	4355	4749	5333
75	3394	4782	6181
85	1766	4451	5996

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2454.435	2454.435	2454.435	2454.435	2454.435
5	2454.435	2438.600	2428.420	2429.551	2427.289
10	2402.405	2389.964	2379.784	2375.260	2371.866
15	2317.575	2308.526	2297.215	2288.167	2285.905
20	2221.433	2206.729	2179.583	2173.928	2168.273
25	2081.180	2075.524	2043.854	2028.019	2017.840
30	1921.698	1912.649	1891.159	1866.275	1849.309
35	1741.857	1744.119	1716.973	1692.090	1681.910
40	1557.492	1563.147	1536.001	1519.035	1512.249
45	1381.044	1377.651	1360.684	1355.029	1341.456
50	1193.285	1196.678	1180.843	1194.416	1183.105
55	1006.658	1016.837	1015.706	1043.983	1043.983
60	823.423	830.210	859.618	898.074	915.040
65	649.238	666.204	708.054	763.476	795.146
70	472.790	502.198	572.324	643.582	682.039
75	309.915	361.944	436.595	519.164	564.407
80	164.006	222.822	306.522	387.959	429.809
85	54.292	90.486	136.860	167.399	184.365
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	878.36	N.A.	14.20
0-30	1821.22	N.A.	29.40
0-40	2895.1	N.A.	46.70
0-60	4866.95	N.A.	78.60
0-80	6040.51	N.A.	97.50
0-90	6193.1	N.A.	100.00
10-90	5962.32	N.A.	96.30
20-40	2016.74	N.A.	32.60
20-50	3070.06	N.A.	49.60
40-70	2682.13	N.A.	43.30
60-80	1173.56	N.A.	18.90
70-80	463.29	N.A.	7.50
80-90	152.59	N.A.	2.50
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	6193.1	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	230.78
10-20	647.58
20-30	942.86
30-40	1073.88
40-50	1053.32
50-60	918.53
60-70	710.27
70-80	463.29
80-90	152.59
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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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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	17.3	18.9	17.7	19.2	19.5	17.7	19.3	18.0	19.6	19.9
	3H	18.9	20.4	19.3	20.7	21.1	19.9	21.4	20.3	21.7	22.1
	4H	19.5	20.9	19.9	21.2	21.6	21.0	22.4	21.4	22.7	23.1
	6H	19.9	21.1	20.3	21.5	21.9	22.0	23.3	22.4	23.7	24.1
	8H	20.0	21.2	20.4	21.6	22.0	22.4	23.6	22.8	24.0	24.4
	12H	20.0	21.2	20.4	21.6	22.0	22.7	23.8	23.1	24.2	24.7
4H	2H	18.0	19.3	18.4	19.7	20.1	18.3	19.7	18.7	20.0	20.4
	3H	19.8	21.0	20.3	21.4	21.8	20.8	21.9	21.2	22.3	22.7
	4H	20.6	21.6	21.0	22.0	22.5	22.0	23.1	22.5	23.5	23.9
	6H	21.1	22.0	21.5	22.5	22.9	23.2	24.2	23.7	24.6	25.1
	8H	21.2	22.1	21.7	22.5	23.0	23.7	24.6	24.2	25.0	25.5
	12H	21.3	22.1	21.8	22.6	23.0	24.0	24.8	24.5	25.3	25.7
8H	4H	21.1	22.0	21.5	22.4	22.9	22.3	23.2	22.8	23.7	24.1
	6H	21.8	22.5	22.3	23.0	23.5	23.7	24.5	24.2	24.9	25.4
	8H	22.0	22.6	22.5	23.1	23.6	24.3	24.9	24.8	25.5	25.9
	12H	22.1	22.7	22.6	23.2	23.8	24.7	25.3	25.2	25.8	26.3
12H	4H	21.2	22.0	21.7	22.5	22.9	22.4	23.2	22.8	23.6	24.1
	6H	21.9	22.6	22.5	23.1	23.6	23.8	24.5	24.3	24.9	25.4
	8H	22.2	22.8	22.7	23.3	23.9	24.4	25.0	24.9	25.5	26.0

Maximum UGR = 26.3

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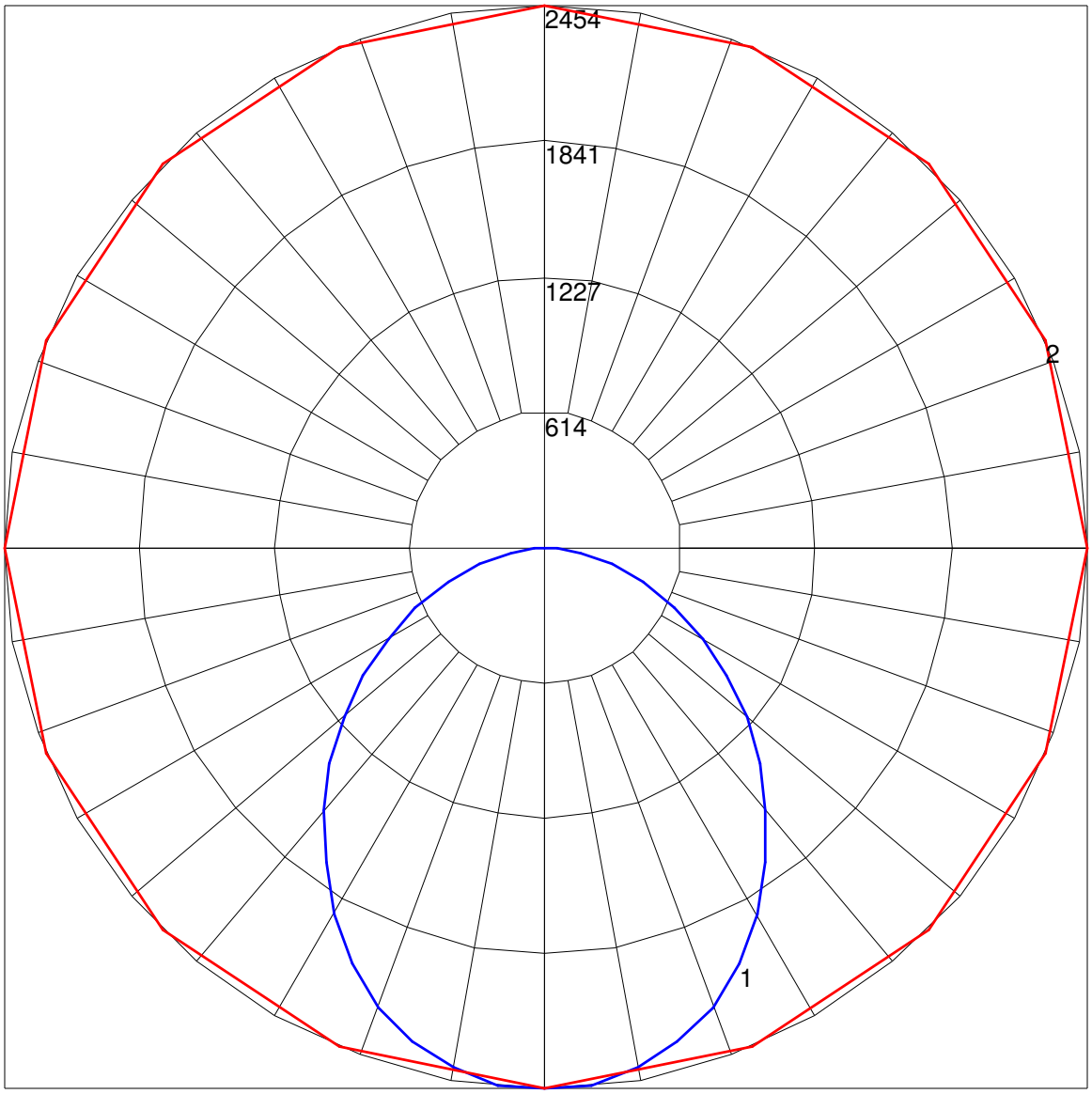
POLAR GRAPH



Maximum Candela = 2454.435 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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