H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-840-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-L26-840-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3102
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	144
Total Luminaire Watts	21.5
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	2773	2732	2694
55	2492	2514	2584
65	2181	2379	2672
75	1700	2395	3096
85	885	2230	3004

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1229.497	1229.497	1229.497	1229.497	1229.497
5	1229.497	1221.565	1216.465	1217.032	1215.899
10	1203.434	1197.201	1192.102	1189.836	1188.136
15	1160.940	1156.407	1150.741	1146.208	1145.075
20	1112.780	1105.414	1091.816	1088.983	1086.150
25	1042.523	1039.690	1023.825	1015.893	1010.794
30	962.634	958.101	947.336	934.871	926.372
35	872.546	873.679	860.081	847.616	842.517
40	780.192	783.025	769.427	760.928	757.529
45	691.804	690.105	681.606	678.773	671.974
50	597.751	599.451	591.518	598.317	592.651
55	504.264	509.363	508.796	522.961	522.961
60	412.476	415.876	430.607	449.871	458.370
65	325.222	333.721	354.684	382.447	398.312
70	236.834	251.565	286.694	322.389	341.653
75	155.245	181.308	218.703	260.064	282.728
80	82.155	111.618	153.545	194.340	215.304
85	27.196	45.327	68.557	83.855	92.354
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	439.99	N.A.	14.20
0-30	912.30	N.A.	29.40
0-40	1450.24	N.A.	46.70
0-60	2438.00	N.A.	78.60
0-80	3025.86	N.A.	97.50
0-90	3102.3	N.A.	100.00
10-90	2986.7	N.A.	96.30
20-40	1010.24	N.A.	32.60
20-50	1537.88	N.A.	49.60
40-70	1343.55	N.A.	43.30
60-80	587.87	N.A.	18.90
70-80	232.07	N.A.	7.50
80-90	76.44	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	3102.3	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	115.60
10-20	324.39
20-30	472.31
30-40	537.94
40-50	527.64
50-60	460.12
60-70	355.79
70-80	232.07
80-90	76.44
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	14.9	16.5	15.3	16.8	17.1	15.3	16.9	15.6	17.2	17.5
	3H	16.5	18.0	16.9	18.3	18.7	17.5	19.0	17.9	19.3	19.7
	4H	17.1	18.5	17.5	18.8	19.2	18.6	20.0	19.0	20.3	20.7
	6H	17.4	18.7	17.9	19.1	19.5	19.6	20.9	20.0	21.3	21.7
	8H	17.6	18.8	18.0	19.2	19.6	20.0	21.2	20.4	21.6	22.0
	12H	17.6	18.8	18.0	19.2	19.6	20.3	21.4	20.7	21.8	22.3
4H	2H	15.6	16.9	16.0	17.3	17.7	15.9	17.3	16.3	17.6	18.0
	3H	17.4	18.6	17.9	19.0	19.4	18.4	19.5	18.8	19.9	20.3
	4H	18.2	19.2	18.6	19.6	20.1	19.6	20.7	20.1	21.1	21.5
	6H	18.7	19.6	19.1	20.1	20.5	20.8	21.8	21.3	22.2	22.7
	8H	18.8	19.7	19.3	20.1	20.6	21.3	22.2	21.7	22.6	23.1
	12H	18.9	19.7	19.4	20.2	20.6	21.6	22.4	22.1	22.9	23.3
8H	4H	18.7	19.6	19.1	20.0	20.5	19.9	20.8	20.4	21.3	21.7
	6H	19.4	20.1	19.9	20.6	21.1	21.3	22.1	21.8	22.5	23.0
	8H	19.6	20.2	20.1	20.7	21.2	21.9	22.5	22.4	23.1	23.5
	12H	19.7	20.3	20.2	20.8	21.4	22.3	22.9	22.8	23.4	23.9
12H	4H	18.8	19.6	19.3	20.1	20.5	20.0	20.8	20.4	21.2	21.7
	6H	19.5	20.2	20.1	20.7	21.2	21.4	22.1	21.9	22.5	23.0
	8H	19.8	20.4	20.3	20.9	21.5	22.0	22.6	22.5	23.1	23.6

Maximum UGR = 23.9

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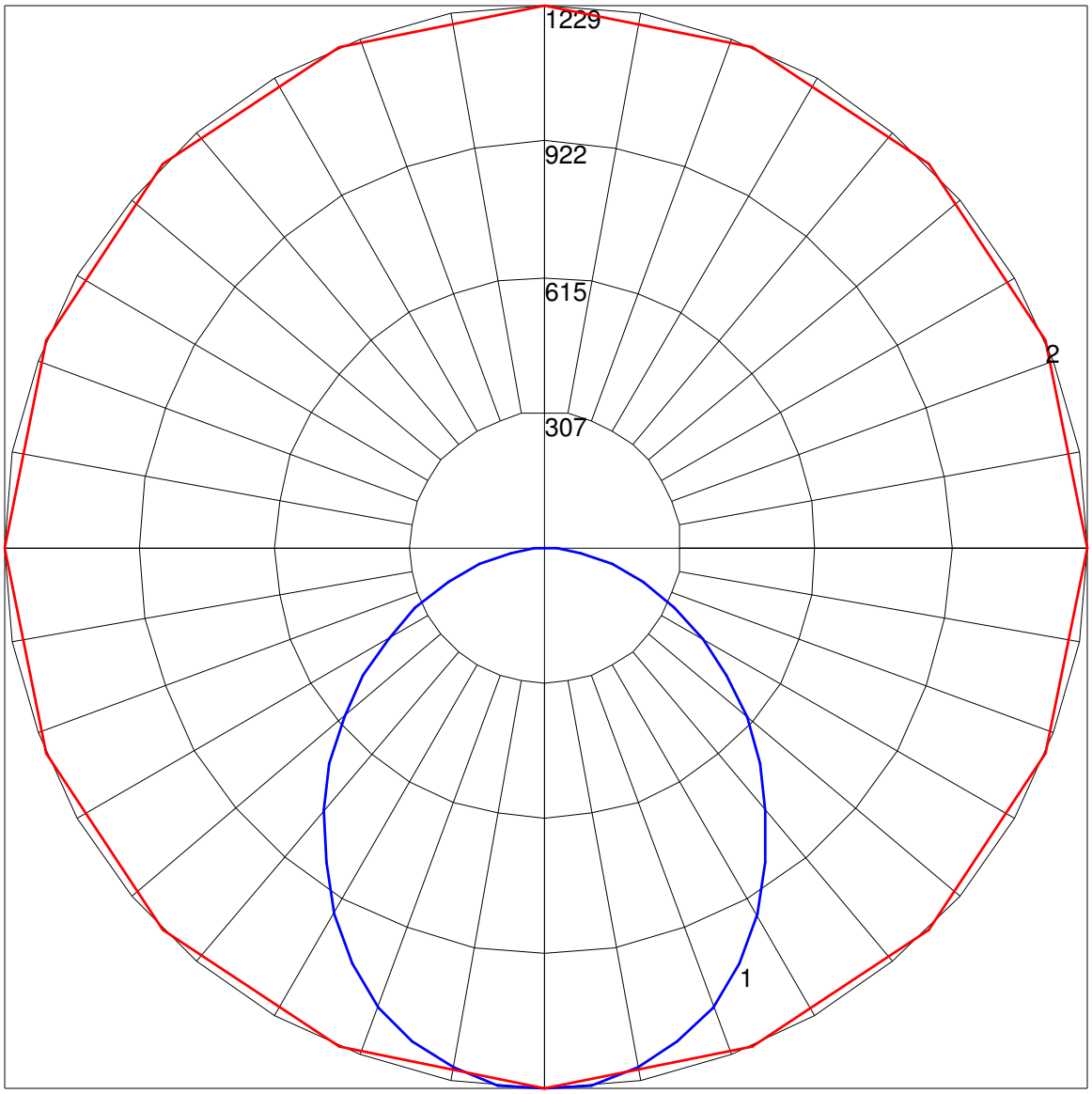
POLAR GRAPH



Maximum Candela = 1229.497 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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