H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-930-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L49-930-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4341
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	36.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3879	3759	3731
55	3491	3511	3589
65	3050	3375	3697
75	2462	3408	4252
85	1141	3679	4444

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1690.648	1690.648	1690.648	1690.648	1690.648
5	1699.048	1680.382	1671.049	1647.717	1669.183
10	1666.383	1646.317	1634.185	1631.851	1635.118
15	1611.319	1591.720	1580.987	1577.254	1574.454
20	1538.056	1518.924	1501.191	1492.325	1493.725
25	1446.594	1430.728	1423.262	1399.930	1391.063
30	1339.733	1323.400	1306.601	1294.002	1287.002
35	1228.672	1213.739	1193.673	1176.408	1166.608
40	1101.278	1089.145	1068.146	1054.614	1046.681
45	978.084	964.085	947.752	940.286	940.753
50	847.891	843.691	825.958	829.225	833.425
55	713.964	713.964	718.164	729.363	734.030
60	589.370	592.170	611.303	630.435	642.101
65	459.644	476.443	508.641	541.773	557.172
70	335.050	363.048	409.246	453.577	471.776
75	227.255	256.187	314.518	371.915	392.447
80	118.994	168.458	229.122	289.785	308.918
85	35.465	79.796	114.328	129.727	138.126
90	0.000	1.400	1.867	3.267	1.867

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	604.93	N.A.	13.90
0-30	1256.91	N.A.	29.00
0-40	2003.95	N.A.	46.20
0-60	3386.71	N.A.	78.00
0-80	4223.63	N.A.	97.30
0-90	4341.38	N.A.	100.00
10-90	4182.73	N.A.	96.30
20-40	1399.02	N.A.	32.20
20-50	2135.09	N.A.	49.20
40-70	1887.3	N.A.	43.50
60-80	836.93	N.A.	19.30
70-80	332.38	N.A.	7.70
80-90	117.74	N.A.	2.70
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	4341.38	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	158.65
10-20	446.28
20-30	651.98
30-40	747.04
40-50	736.07
50-60	646.68
60-70	504.54
70-80	332.38
80-90	117.74
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	108	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	83	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	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	16.1	17.7	16.5	18.1	18.4	16.4	18.0	16.8	18.4	18.7
	3H	17.8	19.2	18.1	19.6	19.9	18.7	20.2	19.1	20.5	20.8
	4H	18.4	19.7	18.8	20.1	20.5	19.8	21.2	20.2	21.5	21.9
	6H	18.7	20.0	19.2	20.4	20.8	20.8	22.1	21.2	22.5	22.9
	8H	18.8	20.1	19.3	20.5	20.9	21.2	22.5	21.6	22.9	23.3
	12H	18.9	20.1	19.3	20.5	20.9	21.5	22.7	21.9	23.1	23.5
4H	2H	16.8	18.2	17.2	18.6	18.9	17.1	18.4	17.5	18.8	19.2
	3H	18.7	19.9	19.1	20.3	20.7	19.6	20.7	20.0	21.1	21.5
	4H	19.5	20.5	19.9	20.9	21.4	20.8	21.9	21.3	22.3	22.7
	6H	20.0	20.9	20.5	21.4	21.8	22.1	23.0	22.5	23.5	23.9
	8H	20.2	21.0	20.6	21.5	21.9	22.6	23.4	23.0	23.9	24.4
	12H	20.2	21.0	20.7	21.5	22.0	22.9	23.7	23.4	24.2	24.6
8H	4H	20.0	20.9	20.4	21.3	21.8	21.2	22.0	21.6	22.5	22.9
	6H	20.7	21.4	21.2	21.9	22.4	22.6	23.4	23.1	23.8	24.3
	8H	21.0	21.6	21.5	22.1	22.6	23.2	23.9	23.7	24.4	24.9
	12H	21.1	21.7	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
12H	4H	20.1	20.9	20.6	21.4	21.8	21.2	22.0	21.7	22.5	22.9
	6H	20.9	21.6	21.4	22.0	22.6	22.7	23.4	23.2	23.8	24.4
	8H	21.2	21.8	21.8	22.3	22.9	23.4	23.9	23.9	24.4	25.0

Maximum UGR = 25.3

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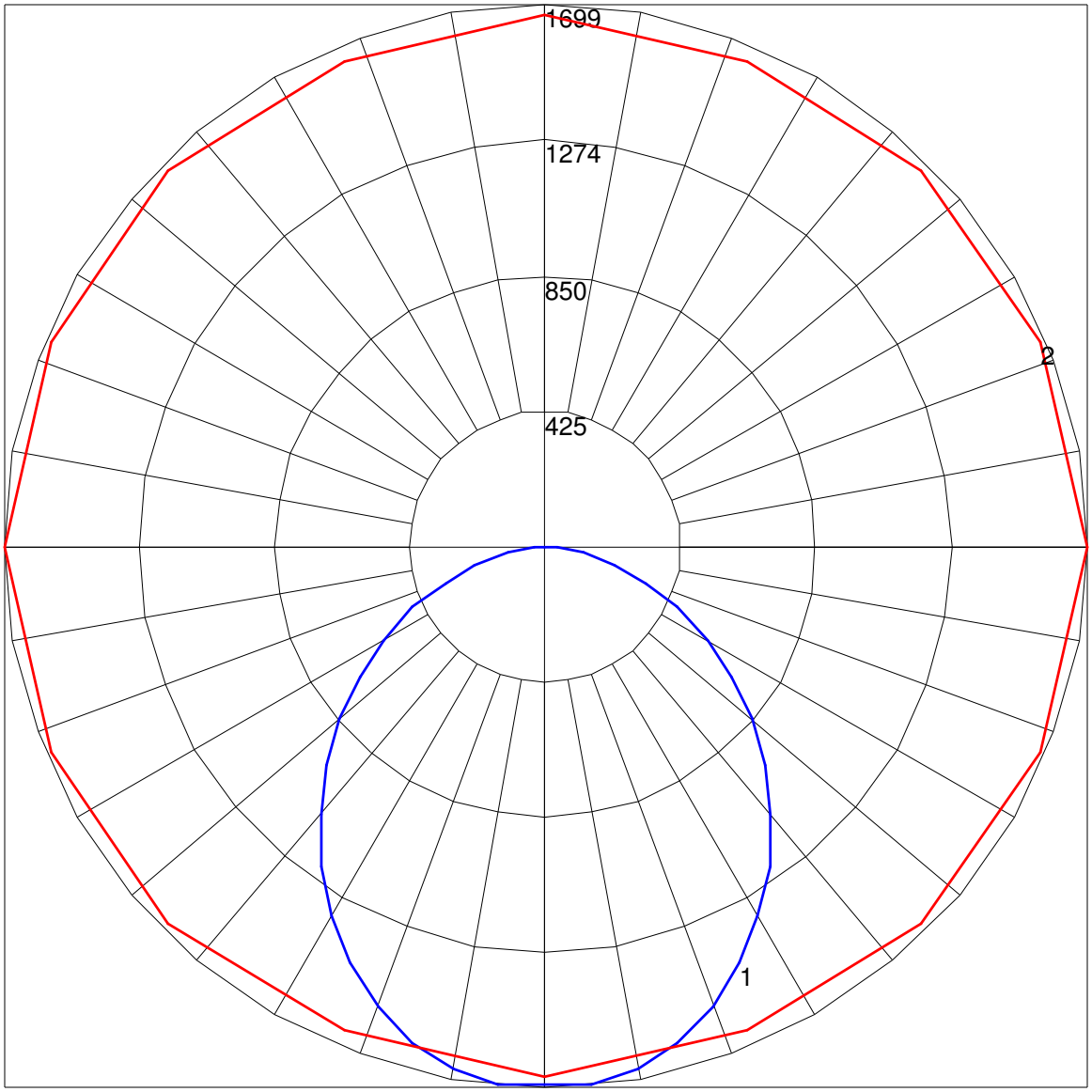
POLAR GRAPH



Maximum Candela = 1699.048 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.)

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