H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-850-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-L49-850-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	5544
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
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	4954	4800	4765
55	4458	4484	4583
65	3895	4310	4722
75	3145	4352	5430
85	1457	4698	5676

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2159.142	2159.142	2159.142	2159.142	2159.142
5	2169.869	2146.031	2134.112	2104.314	2131.728
10	2128.152	2102.526	2087.031	2084.052	2088.223
15	2057.830	2032.800	2019.093	2014.325	2010.749
20	1964.265	1939.831	1917.184	1905.861	1907.649
25	1847.458	1827.195	1817.660	1787.862	1776.539
30	1710.984	1690.126	1668.672	1652.581	1643.641
35	1569.147	1550.077	1524.451	1502.400	1489.885
40	1406.452	1390.957	1364.139	1346.856	1336.725
45	1249.120	1231.241	1210.383	1200.848	1201.444
50	1082.849	1077.485	1054.839	1059.010	1064.374
55	911.810	911.810	917.173	931.476	937.436
60	752.690	756.266	780.700	805.134	820.033
65	587.015	608.469	649.590	691.903	711.569
70	427.895	463.652	522.652	579.267	602.510
75	290.230	327.179	401.673	474.975	501.197
80	151.968	215.139	292.613	370.088	394.522
85	45.293	101.908	146.009	165.675	176.402
90	0.000	1.788	2.384	4.172	2.384

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	772.57	N.A.	13.90
0-30	1605.21	N.A.	29.00
0-40	2559.27	N.A.	46.20
0-60	4325.19	N.A.	78.00
0-80	5394.04	N.A.	97.30
0-90	5544.41	N.A.	100.00
10-90	5341.8	N.A.	96.30
20-40	1786.7	N.A.	32.20
20-50	2726.74	N.A.	49.20
40-70	2410.28	N.A.	43.50
60-80	1068.85	N.A.	19.30
70-80	424.49	N.A.	7.70
80-90	150.37	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	5544.41	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	202.62
10-20	569.95
20-30	832.65
30-40	954.05
40-50	940.04
50-60	825.88
60-70	644.36
70-80	424.49
80-90	150.37
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	17.0	18.6	17.4	19.0	19.3	17.3	18.9	17.7	19.3	19.6
	3H	18.7	20.1	19.0	20.5	20.8	19.6	21.1	20.0	21.4	21.7
	4H	19.3	20.6	19.7	21.0	21.4	20.7	22.1	21.1	22.4	22.8
	6H	19.6	20.9	20.1	21.3	21.7	21.7	23.0	22.1	23.4	23.8
	8H	19.7	21.0	20.2	21.4	21.8	22.1	23.4	22.5	23.8	24.2
	12H	19.8	21.0	20.2	21.4	21.8	22.4	23.6	22.8	24.0	24.4
4H	2H	17.7	19.1	18.1	19.5	19.8	18.0	19.3	18.4	19.7	20.1
	3H	19.6	20.8	20.0	21.2	21.6	20.5	21.6	20.9	22.0	22.4
	4H	20.4	21.4	20.8	21.8	22.3	21.7	22.8	22.2	23.2	23.6
	6H	20.9	21.8	21.4	22.3	22.7	23.0	23.9	23.4	24.4	24.8
	8H	21.1	21.9	21.5	22.4	22.8	23.5	24.3	23.9	24.8	25.3
	12H	21.1	21.9	21.6	22.4	22.9	23.8	24.6	24.3	25.1	25.5
8H	4H	20.9	21.8	21.3	22.2	22.7	22.1	22.9	22.5	23.4	23.8
	6H	21.6	22.3	22.1	22.8	23.3	23.5	24.3	24.0	24.7	25.2
	8H	21.9	22.5	22.4	23.0	23.5	24.1	24.8	24.6	25.3	25.8
	12H	22.0	22.6	22.5	23.1	23.7	24.6	25.2	25.1	25.7	26.2
12H	4H	21.0	21.8	21.5	22.3	22.7	22.1	22.9	22.6	23.4	23.8
	6H	21.8	22.5	22.3	22.9	23.5	23.6	24.3	24.1	24.7	25.3
	8H	22.1	22.7	22.7	23.2	23.8	24.3	24.8	24.8	25.3	25.9

Maximum UGR = 26.2

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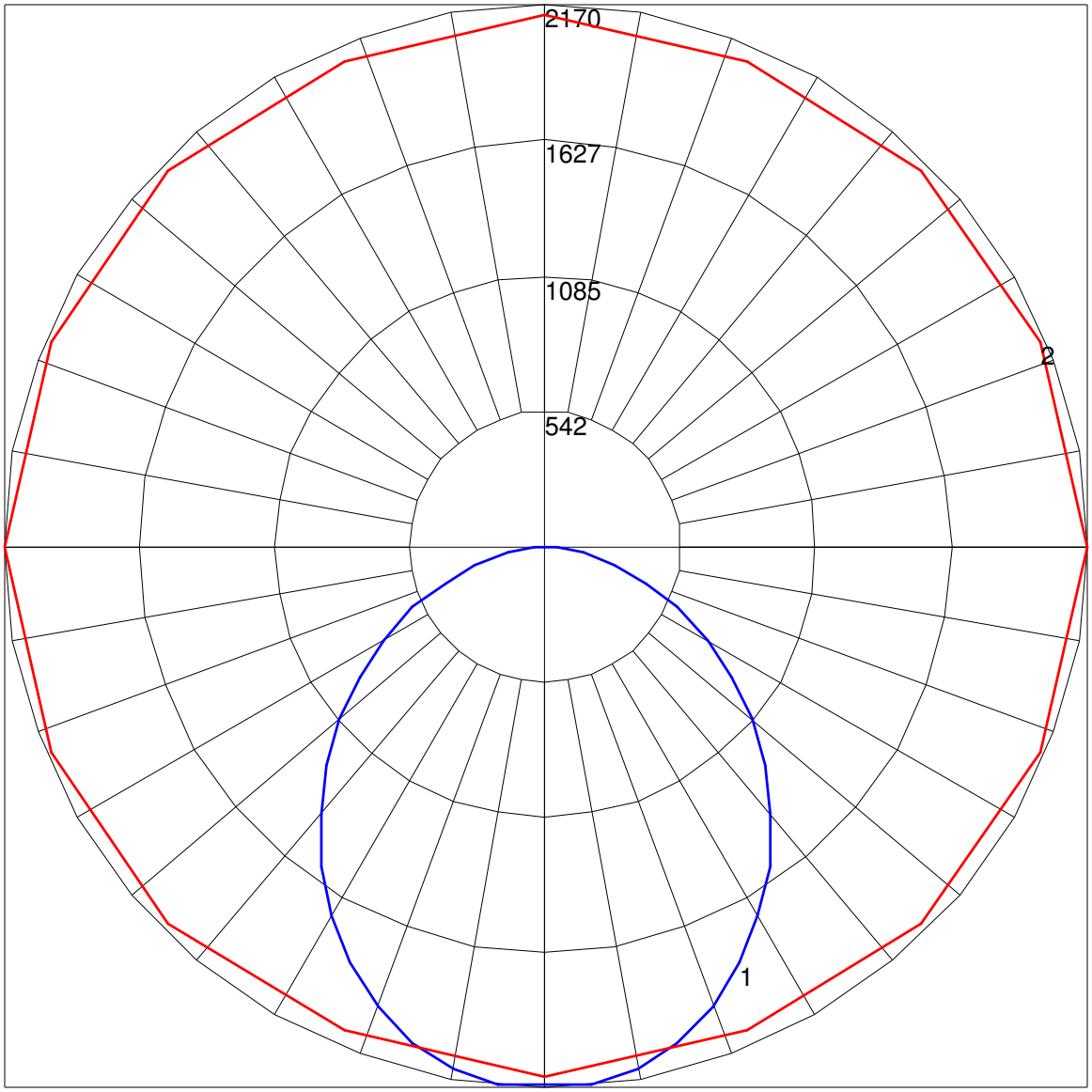
POLAR GRAPH



Maximum Candela = 2169.869 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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