H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-850-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L110-850-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	11751
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
Total Luminaire Watts	83.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	5039	5317	5589
55	4518	4944	5340
65	3970	4704	5345
75	3073	4719	5841
85	1855	6192	7094

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	4495.737	4495.737	4495.737	4495.737	4495.737
5	4427.088	4420.986	4420.986	4405.731	4398.103
10	4413.358	4413.358	4420.986	4427.088	4427.088
15	4297.418	4303.520	4311.148	4321.826	4329.454
20	4013.669	4028.925	4047.231	4071.640	4079.267
25	3786.365	3800.095	3836.708	3868.744	3883.999
30	3318.028	3215.817	3633.812	3513.296	3494.989
35	3060.213	3089.198	3157.847	3215.817	3238.700
40	2723.071	2759.684	2835.960	2912.237	2941.222
45	2488.139	2520.176	2625.437	2723.071	2759.684
50	2161.676	2212.018	2327.959	2430.169	2465.256
55	1809.279	1864.198	1980.138	2096.078	2138.793
60	1475.187	1533.158	1664.353	1783.345	1827.585
65	1171.607	1247.884	1388.232	1527.056	1577.398
70	863.450	953.456	1119.739	1266.190	1316.532
75	555.293	666.657	852.771	1000.748	1055.667
80	305.106	450.031	663.606	808.531	852.771
85	112.889	257.815	376.806	424.097	431.725
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1629.7	N.A.	13.90
0-30	3377.54	N.A.	28.70
0-40	5347.83	N.A.	45.50
0-60	9132.93	N.A.	77.70
0-80	11400.02	N.A.	97.00
0-90	11751.46	N.A.	100.00
10-90	11328.86	N.A.	96.40
20-40	3718.13	N.A.	31.60
20-50	5727.77	N.A.	48.70
40-70	5155.67	N.A.	43.90
60-80	2267.09	N.A.	19.30
70-80	896.53	N.A.	7.60
80-90	351.43	N.A.	3.00
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	11751.46	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	422.60
10-20	1207.1
20-30	1747.84
30-40	1970.29
40-50	2009.64
50-60	1775.46
60-70	1370.56
70-80	896.53
80-90	351.43
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	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	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	16.9	18.6	17.3	18.9	19.2	18.0	19.6	18.3	19.9	20.2
	3H	18.6	20.1	19.0	20.4	20.8	20.1	21.6	20.5	22.0	22.3
	4H	19.2	20.6	19.6	20.9	21.3	21.1	22.5	21.5	22.9	23.3
	6H	19.5	20.9	20.0	21.2	21.6	22.2	23.5	22.6	23.8	24.2
	8H	19.7	20.9	20.1	21.3	21.7	22.6	23.8	23.0	24.2	24.6
	12H	19.7	20.9	20.2	21.3	21.7	22.9	24.1	23.4	24.5	24.9
4H	2H	17.7	19.1	18.1	19.5	19.9	18.5	19.9	18.9	20.3	20.6
	3H	19.6	20.8	20.1	21.2	21.6	21.0	22.2	21.4	22.6	22.9
	4H	20.3	21.4	20.8	21.8	22.3	22.1	23.2	22.6	23.6	24.1
	6H	20.9	21.8	21.3	22.3	22.7	23.4	24.3	23.8	24.8	25.2
	8H	21.0	21.9	21.5	22.4	22.8	23.9	24.8	24.4	25.2	25.7
	12H	21.2	22.0	21.7	22.4	22.9	24.3	25.1	24.8	25.6	26.1
8H	4H	20.9	21.8	21.4	22.3	22.7	22.5	23.4	22.9	23.8	24.3
	6H	21.7	22.4	22.2	22.9	23.4	23.9	24.7	24.4	25.2	25.6
	8H	22.0	22.6	22.5	23.1	23.6	24.6	25.3	25.1	25.8	26.2
	12H	22.2	22.8	22.7	23.3	23.8	25.2	25.7	25.7	26.2	26.8
12H	4H	21.1	21.9	21.6	22.4	22.8	22.5	23.3	23.0	23.8	24.3
	6H	21.9	22.6	22.5	23.1	23.6	24.0	24.7	24.6	25.2	25.7
	8H	22.3	22.9	22.8	23.4	24.0	24.8	25.3	25.3	25.8	26.4

Maximum UGR = 26.8

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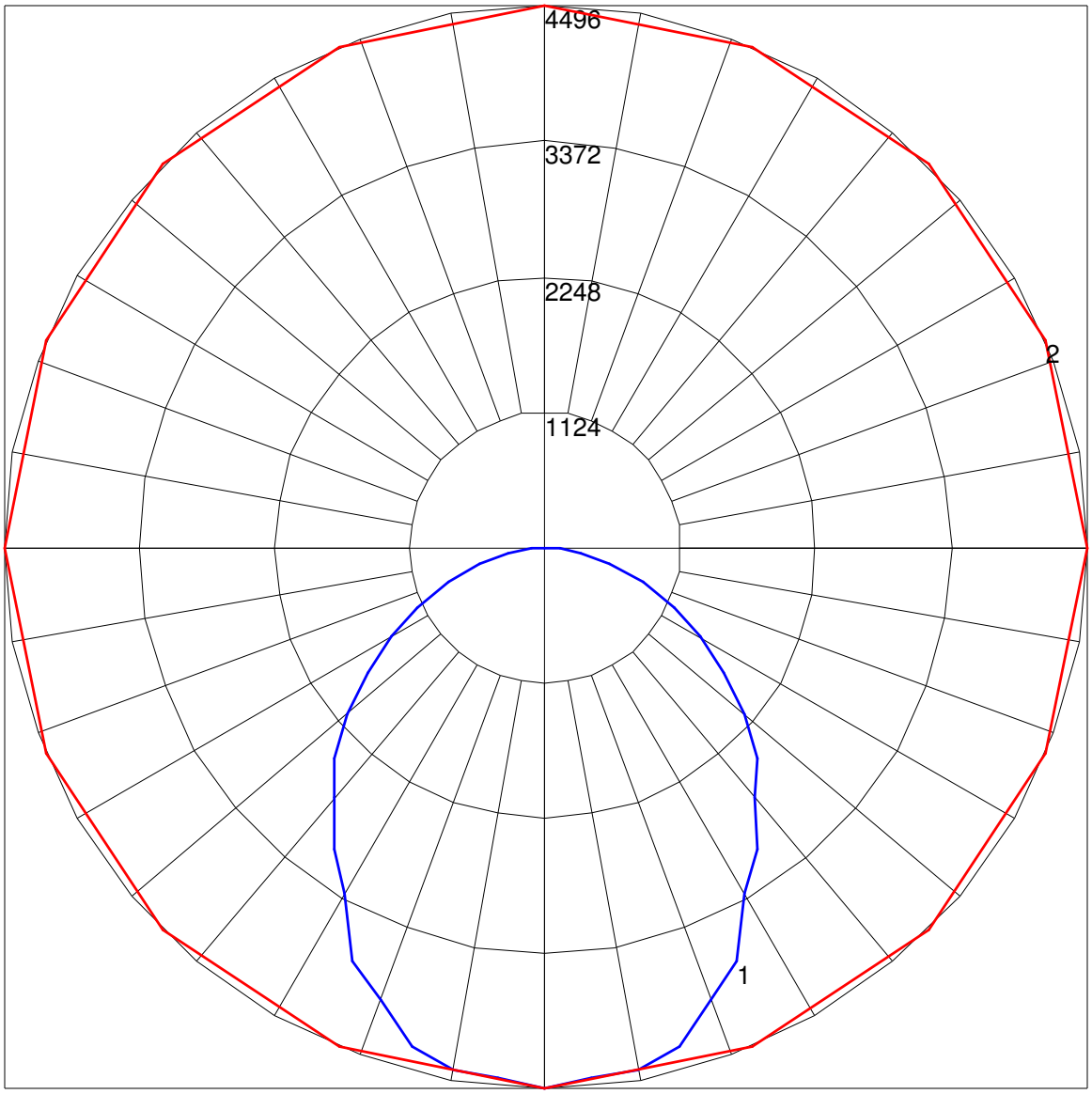
POLAR GRAPH



Maximum Candela = 4495.737 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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