H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L110-827-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-L110-827-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	11077
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	83.7
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	9897	9590	9519
55	8906	8958	9156
65	7782	8611	9433
75	6282	8695	10849
85	2911	9386	11339

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	4313.493	4313.493	4313.493	4313.493	4313.493
5	4334.924	4287.300	4263.488	4203.959	4258.726
10	4251.583	4200.387	4169.432	4163.479	4171.813
15	4111.093	4061.089	4033.705	4024.181	4017.037
20	3924.171	3875.357	3830.115	3807.494	3811.066
25	3690.817	3650.337	3631.287	3571.758	3549.137
30	3418.172	3376.502	3333.641	3301.495	3283.636
35	3134.813	3096.714	3045.519	3001.467	2976.465
40	2809.783	2778.828	2725.251	2690.724	2670.484
45	2495.468	2459.751	2418.080	2399.031	2400.221
50	2163.295	2152.579	2107.337	2115.671	2126.387
55	1821.597	1821.597	1832.312	1860.886	1872.792
60	1503.710	1510.854	1559.668	1608.482	1638.246
65	1172.727	1215.588	1297.739	1382.270	1421.560
70	854.841	926.276	1044.144	1157.250	1203.682
75	579.815	653.632	802.455	948.897	1001.283
80	303.599	429.802	584.578	739.354	788.168
85	90.485	203.590	291.694	330.983	352.413
90	0.000	3.572	4.762	8.334	4.762

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1543.42	N.A.	13.90
0-30	3206.87	N.A.	29.00
0-40	5112.85	N.A.	46.20
0-60	8640.78	N.A.	78.00
0-80	10776.11	N.A.	97.30
0-90	11076.52	N.A.	100.00
10-90	10671.74	N.A.	96.30
20-40	3569.43	N.A.	32.20
20-50	5447.43	N.A.	49.20
40-70	4815.22	N.A.	43.50
60-80	2135.33	N.A.	19.30
70-80	848.04	N.A.	7.70
80-90	300.41	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	11076.52	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	404.78
10-20	1138.64
20-30	1663.45
30-40	1905.99
40-50	1878.00
50-60	1649.93
60-70	1287.29
70-80	848.04
80-90	300.41
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	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	82	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	36	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	19.4	21.0	19.8	21.4	21.7	19.7	21.3	20.1	21.7	22.0
	3H	21.1	22.5	21.4	22.9	23.2	22.0	23.5	22.4	23.8	24.1
	4H	21.7	23.0	22.1	23.4	23.8	23.1	24.5	23.5	24.8	25.2
	6H	22.0	23.3	22.5	23.7	24.1	24.1	25.4	24.5	25.8	26.2
	8H	22.1	23.4	22.6	23.8	24.2	24.5	25.8	24.9	26.2	26.6
	12H	22.2	23.4	22.6	23.8	24.2	24.8	26.0	25.2	26.4	26.8
4H	2H	20.1	21.5	20.5	21.9	22.2	20.4	21.7	20.8	22.1	22.5
	3H	22.0	23.2	22.4	23.6	24.0	22.9	24.0	23.3	24.4	24.8
	4H	22.8	23.8	23.2	24.2	24.7	24.1	25.2	24.6	25.6	26.0
	6H	23.3	24.2	23.8	24.7	25.1	25.4	26.3	25.8	26.8	27.2
	8H	23.5	24.3	23.9	24.8	25.2	25.9	26.7	26.3	27.2	27.7
	12H	23.5	24.3	24.0	24.8	25.3	26.2	27.0	26.7	27.5	28.0
8H	4H	23.3	24.2	23.7	24.6	25.1	24.5	25.3	24.9	25.8	26.2
	6H	24.0	24.7	24.5	25.2	25.7	25.9	26.7	26.4	27.1	27.6
	8H	24.3	24.9	24.8	25.4	25.9	26.5	27.2	27.0	27.7	28.2
	12H	24.4	25.0	24.9	25.5	26.1	27.0	27.6	27.5	28.1	28.6
12H	4H	23.4	24.2	23.9	24.7	25.1	24.5	25.3	25.0	25.8	26.2
	6H	24.2	24.9	24.7	25.3	25.9	26.0	26.7	26.5	27.1	27.7
	8H	24.5	25.1	25.1	25.6	26.2	26.7	27.2	27.2	27.7	28.3

Maximum UGR = 28.6

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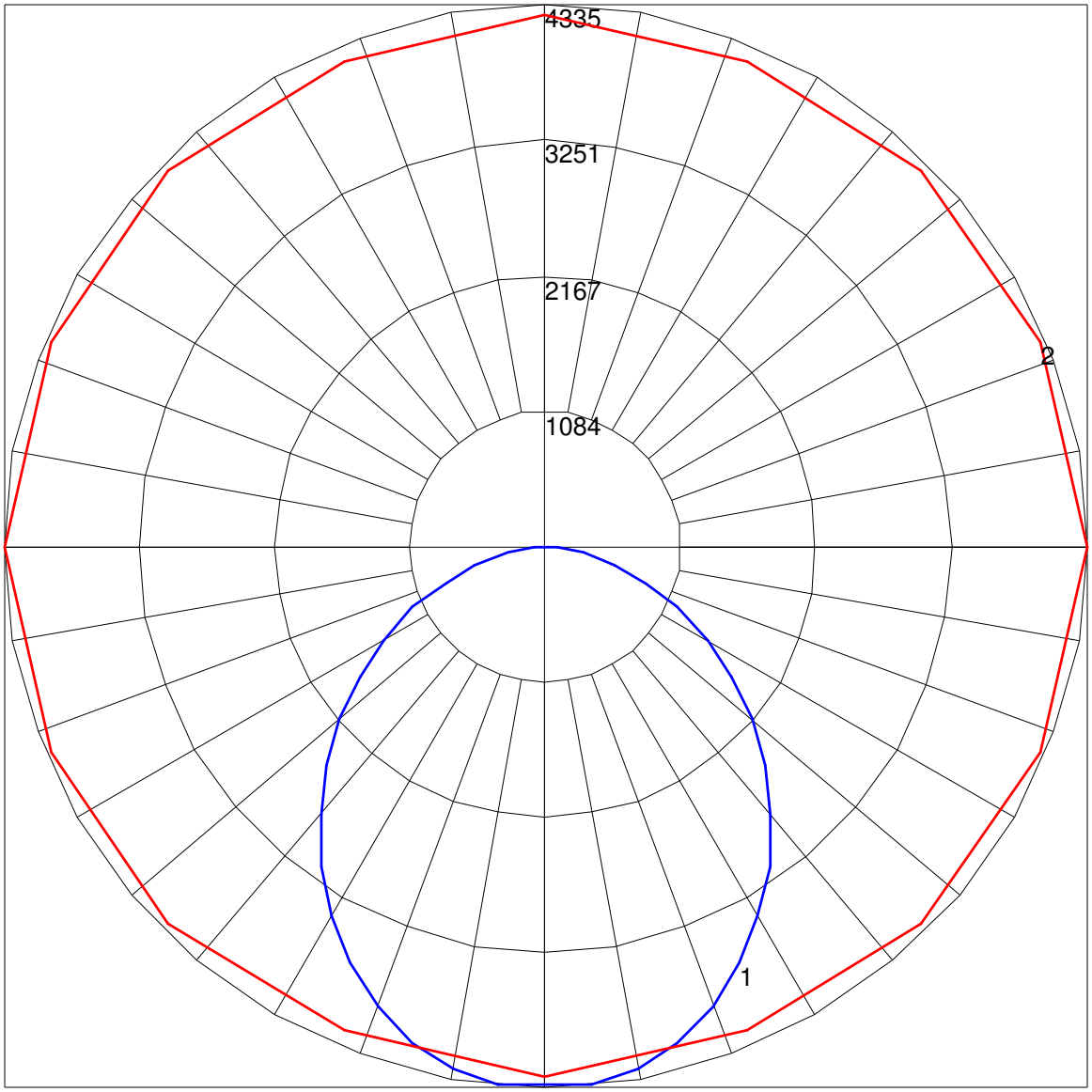
POLAR GRAPH



Maximum Candela = 4334.924 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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