H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-935-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-L90-935-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	7839
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	118
Total Luminaire Watts	66.6
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	7004	6787	6737
55	6303	6340	6480
65	5507	6094	6676
75	4446	6153	7678
85	2060	6642	8025

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3052.742	3052.742	3052.742	3052.742	3052.742
5	3067.909	3034.204	3017.352	2975.222	3013.982
10	3008.926	2972.695	2950.787	2946.574	2952.472
15	2909.500	2874.110	2854.731	2847.990	2842.934
20	2777.211	2742.665	2710.646	2694.636	2697.164
25	2612.062	2583.413	2569.932	2527.802	2511.792
30	2419.106	2389.615	2359.281	2336.531	2323.892
35	2218.567	2191.604	2155.372	2124.196	2106.501
40	1988.537	1966.630	1928.713	1904.277	1889.953
45	1766.091	1740.813	1711.322	1697.840	1698.683
50	1531.005	1523.422	1491.403	1497.301	1504.885
55	1289.179	1289.179	1296.762	1316.985	1325.411
60	1064.204	1069.260	1103.807	1138.353	1159.418
65	829.962	860.295	918.435	978.259	1006.065
70	604.987	655.543	738.961	819.008	851.869
75	410.346	462.588	567.913	671.553	708.627
80	214.863	304.179	413.717	523.255	557.802
85	64.038	144.085	206.437	234.243	249.410
90	0.000	2.528	3.370	5.898	3.370

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1092.31	N.A.	13.90
0-30	2269.56	N.A.	29.00
0-40	3618.46	N.A.	46.20
0-60	6115.25	N.A.	78.00
0-80	7626.46	N.A.	97.30
0-90	7839.07	N.A.	100.00
10-90	7552.6	N.A.	96.30
20-40	2526.16	N.A.	32.20
20-50	3855.25	N.A.	49.20
40-70	3407.82	N.A.	43.50
60-80	1511.21	N.A.	19.30
70-80	600.18	N.A.	7.70
80-90	212.61	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	7839.07	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	286.47
10-20	805.84
20-30	1177.25
30-40	1348.9
40-50	1329.1
50-60	1167.69
60-70	911.04
70-80	600.18
80-90	212.61
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	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	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	18.2	19.8	18.6	20.2	20.5	18.5	20.1	18.9	20.5	20.8
	3H	19.9	21.3	20.2	21.7	22.0	20.8	22.3	21.2	22.6	22.9
	4H	20.5	21.8	20.9	22.2	22.6	21.9	23.3	22.3	23.6	24.0
	6H	20.8	22.1	21.3	22.5	22.9	22.9	24.2	23.3	24.6	25.0
	8H	20.9	22.2	21.4	22.6	23.0	23.3	24.6	23.7	25.0	25.4
	12H	21.0	22.2	21.4	22.6	23.0	23.6	24.8	24.0	25.2	25.6
4H	2H	18.9	20.3	19.3	20.7	21.0	19.2	20.5	19.6	20.9	21.3
	3H	20.8	22.0	21.2	22.4	22.8	21.7	22.8	22.1	23.2	23.6
	4H	21.6	22.6	22.0	23.0	23.5	22.9	24.0	23.4	24.4	24.8
	6H	22.1	23.0	22.6	23.5	23.9	24.2	25.1	24.6	25.6	26.0
	8H	22.3	23.1	22.7	23.6	24.0	24.7	25.6	25.1	26.0	26.5
	12H	22.3	23.1	22.8	23.6	24.1	25.0	25.8	25.5	26.3	26.8
8H	4H	22.1	23.0	22.5	23.4	23.9	23.3	24.1	23.7	24.6	25.0
	6H	22.8	23.5	23.3	24.0	24.5	24.7	25.5	25.2	25.9	26.4
	8H	23.1	23.7	23.6	24.2	24.7	25.3	26.0	25.8	26.5	27.0
	12H	23.2	23.8	23.7	24.3	24.9	25.8	26.4	26.3	26.9	27.4
12H	4H	22.2	23.0	22.7	23.5	23.9	23.3	24.1	23.8	24.6	25.0
	6H	23.0	23.7	23.5	24.1	24.7	24.8	25.5	25.3	25.9	26.5
	8H	23.3	23.9	23.9	24.4	25.0	25.5	26.0	26.0	26.5	27.1

Maximum UGR = 27.4

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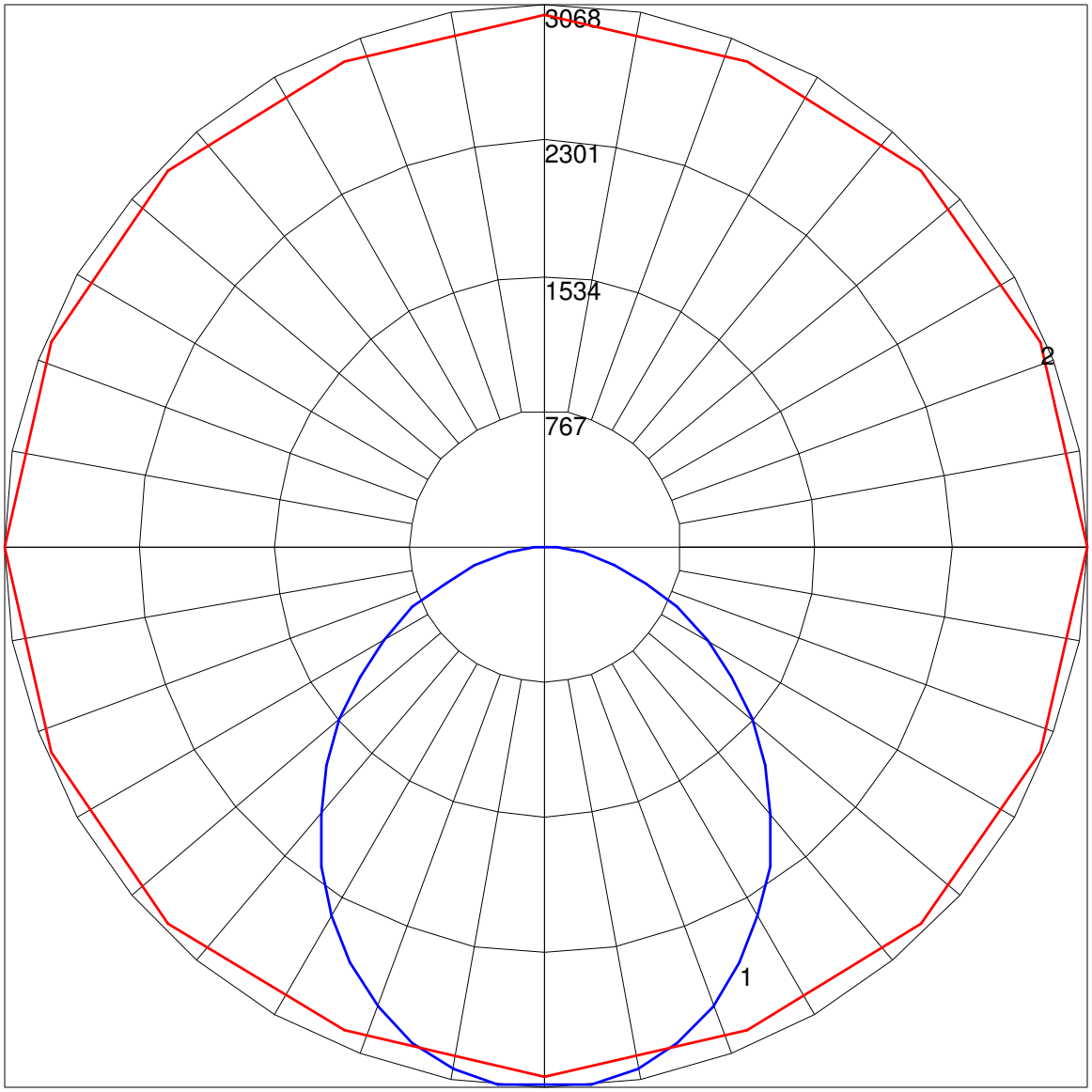
POLAR GRAPH



Maximum Candela = 3067.909 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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