H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L90-950-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-L90-950-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	8399
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	126
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	7504	7272	7218
55	6753	6793	6943
65	5901	6530	7153
75	4764	6593	8226
85	2208	7117	8598

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	3270.794	3270.794	3270.794	3270.794	3270.794
5	3287.045	3250.933	3232.877	3187.738	3229.266
10	3223.850	3185.030	3161.557	3157.043	3163.363
15	3117.321	3079.404	3058.640	3051.417	3046.001
20	2975.583	2938.569	2904.263	2887.110	2889.819
25	2798.637	2767.942	2753.498	2708.359	2691.206
30	2591.899	2560.302	2527.801	2503.426	2489.884
35	2377.036	2348.147	2309.327	2275.924	2256.965
40	2130.575	2107.103	2066.478	2040.297	2024.949
45	1892.240	1865.156	1833.559	1819.114	1820.017
50	1640.363	1632.237	1597.932	1604.251	1612.376
55	1381.263	1381.263	1389.388	1411.055	1420.083
60	1140.219	1145.636	1182.650	1219.664	1242.234
65	889.244	921.745	984.037	1048.135	1077.927
70	648.200	702.368	791.743	877.508	912.717
75	439.657	495.630	608.478	719.521	759.243
80	230.210	325.906	443.268	560.630	597.644
85	68.612	154.376	221.183	250.975	267.225
90	0.000	2.708	3.611	6.320	3.611

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1170.33	N.A.	13.90
0-30	2431.67	N.A.	29.00
0-40	3876.92	N.A.	46.20
0-60	6552.05	N.A.	78.00
0-80	8171.21	N.A.	97.30
0-90	8399.00	N.A.	100.00
10-90	8092.07	N.A.	96.30
20-40	2706.6	N.A.	32.20
20-50	4130.63	N.A.	49.20
40-70	3651.24	N.A.	43.50
60-80	1619.16	N.A.	19.30
70-80	643.04	N.A.	7.70
80-90	227.79	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	8399.00	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	306.93
10-20	863.40
20-30	1261.34
30-40	1445.25
40-50	1424.03
50-60	1251.1
60-70	976.11
70-80	643.04
80-90	227.79
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	18.4	20.0	18.8	20.4	20.7	18.7	20.3	19.1	20.7	21.0
	3H	20.1	21.5	20.4	21.9	22.2	21.0	22.5	21.4	22.8	23.1
	4H	20.7	22.0	21.1	22.4	22.8	22.1	23.5	22.5	23.8	24.2
	6H	21.0	22.3	21.5	22.7	23.1	23.1	24.4	23.5	24.8	25.2
	8H	21.1	22.4	21.6	22.8	23.2	23.5	24.8	23.9	25.2	25.6
	12H	21.2	22.4	21.6	22.8	23.2	23.8	25.0	24.2	25.4	25.8
4H	2H	19.1	20.5	19.5	20.9	21.2	19.4	20.7	19.8	21.1	21.5
	3H	21.0	22.2	21.4	22.6	23.0	21.9	23.0	22.3	23.4	23.8
	4H	21.8	22.8	22.2	23.2	23.7	23.1	24.2	23.6	24.6	25.0
	6H	22.3	23.2	22.8	23.7	24.1	24.4	25.3	24.8	25.8	26.2
	8H	22.5	23.3	22.9	23.8	24.2	24.9	25.8	25.3	26.2	26.7
	12H	22.5	23.3	23.0	23.8	24.3	25.2	26.0	25.7	26.5	27.0
8H	4H	22.3	23.2	22.7	23.6	24.1	23.5	24.3	23.9	24.8	25.2
	6H	23.0	23.7	23.5	24.2	24.7	24.9	25.7	25.4	26.1	26.6
	8H	23.3	23.9	23.8	24.4	24.9	25.5	26.2	26.0	26.7	27.2
	12H	23.4	24.0	23.9	24.5	25.1	26.0	26.6	26.5	27.1	27.6
12H	4H	22.4	23.2	22.9	23.7	24.1	23.5	24.3	24.0	24.8	25.2
	6H	23.2	23.9	23.7	24.3	24.9	25.0	25.7	25.5	26.1	26.7
	8H	23.5	24.1	24.1	24.6	25.2	25.7	26.2	26.2	26.7	27.3

Maximum UGR = 27.6

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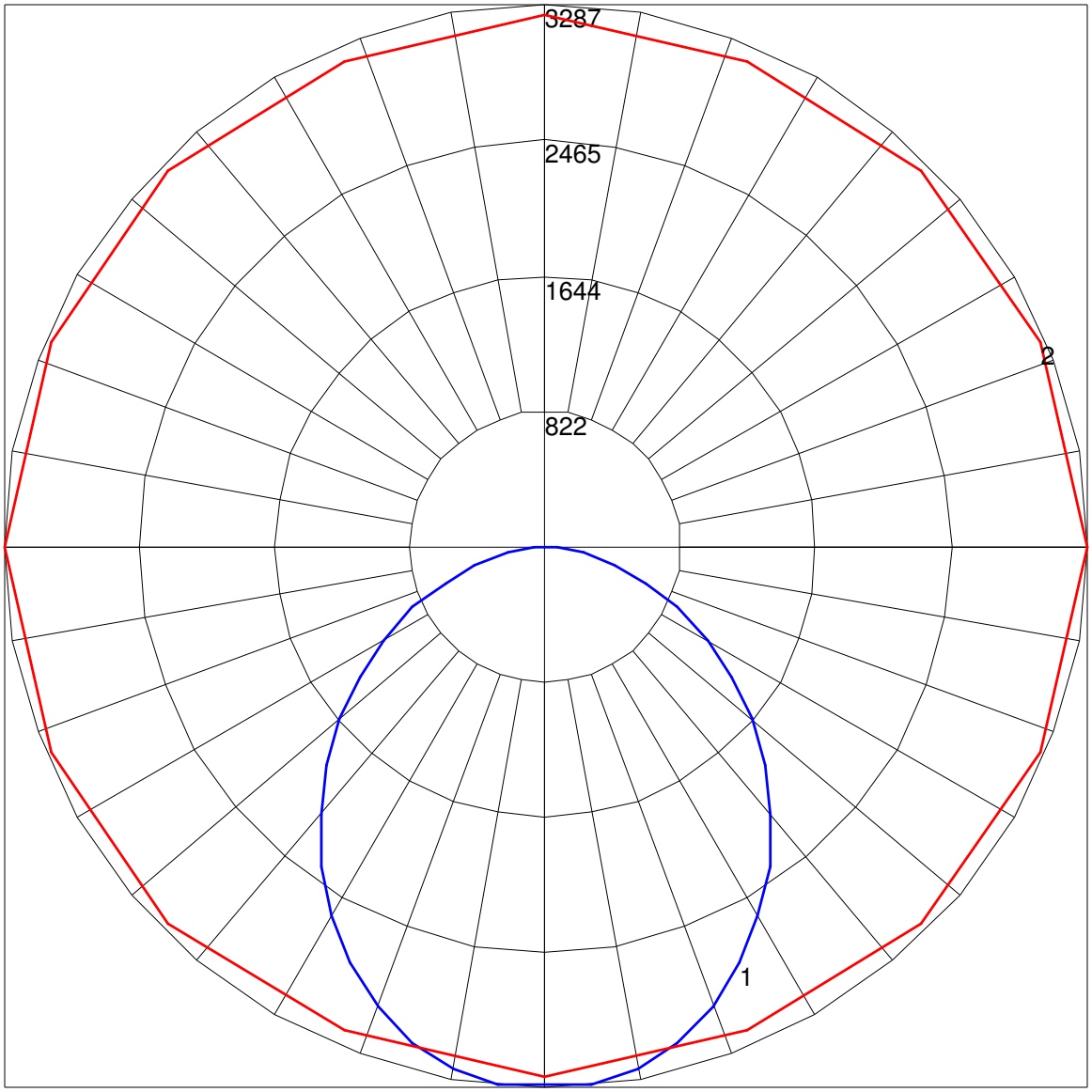
POLAR GRAPH



Maximum Candela = 3287.045 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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