H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-P65-835-SA-(P48)-POE PR_.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] 12-17-2021
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 x 4 SHALLOW LED RECESSED LUMINAIRE
[MORE] FROST SQUARED RIBBED LENS
[LUMCAT] PT-24-P65-835-SA-(P48)-POE PR
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4864
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	154
Total Luminaire Watts	31.6
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	4346	4211	4180
55	3911	3934	4021
65	3417	3782	4142
75	2759	3818	4764
85	1279	4122	4980

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1894.257	1894.257	1894.257	1894.257	1894.257
5	1903.668	1882.754	1872.298	1846.155	1870.206
10	1867.069	1844.587	1830.993	1828.379	1832.039
15	1805.374	1783.414	1771.389	1767.206	1764.069
20	1723.288	1701.851	1681.983	1672.049	1673.618
25	1620.811	1603.034	1594.668	1568.526	1558.592
30	1501.080	1482.780	1463.958	1449.841	1441.999
35	1376.643	1359.912	1337.430	1318.085	1307.105
40	1233.907	1220.313	1196.786	1181.623	1172.735
45	1095.877	1080.192	1061.892	1053.527	1054.050
50	950.004	945.299	925.431	929.090	933.796
55	799.948	799.948	804.654	817.202	822.431
60	660.350	663.487	684.923	706.360	719.431
65	514.999	533.822	569.898	607.020	624.273
70	375.401	406.771	458.533	508.203	528.593
75	254.624	287.040	352.396	416.705	439.710
80	133.325	188.746	256.715	324.685	346.121
85	39.736	89.406	128.096	145.350	154.761
90	0.000	1.569	2.091	3.660	2.091

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	677.79	N.A.	13.90
0-30	1408.28	N.A.	29.00
0-40	2245.29	N.A.	46.20
0-60	3794.57	N.A.	78.00
0-80	4732.3	N.A.	97.30
0-90	4864.22	N.A.	100.00
10-90	4686.46	N.A.	96.30
20-40	1567.51	N.A.	32.20
20-50	2392.22	N.A.	49.20
40-70	2114.59	N.A.	43.50
60-80	937.72	N.A.	19.30
70-80	372.41	N.A.	7.70
80-90	131.92	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	4864.22	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	177.76
10-20	500.03
20-30	730.50
30-40	837.01
40-50	824.72
50-60	724.56
60-70	565.31
70-80	372.41
80-90	131.92
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	16.5	18.1	16.9	18.5	18.8	16.8	18.4	17.2	18.8	19.1
	3H	18.2	19.6	18.5	20.0	20.3	19.1	20.6	19.5	20.9	21.2
	4H	18.8	20.1	19.2	20.5	20.9	20.2	21.6	20.6	21.9	22.3
	6H	19.1	20.4	19.6	20.8	21.2	21.2	22.5	21.6	22.9	23.3
	8H	19.2	20.5	19.7	20.9	21.3	21.6	22.9	22.0	23.3	23.7
	12H	19.3	20.5	19.7	20.9	21.3	21.9	23.1	22.3	23.5	23.9
4H	2H	17.2	18.6	17.6	19.0	19.3	17.5	18.8	17.9	19.2	19.6
	3H	19.1	20.3	19.5	20.7	21.1	20.0	21.1	20.4	21.5	21.9
	4H	19.9	20.9	20.3	21.3	21.8	21.2	22.3	21.7	22.7	23.1
	6H	20.4	21.3	20.9	21.8	22.2	22.5	23.4	22.9	23.9	24.3
	8H	20.6	21.4	21.0	21.9	22.3	23.0	23.9	23.4	24.3	24.8
	12H	20.6	21.4	21.1	21.9	22.4	23.3	24.1	23.8	24.6	25.1
8H	4H	20.4	21.3	20.8	21.7	22.2	21.6	22.4	22.0	22.9	23.3
	6H	21.1	21.8	21.6	22.3	22.8	23.0	23.8	23.5	24.2	24.7
	8H	21.4	22.0	21.9	22.5	23.0	23.6	24.3	24.1	24.8	25.3
	12H	21.5	22.1	22.0	22.6	23.2	24.1	24.7	24.6	25.2	25.7
12H	4H	20.5	21.3	21.0	21.8	22.2	21.6	22.4	22.1	22.9	23.3
	6H	21.3	22.0	21.8	22.4	23.0	23.1	23.8	23.6	24.2	24.8
	8H	21.6	22.2	22.2	22.7	23.3	23.8	24.3	24.3	24.8	25.4

Maximum UGR = 25.7

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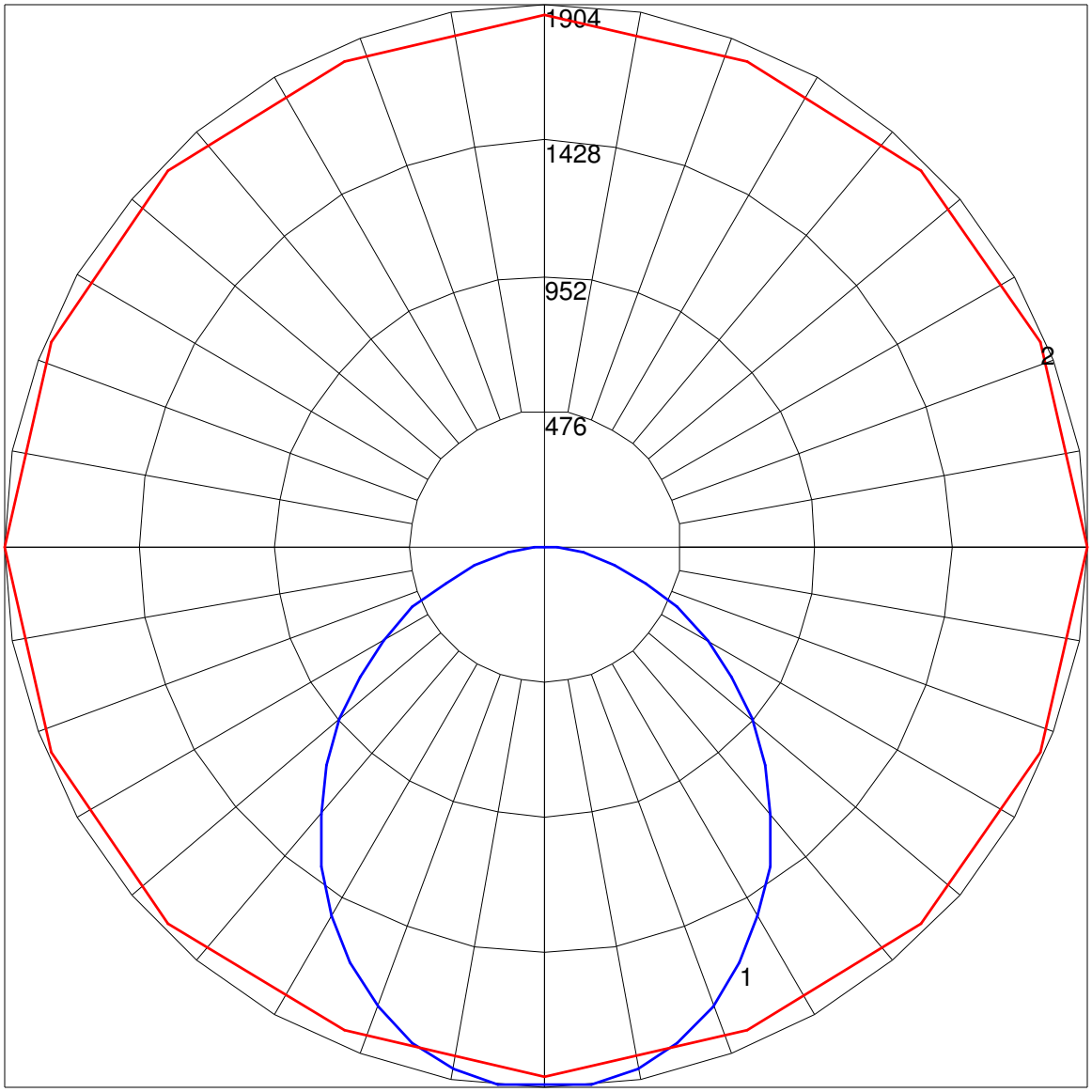
POLAR GRAPH



Maximum Candela = 1903.668 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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