H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-835-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-L49-835-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	5231
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	143
Total Luminaire Watts	36.7
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	4673	4529	4495
55	4206	4230	4324
65	3675	4066	4454
75	2967	4106	5123
85	1375	4432	5355

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2036.926	2036.926	2036.926	2036.926	2036.926
5	2047.046	2024.557	2013.313	1985.202	2011.064
10	2007.691	1983.515	1968.897	1966.086	1970.022
15	1941.348	1917.735	1904.804	1900.306	1896.933
20	1853.080	1830.029	1808.664	1797.982	1799.669
25	1742.885	1723.769	1714.773	1686.662	1675.980
30	1614.136	1594.458	1574.218	1559.038	1550.605
35	1480.327	1462.336	1438.161	1417.359	1405.552
40	1326.841	1312.223	1286.923	1270.619	1261.061
45	1178.415	1161.548	1141.870	1132.875	1133.437
50	1021.555	1016.495	995.131	999.066	1004.126
55	860.198	860.198	865.258	878.751	884.373
60	710.085	713.458	736.509	759.560	773.616
65	553.787	574.027	612.821	652.738	671.292
70	403.675	437.408	493.068	546.479	568.405
75	273.802	308.659	378.937	448.090	472.828
80	143.366	202.962	276.050	349.139	372.190
85	42.729	96.140	137.744	156.297	166.417
90	0.000	1.687	2.249	3.936	2.249

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	728.84	N.A.	13.90
0-30	1514.35	N.A.	29.00
0-40	2414.4	N.A.	46.20
0-60	4080.37	N.A.	78.00
0-80	5088.72	N.A.	97.30
0-90	5230.58	N.A.	100.00
10-90	5039.43	N.A.	96.30
20-40	1685.56	N.A.	32.20
20-50	2572.4	N.A.	49.20
40-70	2273.85	N.A.	43.50
60-80	1008.35	N.A.	19.30
70-80	400.46	N.A.	7.70
80-90	141.86	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	5230.58	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	191.15
10-20	537.69
20-30	785.52
30-40	900.05
40-50	886.83
50-60	779.13
60-70	607.88
70-80	400.46
80-90	141.86
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	55	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	16.7	18.3	17.1	18.7	19.0	17.0	18.6	17.4	19.0	19.3
	3H	18.4	19.8	18.7	20.2	20.5	19.3	20.8	19.7	21.1	21.4
	4H	19.0	20.3	19.4	20.7	21.1	20.4	21.8	20.8	22.1	22.5
	6H	19.3	20.6	19.8	21.0	21.4	21.4	22.7	21.8	23.1	23.5
	8H	19.4	20.7	19.9	21.1	21.5	21.8	23.1	22.2	23.5	23.9
	12H	19.5	20.7	19.9	21.1	21.5	22.1	23.3	22.5	23.7	24.1
4H	2H	17.4	18.8	17.8	19.2	19.5	17.7	19.0	18.1	19.4	19.8
	3H	19.3	20.5	19.7	20.9	21.3	20.2	21.3	20.6	21.7	22.1
	4H	20.1	21.1	20.5	21.5	22.0	21.4	22.5	21.9	22.9	23.3
	6H	20.6	21.5	21.1	22.0	22.4	22.7	23.6	23.1	24.1	24.5
	8H	20.8	21.6	21.2	22.1	22.5	23.2	24.0	23.6	24.5	25.0
	12H	20.8	21.6	21.3	22.1	22.6	23.5	24.3	24.0	24.8	25.2
8H	4H	20.6	21.5	21.0	21.9	22.4	21.8	22.6	22.2	23.1	23.5
	6H	21.3	22.0	21.8	22.5	23.0	23.2	24.0	23.7	24.4	24.9
	8H	21.6	22.2	22.1	22.7	23.2	23.8	24.5	24.3	25.0	25.5
	12H	21.7	22.3	22.2	22.8	23.4	24.3	24.9	24.8	25.4	25.9
12H	4H	20.7	21.5	21.2	22.0	22.4	21.8	22.6	22.3	23.1	23.5
	6H	21.5	22.2	22.0	22.6	23.2	23.3	24.0	23.8	24.4	25.0
	8H	21.8	22.4	22.4	22.9	23.5	24.0	24.5	24.5	25.0	25.6

Maximum UGR = 25.9

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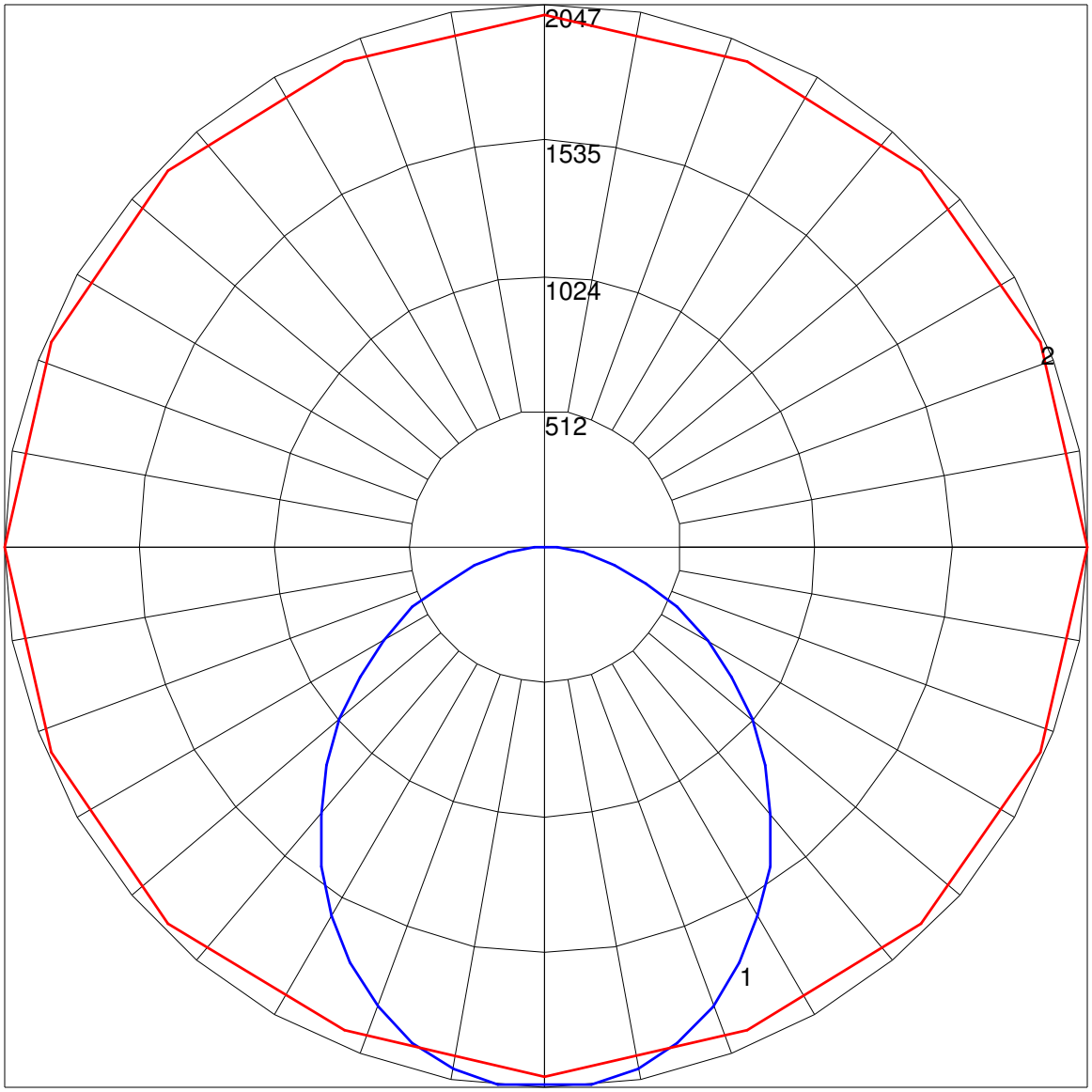
POLAR GRAPH



Maximum Candela = 2047.046 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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