H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-835-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L52-835-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5491
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
Total Luminaire Watts	41.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4909	4837	4768
55	4411	4451	4575
65	3861	4211	4729
75	3010	4240	5481
85	1566	3947	5317

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2176.315	2176.315	2176.315	2176.315	2176.315
5	2176.315	2162.274	2153.248	2154.251	2152.245
10	2130.181	2119.149	2110.123	2106.111	2103.102
15	2054.963	2046.939	2036.910	2028.887	2026.881
20	1969.715	1956.677	1932.608	1927.593	1922.579
25	1845.354	1840.340	1812.258	1798.218	1789.191
30	1703.944	1695.921	1676.866	1654.802	1639.758
35	1544.481	1546.487	1522.417	1500.353	1491.327
40	1381.007	1386.022	1361.952	1346.908	1340.891
45	1224.553	1221.544	1206.501	1201.486	1189.451
50	1058.070	1061.079	1047.038	1059.073	1049.044
55	892.590	901.616	900.613	925.686	925.686
60	730.118	736.136	762.212	796.311	811.354
65	575.670	590.714	627.822	676.964	705.046
70	419.216	445.292	507.472	570.656	604.755
75	274.797	320.931	387.123	460.336	500.452
80	145.422	197.573	271.789	343.998	381.106
85	48.140	80.233	121.352	148.431	163.474
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	778.83	N.A.	14.20
0-30	1614.85	N.A.	29.40
0-40	2567.04	N.A.	46.70
0-60	4315.46	N.A.	78.60
0-80	5356.04	N.A.	97.50
0-90	5491.34	N.A.	100.00
10-90	5286.71	N.A.	96.30
20-40	1788.22	N.A.	32.60
20-50	2722.18	N.A.	49.60
40-70	2378.2	N.A.	43.30
60-80	1040.58	N.A.	18.90
70-80	410.79	N.A.	7.50
80-90	135.30	N.A.	2.50
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	5491.34	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	204.63
10-20	574.20
20-30	836.02
30-40	952.19
40-50	933.97
50-60	814.45
60-70	629.79
70-80	410.79
80-90	135.30
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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	91	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	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	16.9	18.5	17.3	18.8	19.1	17.3	18.9	17.6	19.2	19.5
	3H	18.5	20.0	18.9	20.3	20.7	19.5	21.0	19.9	21.3	21.7
	4H	19.1	20.5	19.5	20.8	21.2	20.6	22.0	21.0	22.3	22.7
	6H	19.5	20.7	19.9	21.1	21.5	21.6	22.9	22.0	23.3	23.7
	8H	19.6	20.8	20.0	21.2	21.6	22.0	23.2	22.4	23.6	24.0
	12H	19.6	20.8	20.0	21.2	21.6	22.3	23.4	22.7	23.8	24.3
4H	2H	17.6	18.9	18.0	19.3	19.7	17.9	19.3	18.3	19.6	20.0
	3H	19.4	20.6	19.9	21.0	21.4	20.4	21.6	20.8	21.9	22.3
	4H	20.2	21.2	20.6	21.6	22.1	21.6	22.7	22.1	23.1	23.5
	6H	20.7	21.6	21.1	22.1	22.5	22.8	23.8	23.3	24.2	24.7
	8H	20.8	21.7	21.3	22.1	22.6	23.3	24.2	23.8	24.6	25.1
	12H	20.9	21.7	21.4	22.2	22.6	23.6	24.4	24.1	24.9	25.3
8H	4H	20.7	21.6	21.1	22.0	22.5	21.9	22.8	22.4	23.3	23.7
	6H	21.4	22.1	21.9	22.6	23.1	23.3	24.1	23.8	24.5	25.0
	8H	21.6	22.2	22.1	22.7	23.2	23.9	24.5	24.4	25.1	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	20.8	21.6	21.3	22.1	22.5	22.0	22.8	22.4	23.2	23.7
	6H	21.5	22.2	22.1	22.7	23.2	23.4	24.1	23.9	24.5	25.0
	8H	21.8	22.4	22.3	22.9	23.5	24.0	24.6	24.5	25.1	25.6

Maximum UGR = 25.9

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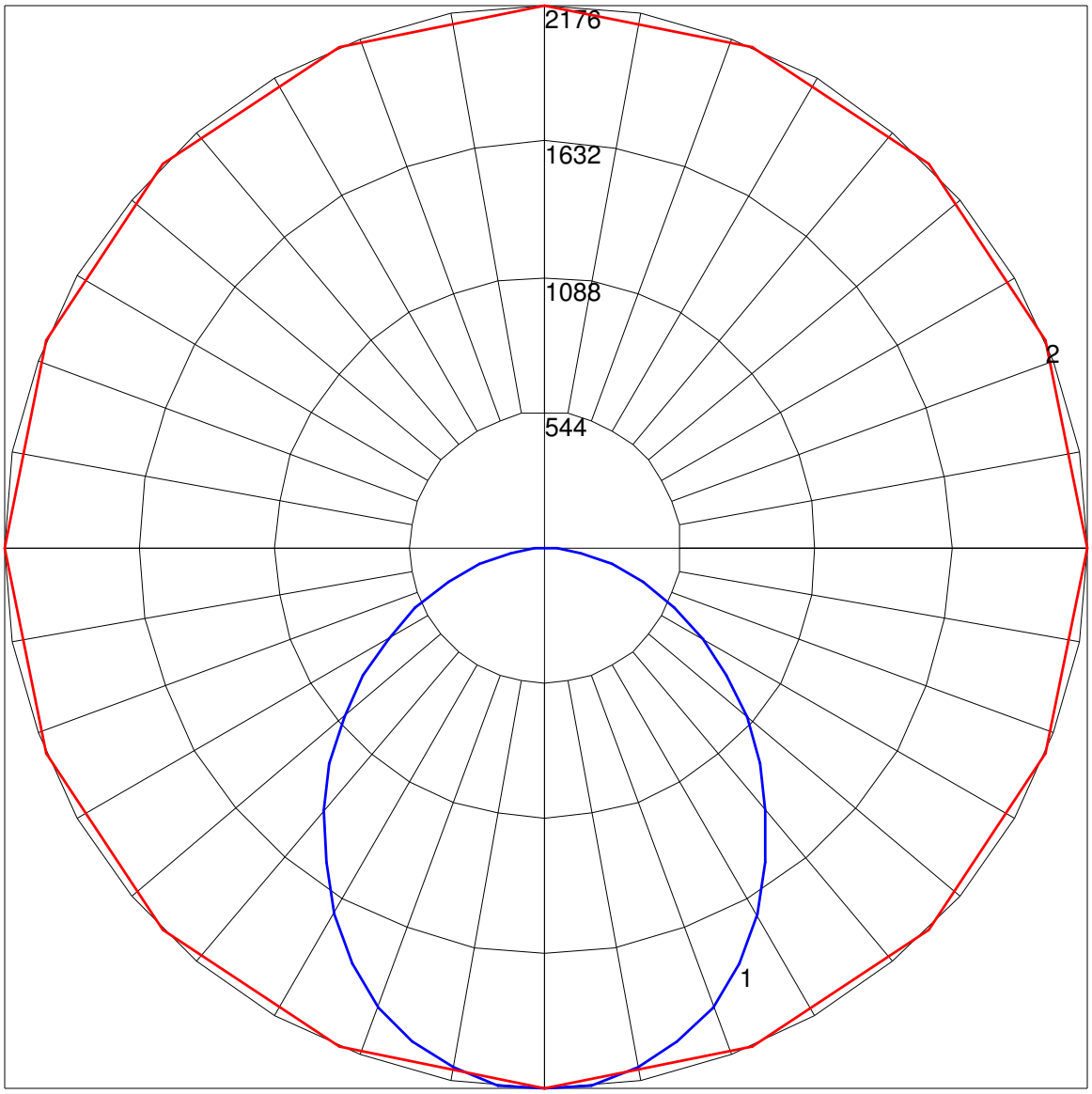
POLAR GRAPH



Maximum Candela = 2176.315 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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