H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-935-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19562.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x2'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/CENTER FROSTED RIBBED ACRYLIC LENS
[MORE] ELECTRONIC 0-10V LED DRIVER
[LUMCAT] PT-22-L52-935-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4478
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	108
Total Luminaire Watts	41.6
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.34
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.93 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	4207	4364	4506
55	3557	3919	4182
65	2719	3401	3781
75	1890	3016	3728
85	1076	2460	3075

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1711.345	1711.345	1711.345	1711.345	1711.345
5	1717.100	1706.742	1704.440	1698.686	1698.686
10	1694.082	1683.724	1682.573	1676.819	1675.668
15	1653.802	1642.293	1641.142	1638.840	1637.689
20	1596.258	1585.900	1584.749	1585.900	1585.900
25	1515.697	1505.339	1512.245	1516.848	1512.245
30	1416.722	1412.119	1419.024	1427.080	1421.326
35	1302.786	1301.635	1316.596	1322.351	1328.105
40	1171.587	1171.587	1196.906	1207.264	1216.471
45	1021.973	1021.973	1059.952	1084.121	1094.478
50	864.304	865.455	916.093	948.318	963.279
55	700.880	713.540	772.234	806.761	824.024
60	540.909	566.229	624.923	662.902	681.316
65	394.749	428.124	493.724	535.155	548.965
70	265.851	307.283	372.882	415.464	431.577
75	168.027	208.308	268.153	310.735	331.451
80	90.919	125.445	178.385	208.308	229.023
85	32.224	56.393	73.656	73.656	92.070
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	625.26	N.A.	14.00
0-30	1321.27	N.A.	29.50
0-40	2141.95	N.A.	47.80
0-60	3638.86	N.A.	81.30
0-80	4395.9	N.A.	98.20
0-90	4477.81	N.A.	100.00
10-90	4315.83	N.A.	96.40
20-40	1516.68	N.A.	33.90
20-50	2330.47	N.A.	52.00
40-70	1977.49	N.A.	44.20
60-80	757.04	N.A.	16.90
70-80	276.46	N.A.	6.20
80-90	81.91	N.A.	1.80
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	4477.81	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	161.98
10-20	463.29
20-30	696.00
30-40	820.68
40-50	813.79
50-60	683.12
60-70	480.58
70-80	276.46
80-90	81.91
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	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	100	91	85	79	97	90	83	78	86	81	76	83	79	75	80	76	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	48	57	52	47	45
6	71	58	49	43	69	57	49	43	55	48	42	54	47	42	52	46	42	40
7	66	53	44	38	64	52	44	38	50	43	38	49	42	37	48	42	37	35
8	62	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	58	44	36	31	56	44	36	31	43	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	28	38	32	27	26

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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	16.0	17.6	16.3	17.9	18.2	17.0	18.6	17.4	18.9	19.2
	3H	17.3	18.7	17.6	19.0	19.4	18.8	20.3	19.2	20.6	21.0
	4H	17.7	19.0	18.1	19.4	19.8	19.6	21.0	20.0	21.3	21.7
	6H	17.9	19.2	18.4	19.6	20.0	20.3	21.6	20.7	21.9	22.3
	8H	18.0	19.2	18.4	19.6	20.0	20.5	21.7	21.0	22.1	22.5
	12H	18.0	19.2	18.5	19.6	20.0	20.7	21.8	21.1	22.2	22.7
4H	2H	16.7	18.0	17.1	18.4	18.8	17.5	18.9	17.9	19.2	19.6
	3H	18.2	19.3	18.6	19.7	20.1	19.6	20.7	20.0	21.1	21.5
	4H	18.8	19.8	19.2	20.2	20.6	20.5	21.5	20.9	21.9	22.4
	6H	19.1	20.0	19.6	20.5	20.9	21.4	22.3	21.8	22.7	23.2
	8H	19.2	20.1	19.7	20.5	21.0	21.7	22.5	22.1	22.9	23.4
	12H	19.3	20.1	19.8	20.5	21.0	21.9	22.6	22.3	23.1	23.6
8H	4H	19.2	20.0	19.7	20.5	20.9	20.8	21.6	21.2	22.0	22.5
	6H	19.7	20.4	20.2	20.9	21.4	21.7	22.4	22.2	22.9	23.4
	8H	19.9	20.5	20.4	21.1	21.5	22.1	22.8	22.7	23.3	23.8
	12H	20.0	20.6	20.5	21.1	21.6	22.4	23.0	22.9	23.4	24.0
12H	4H	19.3	20.0	19.8	20.5	21.0	20.8	21.5	21.2	22.0	22.5
	6H	19.9	20.5	20.4	21.0	21.5	21.8	22.4	22.3	22.9	23.4
	8H	20.1	20.7	20.6	21.2	21.7	22.2	22.8	22.7	23.3	23.8

Maximum UGR = 24.0

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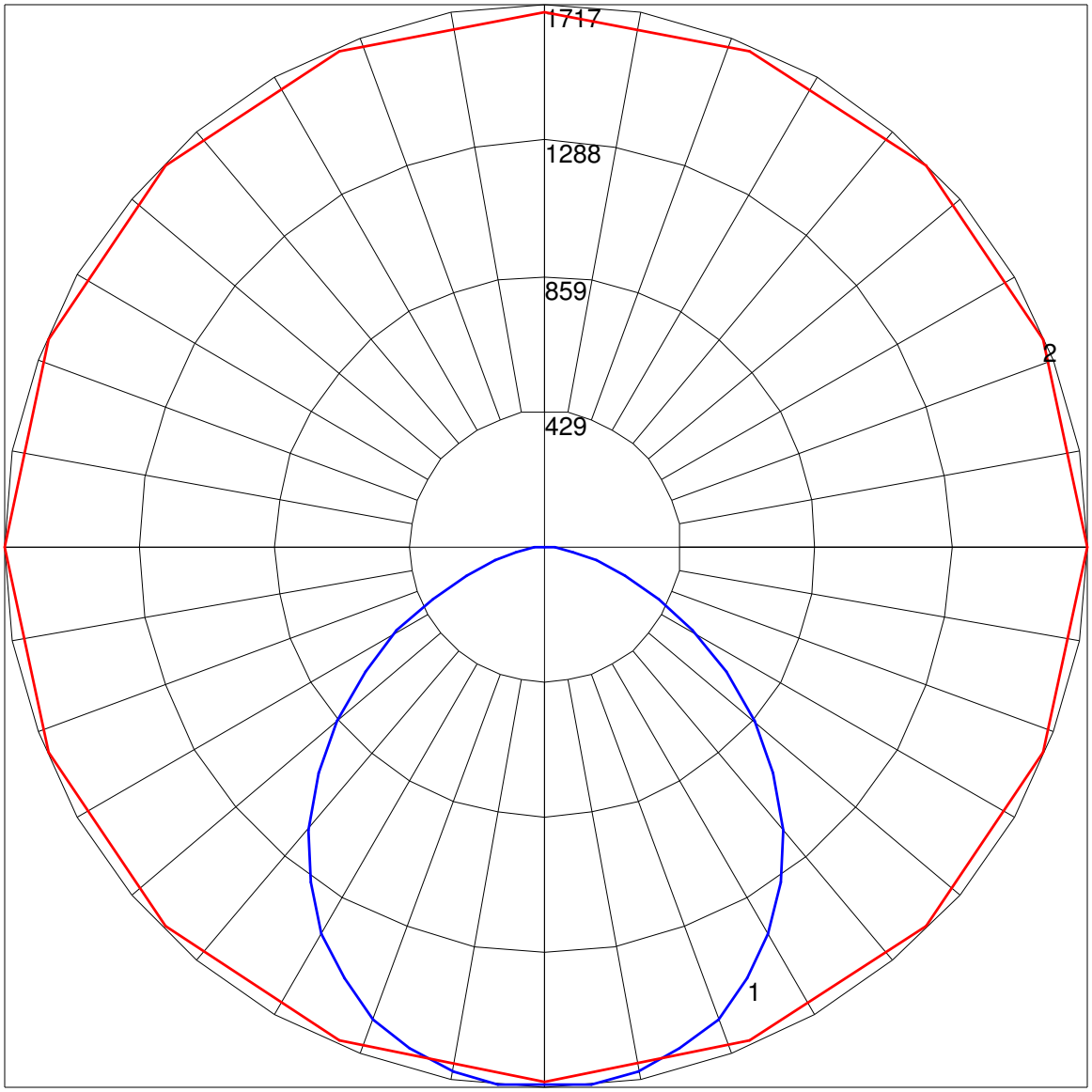
POLAR GRAPH



Maximum Candela = 1717.1 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.)