H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-950-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-L52-950-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4798
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	115
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	4508	4675	4828
55	3811	4199	4481
65	2913	3644	4052
75	2025	3232	3994
85	1153	2636	3295

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1833.584	1833.584	1833.584	1833.584	1833.584
5	1839.749	1828.652	1826.186	1820.020	1820.020
10	1815.088	1803.990	1802.757	1796.592	1795.359
15	1771.930	1759.599	1758.366	1755.900	1754.667
20	1710.276	1699.179	1697.946	1699.179	1699.179
25	1623.961	1612.863	1620.262	1625.194	1620.262
30	1517.917	1512.984	1520.383	1529.014	1522.849
35	1395.842	1394.609	1410.639	1416.804	1422.970
40	1255.271	1255.271	1282.399	1293.497	1303.361
45	1094.971	1094.971	1135.663	1161.558	1172.655
50	926.040	927.273	981.528	1016.055	1032.085
55	750.943	764.507	827.394	864.386	882.882
60	579.546	606.673	669.560	710.252	729.981
65	422.945	458.704	528.990	573.380	588.177
70	284.841	329.231	399.517	445.140	462.403
75	180.029	223.187	287.307	332.931	355.126
80	97.413	134.405	191.127	223.187	245.382
85	34.526	60.421	78.917	78.917	98.646
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	669.93	N.A.	14.00
0-30	1415.64	N.A.	29.50
0-40	2294.94	N.A.	47.80
0-60	3898.77	N.A.	81.30
0-80	4709.89	N.A.	98.20
0-90	4797.66	N.A.	100.00
10-90	4624.11	N.A.	96.40
20-40	1625.02	N.A.	33.90
20-50	2496.93	N.A.	52.00
40-70	2118.73	N.A.	44.20
60-80	811.12	N.A.	16.90
70-80	296.21	N.A.	6.20
80-90	87.77	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	4797.66	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	173.55
10-20	496.38
20-30	745.72
30-40	879.30
40-50	871.92
50-60	731.91
60-70	514.91
70-80	296.21
80-90	87.77
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	99	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	16.2	17.8	16.5	18.1	18.4	17.2	18.8	17.6	19.1	19.4
	3H	17.5	18.9	17.8	19.2	19.6	19.0	20.5	19.4	20.8	21.2
	4H	17.9	19.2	18.3	19.6	20.0	19.8	21.2	20.2	21.5	21.9
	6H	18.1	19.4	18.6	19.8	20.2	20.5	21.8	20.9	22.1	22.5
	8H	18.2	19.4	18.6	19.8	20.2	20.7	21.9	21.2	22.3	22.7
	12H	18.2	19.4	18.7	19.8	20.2	20.9	22.0	21.3	22.4	22.9
4H	2H	16.9	18.2	17.3	18.6	19.0	17.7	19.1	18.1	19.4	19.8
	3H	18.4	19.5	18.8	19.9	20.3	19.8	20.9	20.2	21.3	21.7
	4H	19.0	20.0	19.4	20.4	20.8	20.7	21.7	21.1	22.1	22.6
	6H	19.3	20.2	19.8	20.7	21.1	21.6	22.5	22.0	22.9	23.4
	8H	19.4	20.3	19.9	20.7	21.2	21.9	22.7	22.3	23.1	23.6
	12H	19.5	20.3	20.0	20.7	21.2	22.1	22.8	22.5	23.3	23.8
8H	4H	19.4	20.2	19.9	20.7	21.1	21.0	21.8	21.4	22.2	22.7
	6H	19.9	20.6	20.4	21.1	21.6	21.9	22.6	22.4	23.1	23.6
	8H	20.1	20.7	20.6	21.3	21.7	22.3	23.0	22.9	23.5	24.0
	12H	20.2	20.8	20.7	21.3	21.8	22.6	23.2	23.1	23.6	24.2
12H	4H	19.5	20.2	20.0	20.7	21.2	21.0	21.7	21.4	22.2	22.7
	6H	20.1	20.7	20.6	21.2	21.7	22.0	22.6	22.5	23.1	23.6
	8H	20.3	20.9	20.8	21.4	21.9	22.4	23.0	22.9	23.5	24.0

Maximum UGR = 24.2

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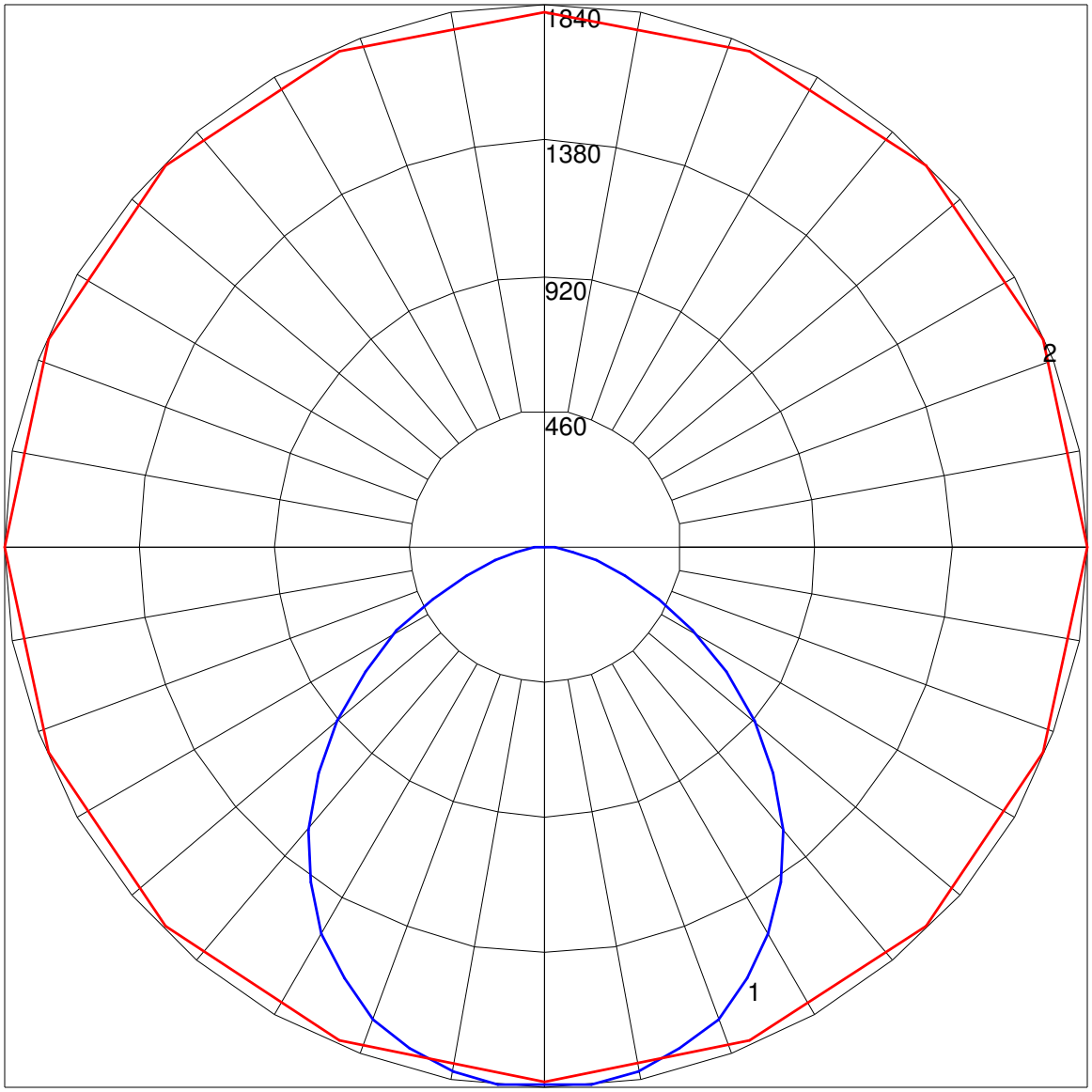
POLAR GRAPH



Maximum Candela = 1839.749 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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