H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L26-835-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-L26-835-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAY

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2924
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	136
Total Luminaire Watts	21.5
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	2747	2849	2942
55	2323	2559	2731
65	1776	2221	2469
75	1234	1969	2434
85	703	1606	2008

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1117.447	1117.447	1117.447	1117.447	1117.447
5	1121.205	1114.442	1112.939	1109.181	1109.181
10	1106.175	1099.412	1098.661	1094.903	1094.152
15	1079.874	1072.359	1071.607	1070.104	1069.353
20	1042.300	1035.536	1034.785	1035.536	1035.536
25	989.696	982.933	987.442	990.448	987.442
30	925.069	922.063	926.572	931.832	928.075
35	850.673	849.921	859.691	863.448	867.205
40	765.004	765.004	781.537	788.300	794.312
45	667.312	667.312	692.111	707.892	714.655
50	564.360	565.111	598.176	619.218	628.987
55	457.650	465.916	504.242	526.786	538.058
60	353.195	369.727	408.052	432.851	444.875
65	257.757	279.550	322.384	349.437	358.455
70	173.591	200.645	243.479	271.283	281.804
75	109.716	136.017	175.094	202.899	216.426
80	59.367	81.911	116.479	136.017	149.544
85	21.041	36.822	48.095	48.095	60.118
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	408.27	N.A.	14.00
0-30	862.74	N.A.	29.50
0-40	1398.62	N.A.	47.80
0-60	2376.04	N.A.	81.30
0-80	2870.36	N.A.	98.20
0-90	2923.85	N.A.	100.00
10-90	2818.09	N.A.	96.40
20-40	990.34	N.A.	33.90
20-50	1521.72	N.A.	52.00
40-70	1291.23	N.A.	44.20
60-80	494.32	N.A.	16.90
70-80	180.52	N.A.	6.20
80-90	53.49	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	2923.85	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	105.77
10-20	302.51
20-30	454.46
30-40	535.88
40-50	531.37
50-60	446.05
60-70	313.80
70-80	180.52
80-90	53.49
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	14.5	16.1	14.8	16.4	16.7	15.5	17.1	15.9	17.4	17.7
	3H	15.8	17.2	16.1	17.5	17.9	17.3	18.8	17.7	19.1	19.5
	4H	16.2	17.5	16.6	17.9	18.3	18.1	19.5	18.5	19.8	20.2
	6H	16.4	17.7	16.9	18.1	18.5	18.8	20.1	19.2	20.4	20.8
	8H	16.5	17.7	16.9	18.1	18.5	19.0	20.2	19.5	20.6	21.0
	12H	16.5	17.7	17.0	18.1	18.5	19.2	20.3	19.6	20.7	21.2
4H	2H	15.2	16.5	15.6	16.9	17.3	16.0	17.4	16.4	17.7	18.1
	3H	16.7	17.8	17.1	18.2	18.6	18.1	19.2	18.5	19.6	20.0
	4H	17.3	18.3	17.7	18.7	19.1	19.0	20.0	19.4	20.4	20.9
	6H	17.6	18.5	18.1	19.0	19.4	19.9	20.8	20.3	21.2	21.7
	8H	17.7	18.6	18.2	19.0	19.5	20.2	21.0	20.6	21.4	21.9
	12H	17.8	18.6	18.3	19.0	19.5	20.4	21.1	20.8	21.6	22.1
8H	4H	17.7	18.5	18.2	19.0	19.4	19.3	20.1	19.7	20.5	21.0
	6H	18.2	18.9	18.7	19.4	19.9	20.2	20.9	20.7	21.4	21.9
	8H	18.4	19.0	18.9	19.6	20.0	20.6	21.3	21.2	21.8	22.3
	12H	18.5	19.1	19.0	19.6	20.1	20.9	21.5	21.4	21.9	22.5
12H	4H	17.8	18.5	18.3	19.0	19.5	19.3	20.0	19.7	20.5	21.0
	6H	18.4	19.0	18.9	19.5	20.0	20.3	20.9	20.8	21.4	21.9
	8H	18.6	19.2	19.1	19.7	20.2	20.7	21.3	21.2	21.8	22.3

Maximum UGR = 22.5

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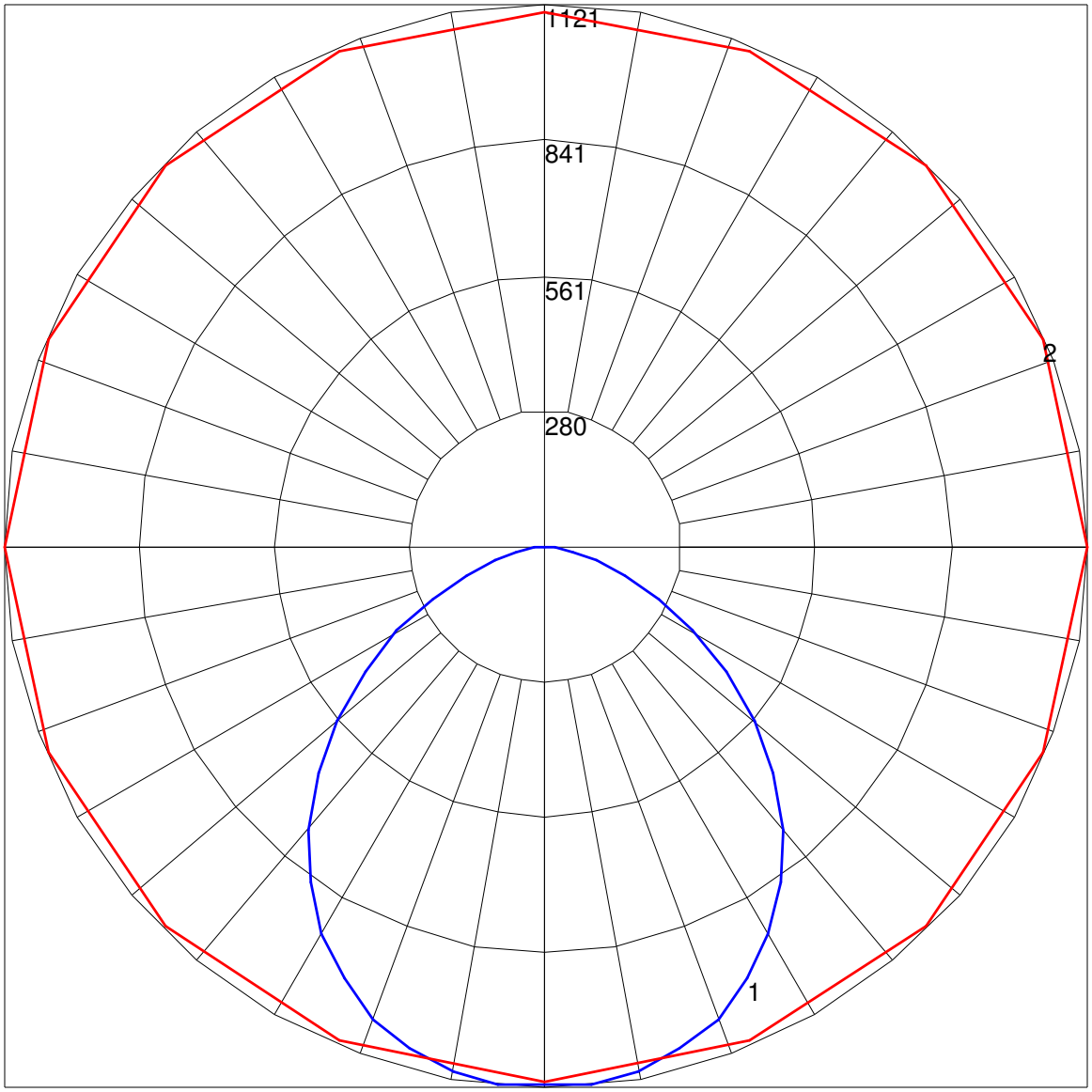
POLAR GRAPH



Maximum Candela = 1121.205 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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