H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-840-RA-(L30)-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] 15 APR 2024
[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-L43-840-RA-(L30)-DIM-UNV
[LAMPCAT] HLM 80 CRI 4000K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3071
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
Total Luminaire Watts	23.5
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	2885	2993	3090
55	2440	2688	2868
65	1865	2332	2593
75	1296	2068	2557
85	738	1687	2109

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1173.625	1173.625	1173.625	1173.625	1173.625
5	1177.571	1170.468	1168.890	1164.943	1164.943
10	1161.786	1154.683	1153.894	1149.947	1149.158
15	1134.162	1126.270	1125.480	1123.902	1123.113
20	1094.699	1087.596	1086.807	1087.596	1087.596
25	1039.451	1032.348	1037.084	1040.241	1037.084
30	971.575	968.418	973.154	978.679	974.732
35	893.439	892.650	902.910	906.856	910.803
40	803.464	803.464	820.827	827.931	834.245
45	700.860	700.860	726.906	743.480	750.583
50	592.732	593.521	628.249	650.348	660.608
55	480.658	489.339	529.591	553.269	565.108
60	370.951	388.314	428.567	454.612	467.240
65	270.715	293.604	338.591	367.005	376.476
70	182.318	210.732	255.719	284.922	295.971
75	115.232	142.856	183.897	213.099	227.306
80	62.351	86.029	122.335	142.856	157.062
85	22.099	38.674	50.512	50.512	63.141
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	428.80	N.A.	14.00
0-30	906.11	N.A.	29.50
0-40	1468.93	N.A.	47.80
0-60	2495.49	N.A.	81.30
0-80	3014.67	N.A.	98.20
0-90	3070.84	N.A.	100.00
10-90	2959.76	N.A.	96.40
20-40	1040.13	N.A.	33.90
20-50	1598.22	N.A.	52.00
40-70	1356.14	N.A.	44.20
60-80	519.17	N.A.	16.90
70-80	189.60	N.A.	6.20
80-90	56.18	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	3070.84	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	111.08
10-20	317.72
20-30	477.31
30-40	562.82
40-50	558.09
50-60	468.48
60-70	329.58
70-80	189.60
80-90	56.18
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	14.7	16.3	15.0	16.6	16.9	15.7	17.3	16.1	17.6	17.9
	3H	16.0	17.4	16.3	17.7	18.1	17.5	19.0	17.9	19.3	19.7
	4H	16.4	17.7	16.8	18.1	18.5	18.3	19.7	18.7	20.0	20.4
	6H	16.6	17.9	17.1	18.3	18.7	19.0	20.3	19.4	20.6	21.0
	8H	16.7	17.9	17.1	18.3	18.7	19.2	20.4	19.7	20.8	21.2
	12H	16.7	17.9	17.2	18.3	18.7	19.4	20.5	19.8	20.9	21.4
4H	2H	15.4	16.7	15.8	17.1	17.5	16.2	17.6	16.6	17.9	18.3
	3H	16.9	18.0	17.3	18.4	18.8	18.3	19.4	18.7	19.8	20.2
	4H	17.5	18.5	17.9	18.9	19.3	19.2	20.2	19.6	20.6	21.1
	6H	17.8	18.7	18.3	19.2	19.6	20.1	21.0	20.5	21.4	21.9
	8H	17.9	18.8	18.4	19.2	19.7	20.4	21.2	20.8	21.6	22.1
	12H	18.0	18.8	18.5	19.2	19.7	20.6	21.3	21.0	21.8	22.3
8H	4H	17.9	18.7	18.4	19.2	19.6	19.5	20.3	19.9	20.7	21.2
	6H	18.4	19.1	18.9	19.6	20.1	20.4	21.1	20.9	21.6	22.1
	8H	18.6	19.2	19.1	19.8	20.2	20.8	21.5	21.4	22.0	22.5
	12H	18.7	19.3	19.2	19.8	20.3	21.1	21.7	21.6	22.1	22.7
12H	4H	18.0	18.7	18.5	19.2	19.7	19.5	20.2	19.9	20.7	21.2
	6H	18.6	19.2	19.1	19.7	20.2	20.5	21.1	21.0	21.6	22.1
	8H	18.8	19.4	19.3	19.9	20.4	20.9	21.5	21.4	22.0	22.5

Maximum UGR = 22.7

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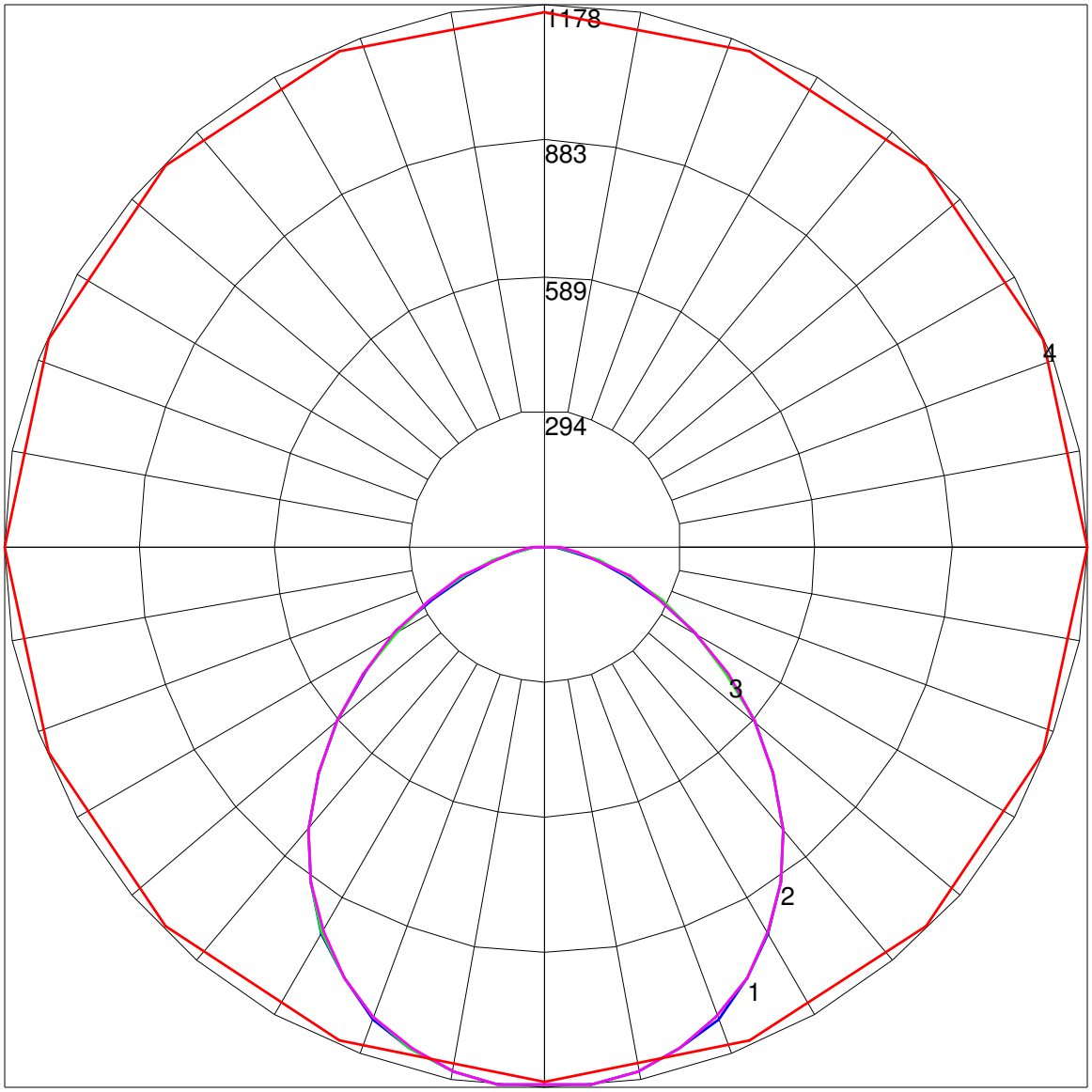
POLAR GRAPH



Maximum Candela = 1177.571 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Vertical Plane Through Horizontal Angles (5 - 185)
3 - Vertical Plane Through Horizontal Angles (10 - 190)
4 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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