H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L38-827-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20790.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2 X 4 RECESSED LED LUMINAIRE WITH
[MORE] FROST SQUARED RIBBED LENS
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L38-827-SA-DIM-UNV
[LAMPCAT] 22 INCH LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] INDOOR
[_SEARCH_MOUNTING] RECESSED

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3779
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	133
Total Luminaire Watts	28.5
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.20
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3376	3272	3247
55	3038	3056	3124
65	2655	2938	3218
75	2143	2966	3701
85	993	3202	3868

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1471.553	1471.553	1471.553	1471.553	1471.553
5	1478.864	1462.617	1454.494	1434.185	1452.869
10	1450.432	1432.967	1422.406	1420.375	1423.219
15	1402.504	1385.445	1376.103	1372.854	1370.417
20	1338.735	1322.082	1306.648	1298.931	1300.149
25	1259.126	1245.316	1238.818	1218.509	1210.792
30	1166.113	1151.897	1137.275	1126.309	1120.216
35	1069.445	1056.447	1038.982	1023.954	1015.424
40	958.561	948.000	929.722	917.944	911.039
45	851.332	839.147	824.931	818.432	818.838
50	738.010	734.355	718.920	721.764	725.419
55	621.440	621.440	625.095	634.843	638.905
60	512.992	515.429	532.082	548.735	558.890
65	400.077	414.699	442.725	471.563	484.967
70	291.630	316.000	356.211	394.797	410.638
75	197.805	222.987	273.758	323.717	341.589
80	103.573	146.627	199.429	252.231	268.884
85	30.869	69.455	99.512	112.915	120.226
90	0.000	1.219	1.625	2.843	1.625

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	526.54	N.A.	13.90
0-30	1094.03	N.A.	29.00
0-40	1744.25	N.A.	46.20
0-60	2947.81	N.A.	78.00
0-80	3676.28	N.A.	97.30
0-90	3778.77	N.A.	100.00
10-90	3640.68	N.A.	96.30
20-40	1217.72	N.A.	32.20
20-50	1858.4	N.A.	49.20
40-70	1642.72	N.A.	43.50
60-80	728.47	N.A.	19.30
70-80	289.31	N.A.	7.70
80-90	102.49	N.A.	2.70
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	3778.77	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	138.09
10-20	388.45
20-30	567.49
30-40	650.23
40-50	640.68
50-60	562.88
60-70	439.16
70-80	289.31
80-90	102.49
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	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	62	55	80	69	61	55	67	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	54	47	60	52	47	58	51	46	56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	64	51	43	37	49	42	36	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	44	35	30	55	43	35	30	42	35	30	41	34	29	40	34	29	27
10	53	40	32	27	52	40	32	27	39	32	27	38	31	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	15.6	17.2	16.0	17.6	17.9	15.9	17.5	16.3	17.9	18.2
	3H	17.3	18.7	17.6	19.1	19.4	18.2	19.7	18.6	20.0	20.3
	4H	17.9	19.2	18.3	19.6	20.0	19.3	20.7	19.7	21.0	21.4
	6H	18.2	19.5	18.7	19.9	20.3	20.3	21.6	20.7	22.0	22.4
	8H	18.3	19.6	18.8	20.0	20.4	20.7	22.0	21.1	22.4	22.8
	12H	18.4	19.6	18.8	20.0	20.4	21.0	22.2	21.4	22.6	23.0
4H	2H	16.3	17.7	16.7	18.1	18.4	16.6	17.9	17.0	18.3	18.7
	3H	18.2	19.4	18.6	19.8	20.2	19.1	20.2	19.5	20.6	21.0
	4H	19.0	20.0	19.4	20.4	20.9	20.3	21.4	20.8	21.8	22.2
	6H	19.5	20.4	20.0	20.9	21.3	21.6	22.5	22.0	23.0	23.4
	8H	19.7	20.5	20.1	21.0	21.4	22.1	22.9	22.5	23.4	23.9
	12H	19.7	20.5	20.2	21.0	21.5	22.4	23.2	22.9	23.7	24.2
8H	4H	19.5	20.4	19.9	20.8	21.3	20.7	21.5	21.1	22.0	22.4
	6H	20.2	20.9	20.7	21.4	21.9	22.1	22.9	22.6	23.3	23.8
	8H	20.5	21.1	21.0	21.6	22.1	22.7	23.4	23.2	23.9	24.4
	12H	20.6	21.2	21.1	21.7	22.3	23.2	23.8	23.7	24.3	24.8
12H	4H	19.6	20.4	20.1	20.9	21.3	20.7	21.5	21.2	22.0	22.4
	6H	20.4	21.1	20.9	21.5	22.1	22.2	22.9	22.7	23.3	23.9
	8H	20.7	21.3	21.3	21.8	22.4	22.9	23.4	23.4	23.9	24.5

Maximum UGR = 24.8

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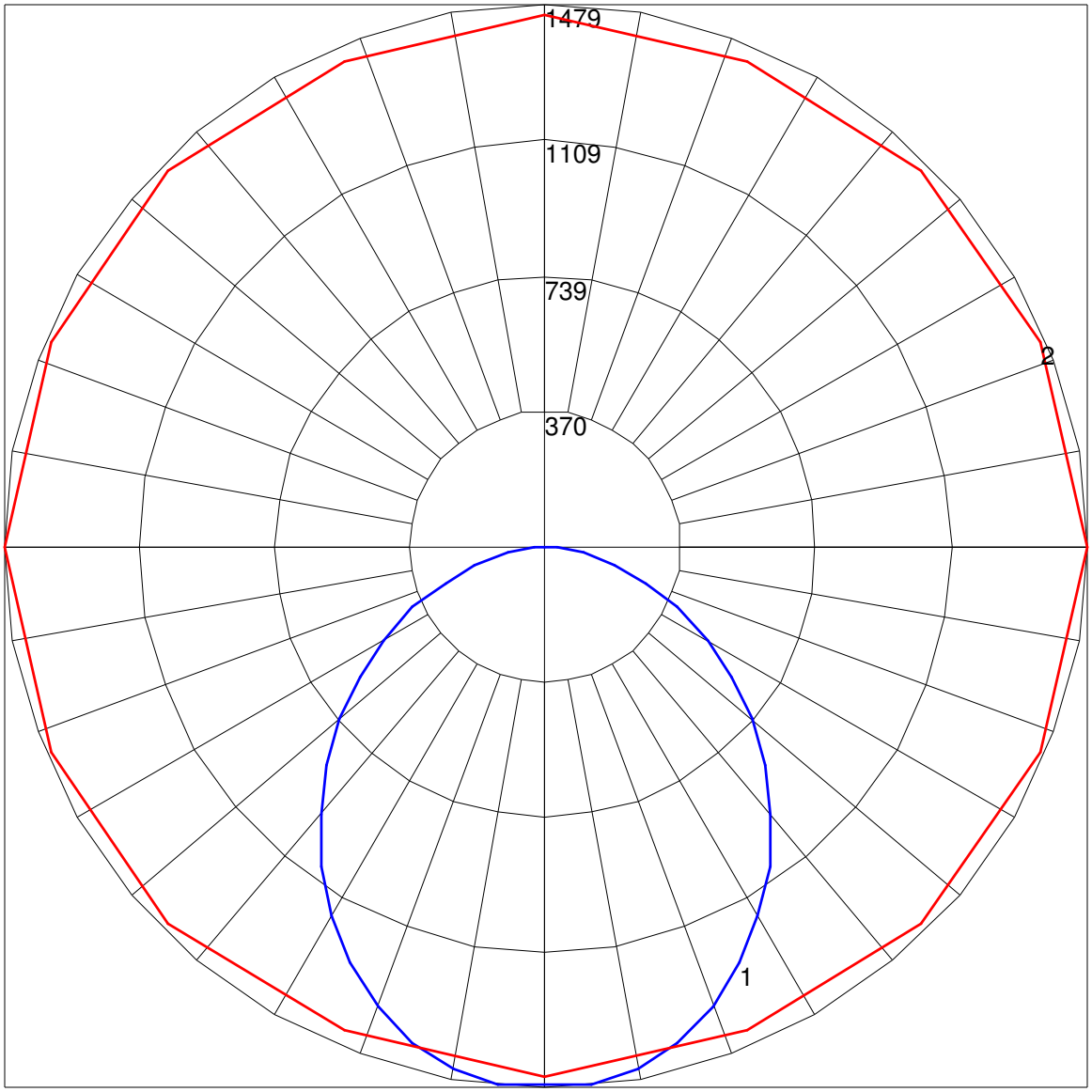
POLAR GRAPH



Maximum Candela = 1478.864 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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