H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-830-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] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1 X 4 RECESSED LED LUMINAIRE
[MORE] W/ FROSTED SQUARE RIBBED LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L27-830-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2678
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
Total Luminaire Watts	18.8
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	2393	2318	2301
55	2153	2166	2214
65	1881	2082	2280
75	1519	2102	2623
85	704	2269	2741

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1042.827	1042.827	1042.827	1042.827	1042.827
5	1048.008	1036.495	1030.738	1016.346	1029.587
10	1027.860	1015.483	1007.999	1006.560	1008.575
15	993.895	981.806	975.186	972.883	971.156
20	948.705	936.904	925.966	920.497	921.361
25	892.289	882.503	877.898	863.506	858.037
30	826.375	816.301	805.939	798.167	793.850
35	757.870	748.660	736.283	725.633	719.588
40	679.291	671.808	658.855	650.508	645.615
45	603.303	594.668	584.593	579.988	580.276
50	522.997	520.406	509.468	511.483	514.074
55	440.388	440.388	442.979	449.887	452.765
60	363.536	365.263	377.064	388.865	396.061
65	283.518	293.880	313.740	334.177	343.675
70	206.666	223.936	252.432	279.776	291.001
75	140.176	158.022	194.001	229.405	242.069
80	73.398	103.909	141.327	178.746	190.547
85	21.875	49.220	70.520	80.018	85.199
90	0.000	0.864	1.151	2.015	1.151

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	373.14	N.A.	13.90
0-30	775.29	N.A.	29.00
0-40	1236.08	N.A.	46.20
0-60	2088.99	N.A.	78.00
0-80	2605.23	N.A.	97.30
0-90	2677.85	N.A.	100.00
10-90	2579.99	N.A.	96.30
20-40	862.94	N.A.	32.20
20-50	1316.97	N.A.	49.20
40-70	1164.12	N.A.	43.50
60-80	516.24	N.A.	19.30
70-80	205.02	N.A.	7.70
80-90	72.63	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	2677.85	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	97.86
10-20	275.28
20-30	402.15
30-40	460.79
40-50	454.02
50-60	398.89
60-70	311.21
70-80	205.02
80-90	72.63
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	56	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	14.4	16.0	14.8	16.4	16.7	14.7	16.3	15.1	16.7	17.0
	3H	16.1	17.5	16.4	17.9	18.2	17.0	18.5	17.4	18.8	19.1
	4H	16.7	18.0	17.1	18.4	18.8	18.1	19.5	18.5	19.8	20.2
	6H	17.0	18.3	17.5	18.7	19.1	19.1	20.4	19.5	20.8	21.2
	8H	17.1	18.4	17.6	18.8	19.2	19.5	20.8	19.9	21.2	21.6
	12H	17.2	18.4	17.6	18.8	19.2	19.8	21.0	20.2	21.4	21.8
4H	2H	15.1	16.5	15.5	16.9	17.2	15.4	16.7	15.8	17.1	17.5
	3H	17.0	18.2	17.4	18.6	19.0	17.9	19.0	18.3	19.4	19.8
	4H	17.8	18.8	18.2	19.2	19.7	19.1	20.2	19.6	20.6	21.0
	6H	18.3	19.2	18.8	19.7	20.1	20.4	21.3	20.8	21.8	22.2
	8H	18.5	19.3	18.9	19.8	20.2	20.9	21.7	21.3	22.2	22.7
	12H	18.5	19.3	19.0	19.8	20.3	21.2	22.0	21.7	22.5	23.0
8H	4H	18.3	19.2	18.7	19.6	20.1	19.5	20.3	19.9	20.8	21.2
	6H	19.0	19.7	19.5	20.2	20.7	20.9	21.7	21.4	22.1	22.6
	8H	19.3	19.9	19.8	20.4	20.9	21.5	22.2	22.0	22.7	23.2
	12H	19.4	20.0	19.9	20.5	21.1	22.0	22.6	22.5	23.1	23.6
12H	4H	18.4	19.2	18.9	19.7	20.1	19.5	20.3	20.0	20.8	21.2
	6H	19.2	19.9	19.7	20.3	20.9	21.0	21.7	21.5	22.1	22.7
	8H	19.5	20.1	20.1	20.6	21.2	21.7	22.2	22.2	22.7	23.3

Maximum UGR = 23.6

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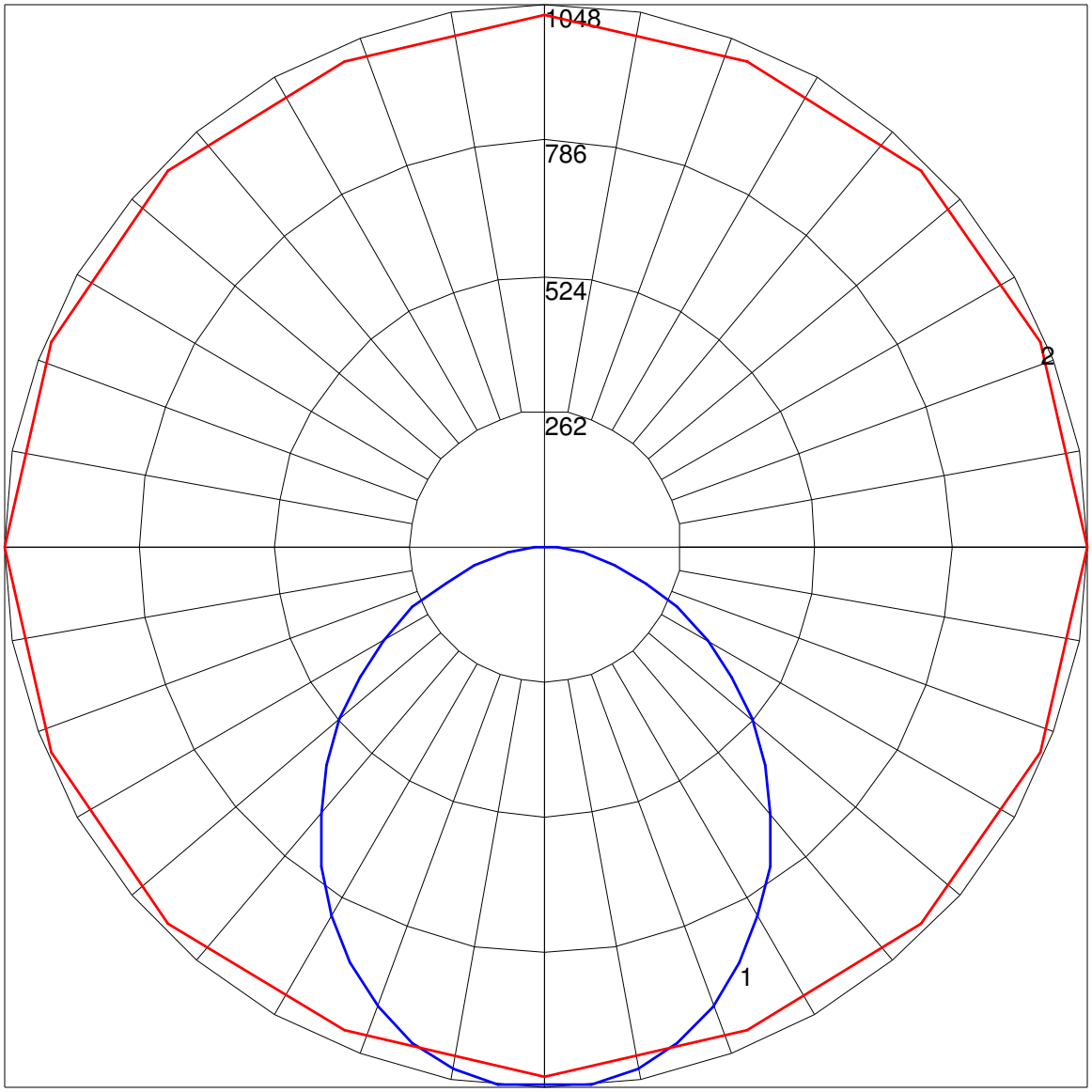
POLAR GRAPH



Maximum Candela = 1048.008 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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