H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L27-827-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] 2023-06-23
[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-L27-827-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2624
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	140
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	2344	2272	2255
55	2110	2122	2169
65	1843	2040	2234
75	1488	2060	2570
85	690	2223	2686

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1021.760	1021.760	1021.760	1021.760	1021.760
5	1026.837	1015.556	1009.915	995.814	1008.787
10	1007.095	994.968	987.636	986.226	988.200
15	973.817	961.972	955.485	953.229	951.537
20	929.540	917.977	907.260	901.902	902.748
25	874.264	864.675	860.163	846.062	840.703
30	809.681	799.810	789.657	782.043	777.813
35	742.560	733.535	721.408	710.974	705.051
40	665.568	658.236	645.545	637.366	632.572
45	591.115	582.654	572.784	568.271	568.553
50	512.431	509.893	499.176	501.150	503.689
55	431.491	431.491	434.030	440.798	443.618
60	356.192	357.884	369.447	381.010	388.060
65	277.790	287.943	307.402	327.426	336.732
70	202.491	219.412	247.332	274.124	285.123
75	137.344	154.829	190.082	224.770	237.179
80	71.915	101.809	138.472	175.135	186.698
85	21.434	48.226	69.095	78.402	83.478
90	0.000	0.846	1.128	1.974	1.128

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	365.60	N.A.	13.90
0-30	759.63	N.A.	29.00
0-40	1211.11	N.A.	46.20
0-60	2046.79	N.A.	78.00
0-80	2552.6	N.A.	97.30
0-90	2623.76	N.A.	100.00
10-90	2527.87	N.A.	96.30
20-40	845.51	N.A.	32.20
20-50	1290.36	N.A.	49.20
40-70	1140.61	N.A.	43.50
60-80	505.81	N.A.	19.30
70-80	200.88	N.A.	7.70
80-90	71.16	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	2623.76	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	95.88
10-20	269.72
20-30	394.03
30-40	451.48
40-50	444.85
50-60	390.83
60-70	304.93
70-80	200.88
80-90	71.16
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	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	22.9
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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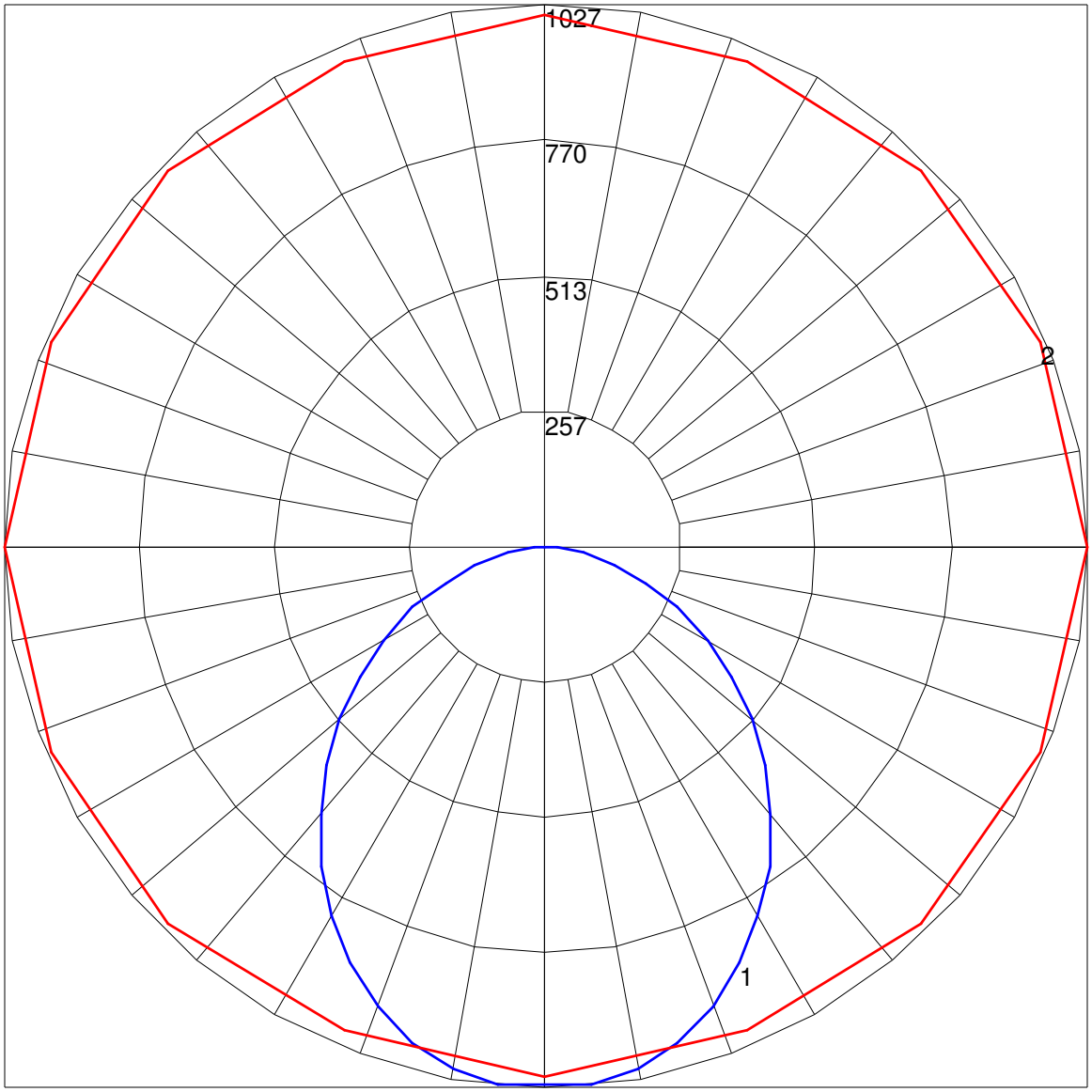
POLAR GRAPH



Maximum Candela = 1026.837 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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