H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-850-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-L45-850-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4712
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	155
Total Luminaire Watts	30.4
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	4211	4080	4050
55	3789	3811	3896
65	3311	3664	4013
75	2673	3699	4616
85	1239	3993	4824

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1835.143	1835.143	1835.143	1835.143	1835.143
5	1844.260	1823.999	1813.869	1788.542	1811.842
10	1808.803	1787.023	1773.853	1771.320	1774.866
15	1749.033	1727.759	1716.109	1712.057	1709.018
20	1669.509	1648.741	1629.493	1619.869	1621.389
25	1570.230	1553.008	1544.903	1519.577	1509.953
30	1454.235	1436.507	1418.272	1404.596	1396.998
35	1333.682	1317.473	1295.693	1276.951	1266.314
40	1195.401	1182.231	1159.437	1144.748	1136.137
45	1061.678	1046.482	1028.754	1020.649	1021.156
50	920.357	915.798	896.550	900.096	904.655
55	774.984	774.984	779.543	791.700	796.765
60	639.742	642.781	663.549	684.316	696.979
65	498.928	517.163	552.113	588.076	604.792
70	363.685	394.077	444.223	492.343	512.097
75	246.678	278.083	341.398	403.701	425.988
80	129.164	182.856	248.704	314.552	335.320
85	38.496	86.616	124.099	140.814	149.932
90	0.000	1.520	2.026	3.546	2.026

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	656.64	N.A.	13.90
0-30	1364.34	N.A.	29.00
0-40	2175.22	N.A.	46.20
0-60	3676.16	N.A.	78.00
0-80	4584.61	N.A.	97.30
0-90	4712.42	N.A.	100.00
10-90	4540.21	N.A.	96.30
20-40	1518.59	N.A.	32.20
20-50	2317.57	N.A.	49.20
40-70	2048.6	N.A.	43.50
60-80	908.46	N.A.	19.30
70-80	360.79	N.A.	7.70
80-90	127.81	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	4712.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	172.21
10-20	484.43
20-30	707.70
30-40	810.89
40-50	798.98
50-60	701.95
60-70	547.67
70-80	360.79
80-90	127.81
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	104	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	83	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	37	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	16.4	18.0	16.8	18.4	18.7	16.7	18.3	17.1	18.7	19.0
	3H	18.1	19.5	18.4	19.9	20.2	19.0	20.5	19.4	20.8	21.1
	4H	18.7	20.0	19.1	20.4	20.8	20.1	21.5	20.5	21.8	22.2
	6H	19.0	20.3	19.5	20.7	21.1	21.1	22.4	21.5	22.8	23.2
	8H	19.1	20.4	19.6	20.8	21.2	21.5	22.8	21.9	23.2	23.6
	12H	19.2	20.4	19.6	20.8	21.2	21.8	23.0	22.2	23.4	23.8
4H	2H	17.1	18.5	17.5	18.9	19.2	17.4	18.7	17.8	19.1	19.5
	3H	19.0	20.2	19.4	20.6	21.0	19.9	21.0	20.3	21.4	21.8
	4H	19.8	20.8	20.2	21.2	21.7	21.1	22.2	21.6	22.6	23.0
	6H	20.3	21.2	20.8	21.7	22.1	22.4	23.3	22.8	23.8	24.2
	8H	20.5	21.3	20.9	21.8	22.2	22.9	23.7	23.3	24.2	24.7
	12H	20.5	21.3	21.0	21.8	22.3	23.2	24.0	23.7	24.5	24.9
8H	4H	20.3	21.2	20.7	21.6	22.1	21.5	22.3	21.9	22.8	23.2
	6H	21.0	21.7	21.5	22.2	22.7	22.9	23.7	23.4	24.1	24.6
	8H	21.3	21.9	21.8	22.4	22.9	23.5	24.2	24.0	24.7	25.2
	12H	21.4	22.0	21.9	22.5	23.1	24.0	24.6	24.5	25.1	25.6
12H	4H	20.4	21.2	20.9	21.7	22.1	21.5	22.3	22.0	22.8	23.2
	6H	21.2	21.9	21.7	22.3	22.9	23.0	23.7	23.5	24.1	24.7
	8H	21.5	22.1	22.1	22.6	23.2	23.7	24.2	24.2	24.7	25.3

Maximum UGR = 25.6

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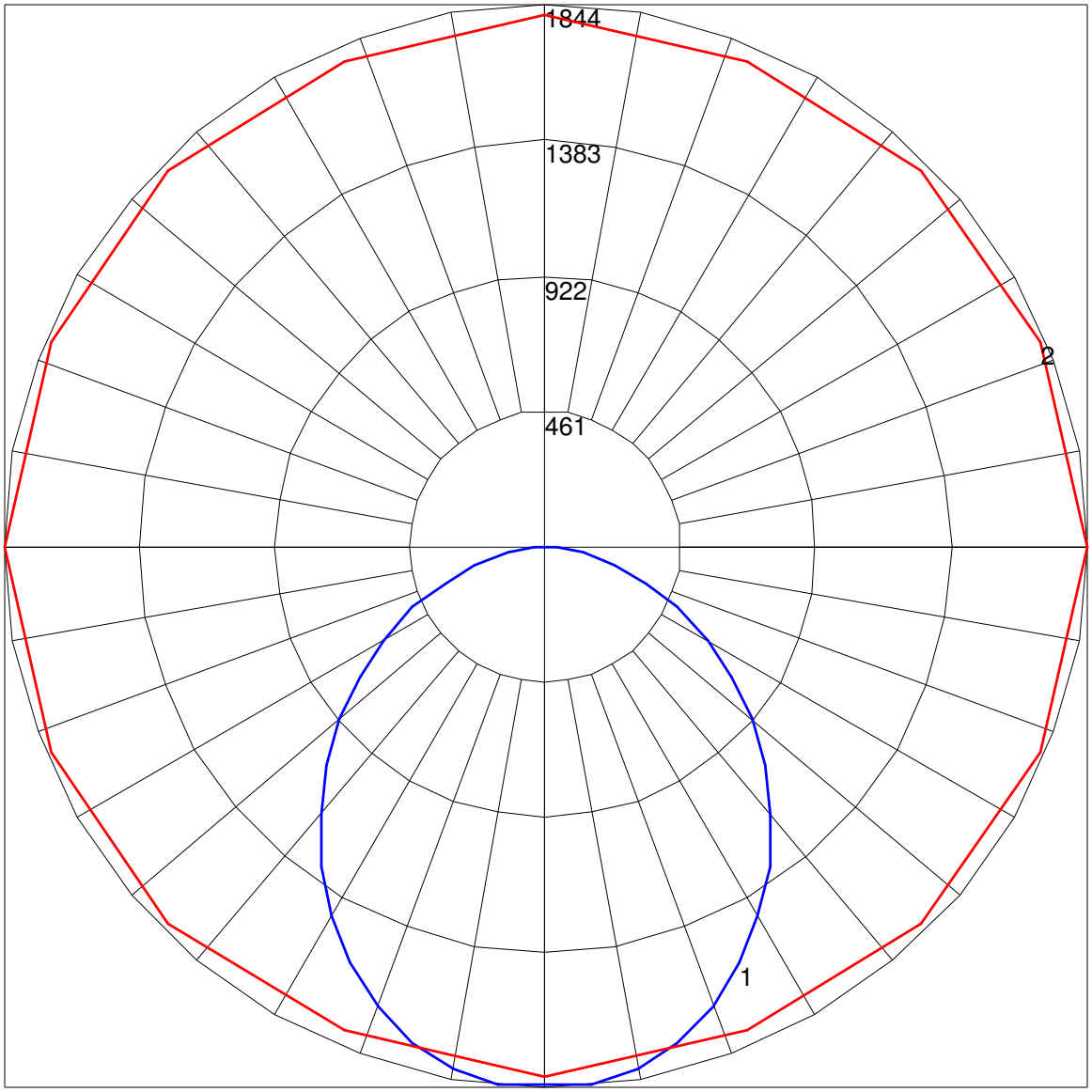
POLAR GRAPH



Maximum Candela = 1844.26 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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