H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-927-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-L45-927-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3645
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	120
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	3257	3156	3133
55	2931	2948	3014
65	2561	2834	3105
75	2068	2862	3571
85	958	3089	3732

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1419.639	1419.639	1419.639	1419.639	1419.639
5	1426.692	1411.018	1403.182	1383.589	1401.614
10	1399.263	1382.414	1372.226	1370.267	1373.010
15	1353.026	1336.569	1327.556	1324.422	1322.071
20	1291.507	1275.441	1260.552	1253.107	1254.282
25	1214.706	1201.384	1195.114	1175.522	1168.077
30	1124.975	1111.260	1097.154	1086.574	1080.697
35	1031.717	1019.178	1002.329	987.830	979.602
40	924.744	914.556	896.923	885.560	878.899
45	821.298	809.543	795.828	789.559	789.951
50	711.975	708.448	693.558	696.301	699.827
55	599.516	599.516	603.043	612.447	616.365
60	494.895	497.246	513.311	529.377	539.173
65	385.963	400.069	427.106	454.927	467.858
70	281.342	304.852	343.644	380.869	396.151
75	190.826	215.121	264.101	312.297	329.538
80	99.919	141.454	192.394	243.333	259.399
85	29.780	67.005	96.001	108.932	115.985
90	0.000	1.176	1.567	2.743	1.567

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	507.96	N.A.	13.90
0-30	1055.43	N.A.	29.00
0-40	1682.72	N.A.	46.20
0-60	2843.82	N.A.	78.00
0-80	3546.59	N.A.	97.30
0-90	3645.46	N.A.	100.00
10-90	3512.24	N.A.	96.30
20-40	1174.76	N.A.	32.20
20-50	1792.84	N.A.	49.20
40-70	1584.76	N.A.	43.50
60-80	702.77	N.A.	19.30
70-80	279.10	N.A.	7.70
80-90	98.87	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	3645.46	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	133.22
10-20	374.74
20-30	547.47
30-40	627.29
40-50	618.08
50-60	543.02
60-70	423.67
70-80	279.10
80-90	98.87
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	15.5	17.1	15.9	17.5	17.8	15.8	17.4	16.2	17.8	18.1
	3H	17.2	18.6	17.5	19.0	19.3	18.1	19.6	18.5	19.9	20.2
	4H	17.8	19.1	18.2	19.5	19.9	19.2	20.6	19.6	20.9	21.3
	6H	18.1	19.4	18.6	19.8	20.2	20.2	21.5	20.6	21.9	22.3
	8H	18.2	19.5	18.7	19.9	20.3	20.6	21.9	21.0	22.3	22.7
	12H	18.3	19.5	18.7	19.9	20.3	20.9	22.1	21.3	22.5	22.9
4H	2H	16.2	17.6	16.6	18.0	18.3	16.5	17.8	16.9	18.2	18.6
	3H	18.1	19.3	18.5	19.7	20.1	19.0	20.1	19.4	20.5	20.9
	4H	18.9	19.9	19.3	20.3	20.8	20.2	21.3	20.7	21.7	22.1
	6H	19.4	20.3	19.9	20.8	21.2	21.5	22.4	21.9	22.9	23.3
	8H	19.6	20.4	20.0	20.9	21.3	22.0	22.8	22.4	23.3	23.8
	12H	19.6	20.4	20.1	20.9	21.4	22.3	23.1	22.8	23.6	24.0
8H	4H	19.4	20.3	19.8	20.7	21.2	20.6	21.4	21.0	21.9	22.3
	6H	20.1	20.8	20.6	21.3	21.8	22.0	22.8	22.5	23.2	23.7
	8H	20.4	21.0	20.9	21.5	22.0	22.6	23.3	23.1	23.8	24.3
	12H	20.5	21.1	21.0	21.6	22.2	23.1	23.7	23.6	24.2	24.7
12H	4H	19.5	20.3	20.0	20.8	21.2	20.6	21.4	21.1	21.9	22.3
	6H	20.3	21.0	20.8	21.4	22.0	22.1	22.8	22.6	23.2	23.8
	8H	20.6	21.2	21.2	21.7	22.3	22.8	23.3	23.3	23.8	24.4

Maximum UGR = 24.7

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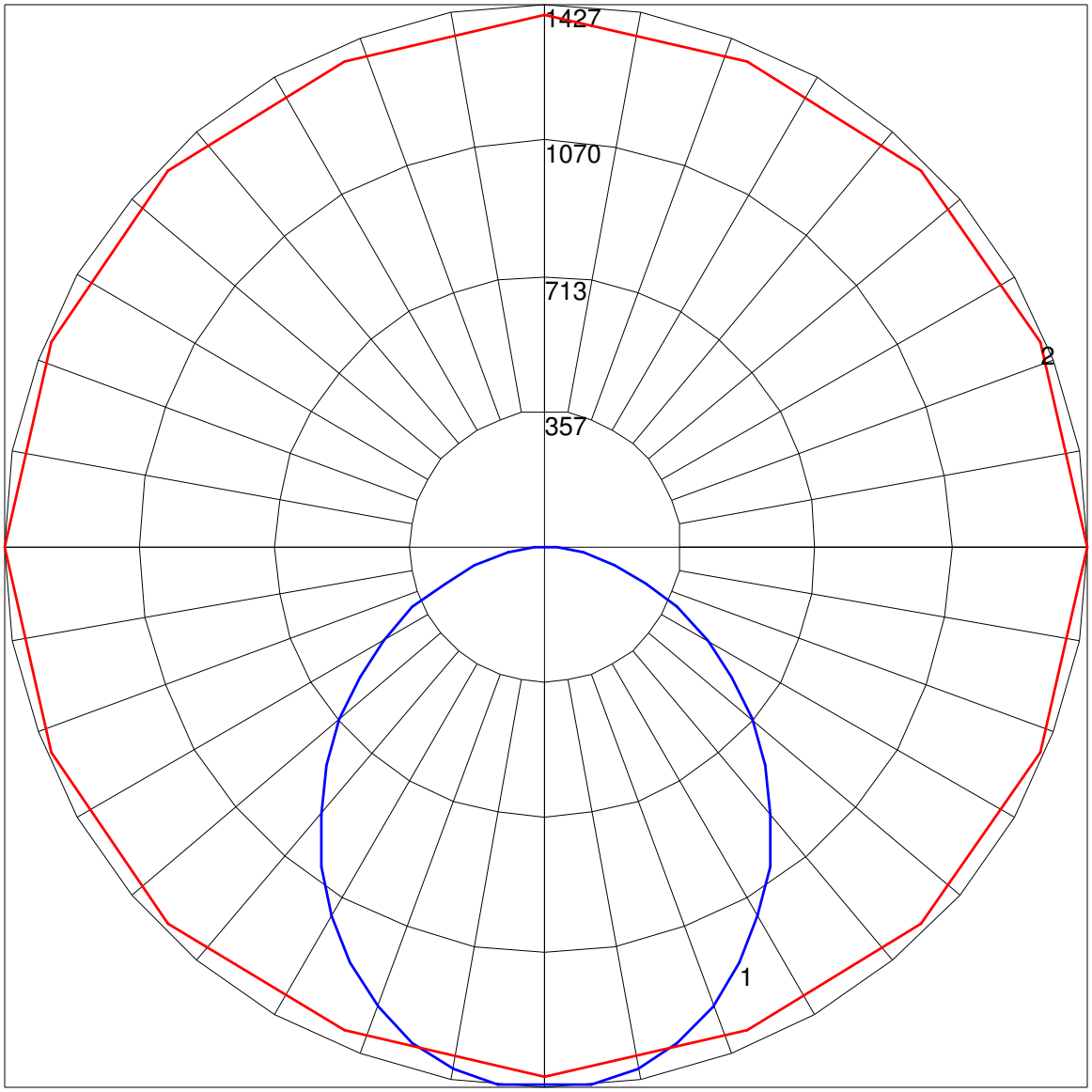
POLAR GRAPH



Maximum Candela = 1426.692 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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