H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-950-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-L45-950-SA-DIM-UNV
[LAMPCAT] HLM 22" LED ARRAYS

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4001
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	132
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	3575	3464	3439
55	3217	3236	3308
65	2811	3111	3407
75	2269	3141	3919
85	1052	3390	4096

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1558.140	1558.140	1558.140	1558.140	1558.140
5	1565.881	1548.678	1540.077	1518.574	1538.357
10	1535.776	1517.283	1506.102	1503.951	1506.962
15	1485.028	1466.965	1457.074	1453.633	1451.053
20	1417.507	1399.875	1383.532	1375.361	1376.651
25	1333.214	1318.592	1311.710	1290.207	1282.036
30	1234.728	1219.676	1204.193	1192.581	1186.130
35	1132.372	1118.609	1100.117	1084.204	1075.172
40	1014.963	1003.781	984.428	971.956	964.645
45	901.425	888.523	873.470	866.589	867.019
50	781.435	777.565	761.222	764.233	768.103
55	658.006	658.006	661.876	672.198	676.499
60	543.177	545.758	563.390	581.023	591.775
65	423.618	439.100	468.775	499.310	513.502
70	308.790	334.594	377.171	418.027	434.800
75	209.444	236.108	289.867	342.765	361.688
80	109.668	155.255	211.164	267.073	284.706
85	32.685	73.542	105.367	119.559	127.300
90	0.000	1.290	1.720	3.010	1.720

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	557.52	N.A.	13.90
0-30	1158.4	N.A.	29.00
0-40	1846.89	N.A.	46.20
0-60	3121.26	N.A.	78.00
0-80	3892.6	N.A.	97.30
0-90	4001.11	N.A.	100.00
10-90	3854.9	N.A.	96.30
20-40	1289.37	N.A.	32.20
20-50	1967.75	N.A.	49.20
40-70	1739.38	N.A.	43.50
60-80	771.33	N.A.	19.30
70-80	306.33	N.A.	7.70
80-90	108.52	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	4001.11	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	146.22
10-20	411.30
20-30	600.88
30-40	688.49
40-50	678.38
50-60	596.00
60-70	465.00
70-80	306.33
80-90	108.52
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	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	15.8	17.4	16.2	17.8	18.1	16.1	17.7	16.5	18.1	18.4
	3H	17.5	18.9	17.8	19.3	19.6	18.4	19.9	18.8	20.2	20.5
	4H	18.1	19.4	18.5	19.8	20.2	19.5	20.9	19.9	21.2	21.6
	6H	18.4	19.7	18.9	20.1	20.5	20.5	21.8	20.9	22.2	22.6
	8H	18.5	19.8	19.0	20.2	20.6	20.9	22.2	21.3	22.6	23.0
	12H	18.6	19.8	19.0	20.2	20.6	21.2	22.4	21.6	22.8	23.2
4H	2H	16.5	17.9	16.9	18.3	18.6	16.8	18.1	17.2	18.5	18.9
	3H	18.4	19.6	18.8	20.0	20.4	19.3	20.4	19.7	20.8	21.2
	4H	19.2	20.2	19.6	20.6	21.1	20.5	21.6	21.0	22.0	22.4
	6H	19.7	20.6	20.2	21.1	21.5	21.8	22.7	22.2	23.2	23.6
	8H	19.9	20.7	20.3	21.2	21.6	22.3	23.2	22.7	23.6	24.1
	12H	19.9	20.7	20.4	21.2	21.7	22.6	23.4	23.1	23.9	24.4
8H	4H	19.7	20.6	20.1	21.0	21.5	20.9	21.7	21.3	22.2	22.6
	6H	20.4	21.1	20.9	21.6	22.1	22.3	23.1	22.8	23.5	24.0
	8H	20.7	21.3	21.2	21.8	22.3	22.9	23.6	23.4	24.1	24.6
	12H	20.8	21.4	21.3	21.9	22.5	23.4	24.0	23.9	24.5	25.0
12H	4H	19.8	20.6	20.3	21.1	21.5	20.9	21.7	21.4	22.2	22.6
	6H	20.6	21.3	21.1	21.7	22.3	22.4	23.1	22.9	23.5	24.1
	8H	20.9	21.5	21.5	22.0	22.6	23.1	23.6	23.6	24.1	24.7

Maximum UGR = 25.0

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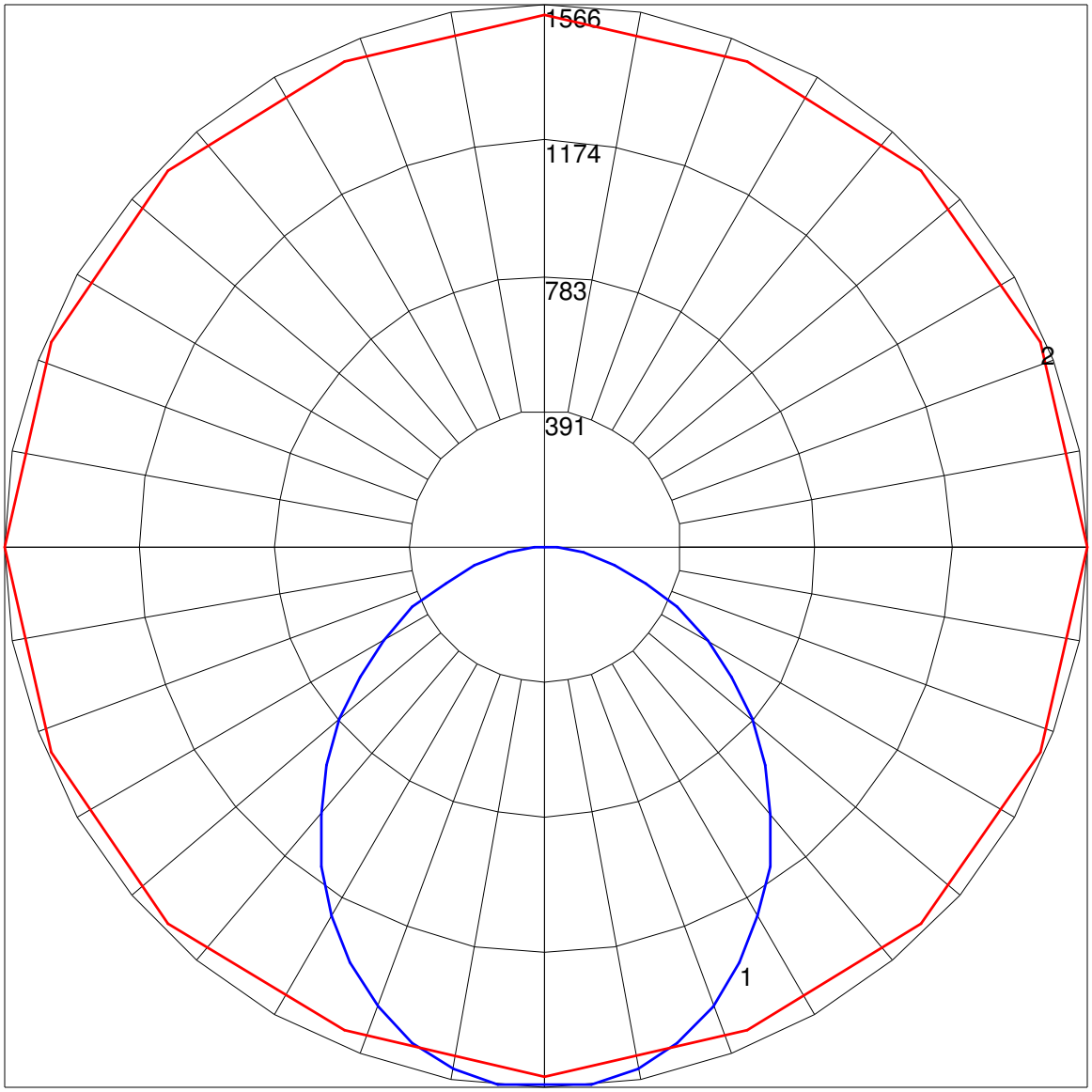
POLAR GRAPH



Maximum Candela = 1565.881 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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