H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-950-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19323.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1x4'RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/WHITE RIBBED ACRYLIC LENS
[MORE] 0-10V LED DRIVER
[LUMCAT] PT-14-L45-950-RA-DIM-UNV
[LAMPCAT] 22" LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Architectural, Office, Direct
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	3884
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	128
Total Luminaire Watts	30.4
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.26
Spacing Criterion (Diagonal)	1.36
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	0.94 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3635	3797	3852
55	3208	3526	3675
65	2792	3309	3395
75	2029	2842	2963
85	925	1521	1789

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1415.577	1415.577	1415.577	1415.577	1415.577
5	1447.547	1436.890	1431.562	1418.241	1410.249
10	1422.681	1414.689	1412.025	1397.816	1390.711
15	1383.607	1376.502	1380.054	1363.181	1363.181
20	1327.658	1324.994	1331.211	1315.225	1320.554
25	1265.494	1259.277	1271.710	1260.165	1256.613
30	1192.672	1181.128	1198.889	1192.672	1190.896
35	1101.202	1092.321	1115.411	1110.970	1116.299
40	994.634	992.858	1017.723	1021.276	1016.835
45	878.297	880.961	917.372	925.365	930.693
50	754.856	768.177	806.364	825.901	825.901
55	628.751	653.616	690.915	729.102	720.221
60	515.078	536.392	580.795	611.877	607.437
65	403.182	421.831	477.779	499.981	490.212
70	287.733	322.368	368.547	379.204	374.764
75	179.389	225.569	251.323	261.979	261.979
80	91.471	134.098	143.867	151.859	145.643
85	27.530	52.396	45.291	49.732	53.284
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	522.74	N.A.	13.50
0-30	1104.64	N.A.	28.40
0-40	1796.11	N.A.	46.20
0-60	3109.42	N.A.	80.00
0-80	3821.55	N.A.	98.40
0-90	3884.42	N.A.	100.00
10-90	3748.94	N.A.	96.50
20-40	1273.38	N.A.	32.80
20-50	1972.69	N.A.	50.80
40-70	1770.29	N.A.	45.60
60-80	712.13	N.A.	18.30
70-80	255.15	N.A.	6.60
80-90	62.87	N.A.	1.60
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	3884.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	135.48
10-20	387.26
20-30	581.90
30-40	691.48
40-50	699.32
50-60	613.99
60-70	456.99
70-80	255.15
80-90	62.87
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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	38	33	43	37	32	31
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	16.0	17.6	16.3	17.9	18.2	16.8	18.4	17.2	18.8	19.1
	3H	17.5	19.0	17.9	19.3	19.7	18.6	20.1	19.0	20.4	20.8
	4H	18.0	19.4	18.4	19.8	20.1	19.3	20.6	19.7	21.0	21.4
	6H	18.3	19.6	18.8	20.0	20.4	19.7	21.0	20.1	21.3	21.7
	8H	18.4	19.6	18.8	20.0	20.4	19.8	21.0	20.2	21.4	21.8
	12H	18.4	19.6	18.9	20.0	20.4	19.9	21.1	20.3	21.4	21.9
4H	2H	16.7	18.1	17.1	18.4	18.8	17.4	18.8	17.8	19.1	19.5
	3H	18.5	19.7	18.9	20.1	20.5	19.4	20.6	19.8	21.0	21.4
	4H	19.2	20.2	19.6	20.6	21.1	20.2	21.2	20.6	21.7	22.1
	6H	19.6	20.5	20.1	21.0	21.4	20.8	21.7	21.2	22.1	22.6
	8H	19.7	20.6	20.2	21.0	21.5	20.9	21.8	21.4	22.2	22.7
	12H	19.8	20.6	20.3	21.0	21.5	21.0	21.8	21.5	22.3	22.8
8H	4H	19.6	20.4	20.0	20.9	21.3	20.5	21.3	20.9	21.8	22.2
	6H	20.2	20.9	20.6	21.3	21.8	21.2	21.9	21.7	22.4	22.8
	8H	20.3	21.0	20.8	21.5	22.0	21.4	22.0	21.9	22.5	23.0
	12H	20.5	21.0	21.0	21.5	22.1	21.5	22.1	22.0	22.6	23.2
12H	4H	19.6	20.4	20.1	20.9	21.3	20.5	21.3	21.0	21.7	22.2
	6H	20.2	20.9	20.7	21.3	21.9	21.2	21.8	21.7	22.3	22.8
	8H	20.5	21.0	21.0	21.5	22.1	21.5	22.0	22.0	22.5	23.1

Maximum UGR = 23.2

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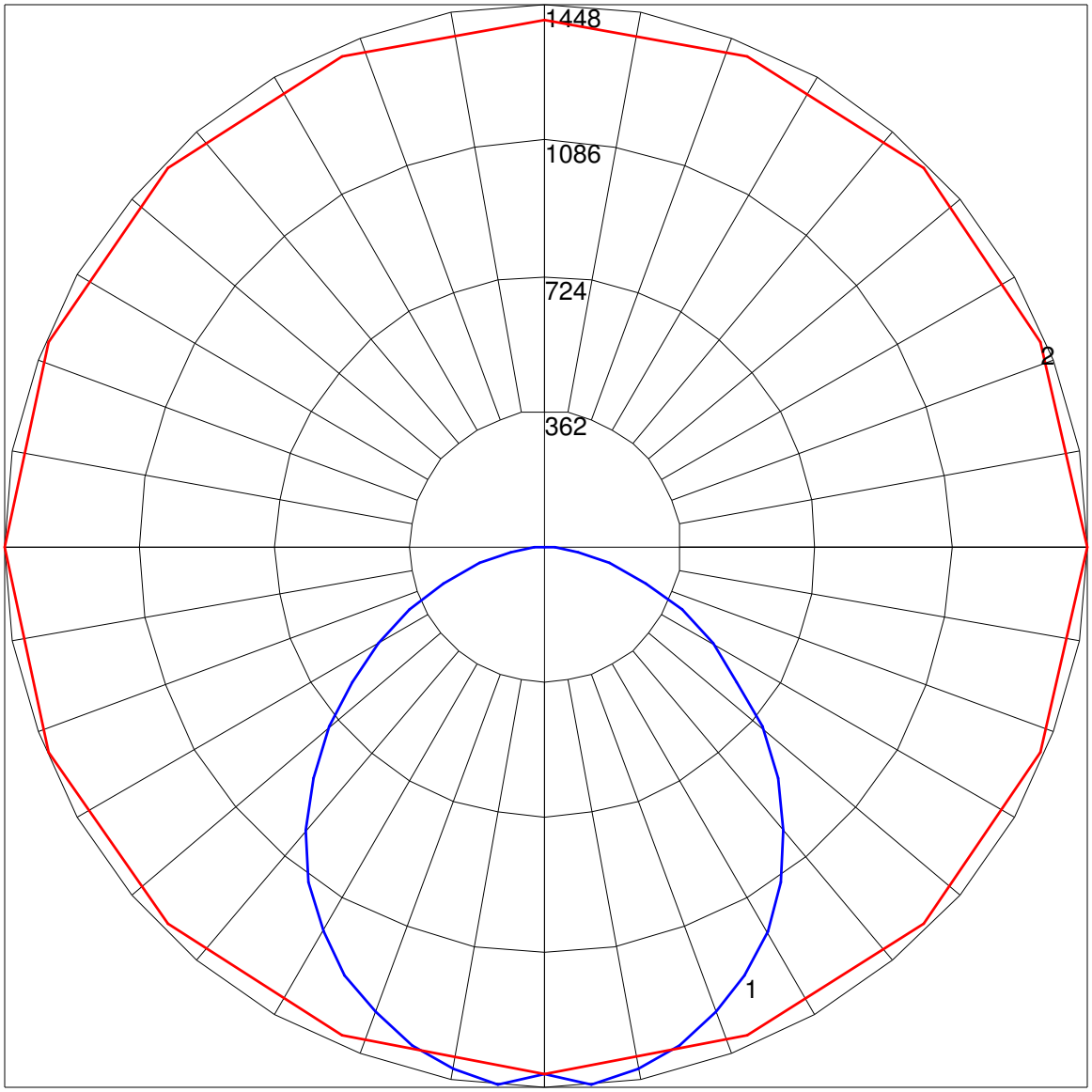
POLAR GRAPH



Maximum Candela = 1447.547 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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