H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-14-L45-830-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-L45-830-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	4273
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	141
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	3999	4177	4238
55	3529	3878	4043
65	3072	3640	3735
75	2232	3126	3259
85	1017	1673	1968

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1557.135	1557.135	1557.135	1557.135	1557.135
5	1592.302	1580.580	1574.718	1560.065	1551.273
10	1564.950	1556.158	1553.227	1537.597	1529.782
15	1521.967	1514.152	1518.060	1499.499	1499.499
20	1460.424	1457.494	1464.332	1446.748	1452.609
25	1392.043	1385.205	1398.881	1386.182	1382.274
30	1311.940	1299.240	1318.778	1311.940	1309.986
35	1211.322	1201.553	1226.952	1222.067	1227.929
40	1094.097	1092.143	1119.496	1123.403	1118.519
45	966.127	969.057	1009.109	1017.901	1023.762
50	830.342	844.995	887.000	908.491	908.491
55	691.626	718.978	760.007	802.012	792.244
60	566.586	590.031	638.875	673.065	668.181
65	443.500	464.014	525.557	549.979	539.234
70	316.507	354.605	405.402	417.125	412.240
75	197.328	248.126	276.455	288.177	288.177
80	100.618	147.508	158.253	167.045	160.207
85	30.283	57.635	49.820	54.705	58.612
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	575.01	N.A.	13.50
0-30	1215.1	N.A.	28.40
0-40	1975.73	N.A.	46.20
0-60	3420.36	N.A.	80.00
0-80	4203.71	N.A.	98.40
0-90	4272.86	N.A.	100.00
10-90	4123.83	N.A.	96.50
20-40	1400.71	N.A.	32.80
20-50	2169.96	N.A.	50.80
40-70	1947.32	N.A.	45.60
60-80	783.35	N.A.	18.30
70-80	280.66	N.A.	6.60
80-90	69.15	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	4272.86	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	149.03
10-20	425.98
20-30	640.09
30-40	760.62
40-50	769.25
50-60	675.39
60-70	502.69
70-80	280.66
80-90	69.15
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	72	70
3	91	80	72	66	88	78	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	54	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	54	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	16.3	17.9	16.6	18.2	18.5	17.1	18.7	17.5	19.1	19.4
	3H	17.8	19.3	18.2	19.6	20.0	18.9	20.4	19.3	20.7	21.1
	4H	18.3	19.7	18.7	20.1	20.4	19.6	20.9	20.0	21.3	21.7
	6H	18.6	19.9	19.1	20.3	20.7	20.0	21.3	20.4	21.6	22.0
	8H	18.7	19.9	19.1	20.3	20.7	20.1	21.3	20.5	21.7	22.1
	12H	18.7	19.9	19.2	20.3	20.7	20.2	21.4	20.6	21.7	22.2
4H	2H	17.0	18.4	17.4	18.7	19.1	17.7	19.1	18.1	19.4	19.8
	3H	18.8	20.0	19.2	20.4	20.8	19.7	20.9	20.1	21.3	21.7
	4H	19.5	20.5	19.9	20.9	21.4	20.5	21.5	20.9	22.0	22.4
	6H	19.9	20.8	20.4	21.3	21.7	21.1	22.0	21.5	22.4	22.9
	8H	20.0	20.9	20.5	21.3	21.8	21.2	22.1	21.7	22.5	23.0
	12H	20.1	20.9	20.6	21.3	21.8	21.3	22.1	21.8	22.6	23.1
8H	4H	19.9	20.7	20.3	21.2	21.6	20.8	21.6	21.2	22.1	22.5
	6H	20.5	21.2	20.9	21.6	22.1	21.5	22.2	22.0	22.7	23.1
	8H	20.6	21.3	21.1	21.8	22.3	21.7	22.3	22.2	22.8	23.3
	12H	20.8	21.3	21.3	21.8	22.4	21.8	22.4	22.3	22.9	23.5
12H	4H	19.9	20.7	20.4	21.2	21.6	20.8	21.6	21.3	22.0	22.5
	6H	20.5	21.2	21.0	21.6	22.2	21.5	22.1	22.0	22.6	23.1
	8H	20.8	21.3	21.3	21.8	22.4	21.8	22.3	22.3	22.8	23.4

Maximum UGR = 23.5

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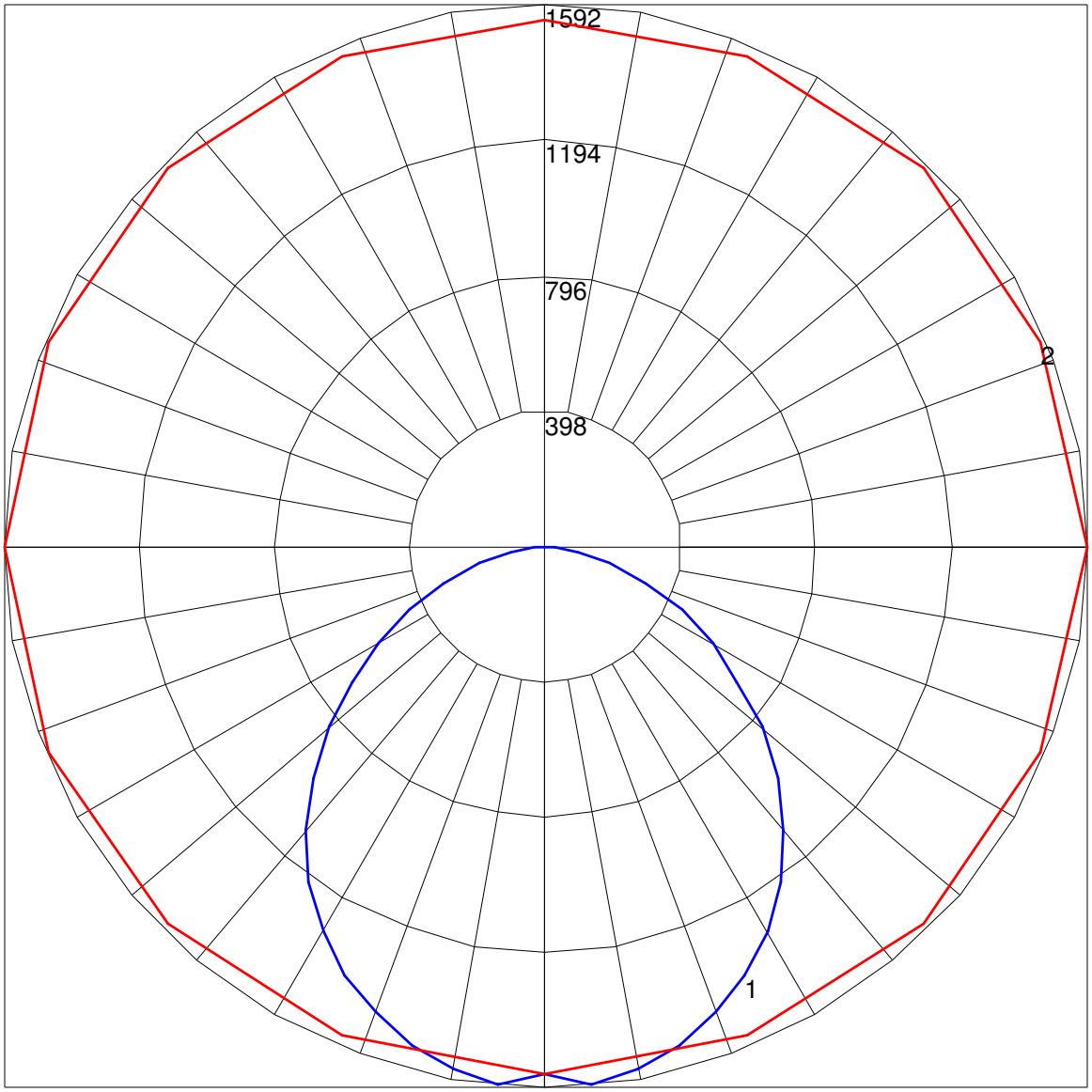
POLAR GRAPH



Maximum Candela = 1592.302 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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