H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-950-RA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19235.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-27
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] WHITE REFLECTOR w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[MORE] 0-10V DRIVER
[LUMCAT] PT-24-L49-950-RA-DIM-UNV
[LAMPCAT] 22 INCH HLM 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	4570
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	125
Total Luminaire Watts	36.7
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.14
Spacing Criterion (90-270)	1.18
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.92 ft
Luminous Width (90-270)	1.92 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	1960	2068	2174
55	1757	1923	2077
65	1544	1830	2079
75	1195	1835	2272
85	721	2408	2759

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1748.459	1748.459	1748.459	1748.459	1748.459
5	1721.760	1719.387	1719.387	1713.454	1710.488
10	1716.421	1716.421	1719.387	1721.760	1721.760
15	1671.330	1673.703	1676.669	1680.823	1683.789
20	1560.976	1566.909	1574.028	1583.521	1586.488
25	1472.574	1477.914	1492.153	1504.612	1510.545
30	1290.430	1250.679	1413.244	1366.373	1359.253
35	1190.162	1201.435	1228.134	1250.679	1259.579
40	1059.043	1073.282	1102.947	1132.612	1143.885
45	967.674	980.134	1021.072	1059.043	1073.282
50	840.708	860.287	905.378	945.129	958.775
55	703.655	725.014	770.105	815.196	831.808
60	573.722	596.268	647.292	693.569	710.775
65	455.655	485.320	539.904	593.895	613.474
70	335.809	370.813	435.483	492.440	512.019
75	215.962	259.273	331.655	389.206	410.564
80	118.660	175.024	258.086	314.450	331.655
85	43.904	100.268	146.545	164.938	167.904
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	633.81	N.A.	13.90
0-30	1313.57	N.A.	28.70
0-40	2079.85	N.A.	45.50
0-60	3551.93	N.A.	77.70
0-80	4433.64	N.A.	97.00
0-90	4570.32	N.A.	100.00
10-90	4405.96	N.A.	96.40
20-40	1446.04	N.A.	31.60
20-50	2227.61	N.A.	48.70
40-70	2005.12	N.A.	43.90
60-80	881.71	N.A.	19.30
70-80	348.67	N.A.	7.60
80-90	136.68	N.A.	3.00
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	4570.32	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	164.36
10-20	469.46
20-30	679.76
30-40	766.28
40-50	781.58
50-60	690.50
60-70	533.03
70-80	348.67
80-90	136.68
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	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	85	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	47	41	54	46	41	52	46	40	51	45	40	38
7	65	52	43	37	63	51	42	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	33	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	13.6	15.3	14.0	15.6	15.9	14.7	16.3	15.0	16.6	16.9
	3H	15.3	16.8	15.7	17.1	17.5	16.8	18.3	17.2	18.7	19.0
	4H	15.9	17.3	16.3	17.6	18.0	17.8	19.2	18.2	19.6	20.0
	6H	16.2	17.6	16.7	17.9	18.3	18.9	20.2	19.3	20.5	20.9
	8H	16.4	17.6	16.8	18.0	18.4	19.3	20.5	19.7	20.9	21.3
	12H	16.4	17.6	16.9	18.0	18.4	19.6	20.8	20.1	21.2	21.6
4H	2H	14.4	15.8	14.8	16.2	16.6	15.2	16.6	15.6	17.0	17.3
	3H	16.3	17.5	16.8	17.9	18.3	17.7	18.9	18.1	19.3	19.6
	4H	17.0	18.1	17.5	18.5	19.0	18.8	19.9	19.3	20.3	20.8
	6H	17.6	18.5	18.0	19.0	19.4	20.1	21.0	20.5	21.5	21.9
	8H	17.7	18.6	18.2	19.1	19.5	20.6	21.5	21.1	21.9	22.4
	12H	17.9	18.7	18.4	19.1	19.6	21.0	21.8	21.5	22.3	22.8
8H	4H	17.6	18.5	18.1	19.0	19.4	19.2	20.1	19.6	20.5	21.0
	6H	18.4	19.1	18.9	19.6	20.1	20.6	21.4	21.1	21.9	22.3
	8H	18.7	19.3	19.2	19.8	20.3	21.3	22.0	21.8	22.5	22.9
	12H	18.9	19.5	19.4	20.0	20.5	21.9	22.4	22.4	22.9	23.5
12H	4H	17.8	18.6	18.3	19.1	19.5	19.2	20.0	19.7	20.5	21.0
	6H	18.6	19.3	19.2	19.8	20.3	20.7	21.4	21.3	21.9	22.4
	8H	19.0	19.6	19.5	20.1	20.7	21.5	22.0	22.0	22.5	23.1

Maximum UGR = 23.5

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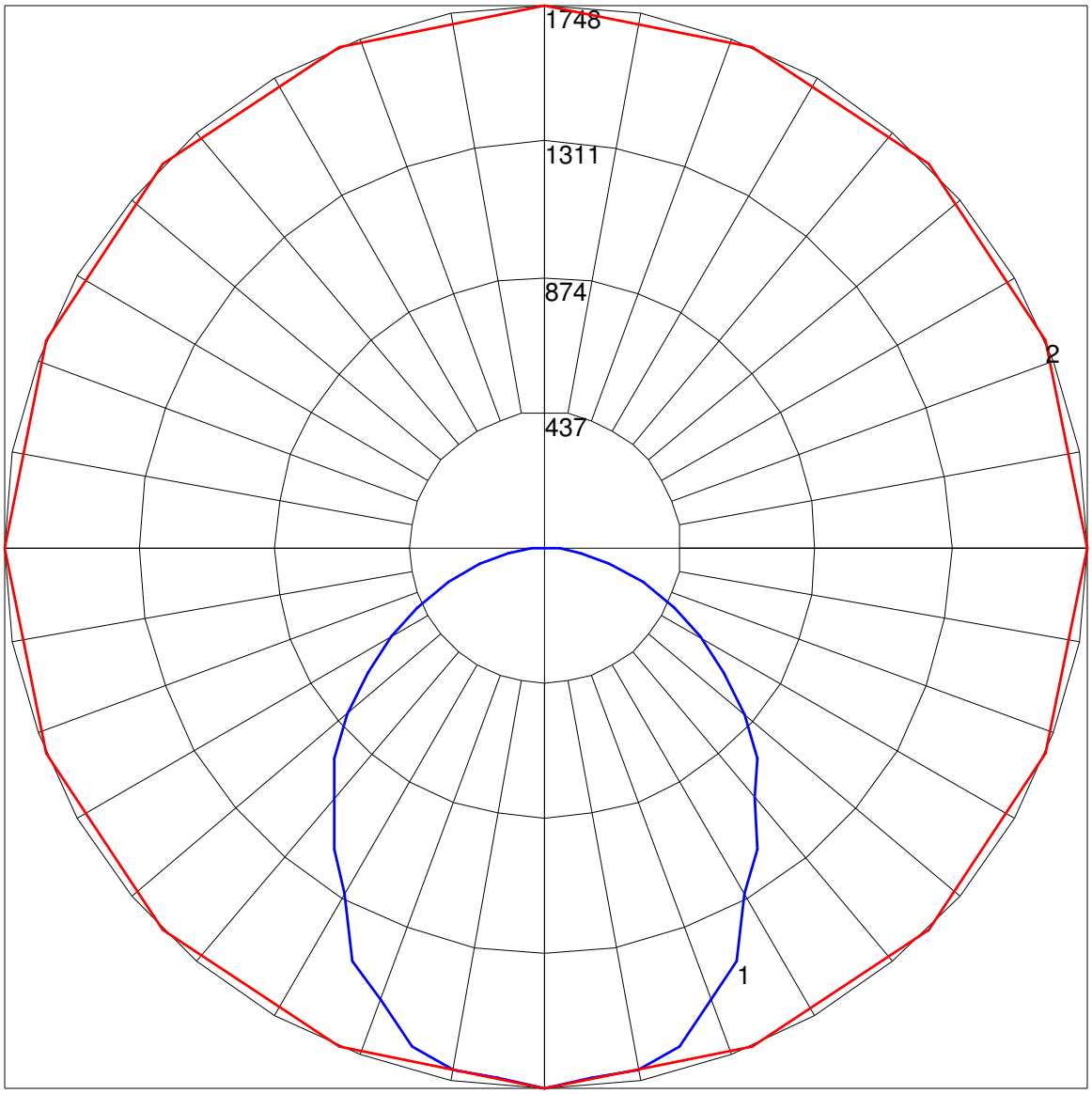
POLAR GRAPH



Maximum Candela = 1748.459 Located At Horizontal Angle = 0, Vertical Angle = 0
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)

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