H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-24-L49-827-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-L49-827-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	4926
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	134
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	2112	2229	2343
55	1894	2072	2238
65	1664	1972	2241
75	1288	1978	2449
85	778	2595	2974

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1884.450	1884.450	1884.450	1884.450	1884.450
5	1855.675	1853.117	1853.117	1846.723	1843.526
10	1849.920	1849.920	1853.117	1855.675	1855.675
15	1801.322	1803.880	1807.077	1811.553	1814.751
20	1682.385	1688.779	1696.453	1706.684	1709.881
25	1587.107	1592.862	1608.209	1621.638	1628.032
30	1390.797	1347.954	1523.163	1472.646	1464.973
35	1282.731	1294.880	1323.655	1347.954	1357.546
40	1141.413	1156.760	1188.732	1220.704	1232.854
45	1042.938	1056.366	1100.488	1141.413	1156.760
50	906.096	927.198	975.796	1018.639	1033.346
55	758.384	781.404	830.002	878.600	896.505
60	618.345	642.644	697.637	747.514	766.057
65	491.095	523.068	581.897	640.086	661.188
70	361.927	399.654	469.354	530.741	551.843
75	232.759	279.438	357.451	419.477	442.497
80	127.889	188.637	278.159	338.907	357.451
85	47.319	108.067	157.943	177.766	180.963
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	683.11	N.A.	13.90
0-30	1415.74	N.A.	28.70
0-40	2241.62	N.A.	45.50
0-60	3828.19	N.A.	77.70
0-80	4778.48	N.A.	97.00
0-90	4925.78	N.A.	100.00
10-90	4748.65	N.A.	96.40
20-40	1558.51	N.A.	31.60
20-50	2400.87	N.A.	48.70
40-70	2161.07	N.A.	43.90
60-80	950.28	N.A.	19.30
70-80	375.79	N.A.	7.60
80-90	147.31	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	4925.78	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	177.14
10-20	505.97
20-30	732.63
30-40	825.87
40-50	842.37
50-60	744.21
60-70	574.49
70-80	375.79
80-90	147.31
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	13.9	15.5	14.2	15.8	16.1	14.9	16.5	15.2	16.8	17.1
	3H	15.5	17.0	15.9	17.3	17.7	17.0	18.5	17.4	18.9	19.2
	4H	16.1	17.5	16.5	17.8	18.2	18.0	19.4	18.4	19.8	20.2
	6H	16.4	17.8	16.9	18.1	18.5	19.1	20.4	19.5	20.7	21.1
	8H	16.6	17.8	17.0	18.2	18.6	19.5	20.7	19.9	21.1	21.5
	12H	16.6	17.8	17.1	18.2	18.6	19.8	21.0	20.3	21.4	21.8
4H	2H	14.6	16.0	15.0	16.4	16.8	15.4	16.8	15.8	17.2	17.5
	3H	16.5	17.7	17.0	18.1	18.5	17.9	19.1	18.3	19.5	19.9
	4H	17.2	18.3	17.7	18.7	19.2	19.0	20.1	19.5	20.5	21.0
	6H	17.8	18.7	18.2	19.2	19.6	20.3	21.2	20.7	21.7	22.1
	8H	17.9	18.8	18.4	19.3	19.7	20.8	21.7	21.3	22.1	22.6
	12H	18.1	18.9	18.6	19.3	19.8	21.2	22.0	21.7	22.5	23.0
8H	4H	17.8	18.7	18.3	19.2	19.6	19.4	20.3	19.8	20.7	21.2
	6H	18.6	19.3	19.1	19.8	20.3	20.8	21.6	21.3	22.1	22.5
	8H	18.9	19.5	19.4	20.0	20.5	21.5	22.2	22.0	22.7	23.1
	12H	19.1	19.7	19.6	20.2	20.7	22.1	22.6	22.6	23.1	23.7
12H	4H	18.0	18.8	18.5	19.3	19.7	19.4	20.2	19.9	20.7	21.2
	6H	18.8	19.5	19.4	20.0	20.5	20.9	21.6	21.5	22.1	22.6
	8H	19.2	19.8	19.7	20.3	20.9	21.7	22.2	22.2	22.7	23.3

Maximum UGR = 23.7

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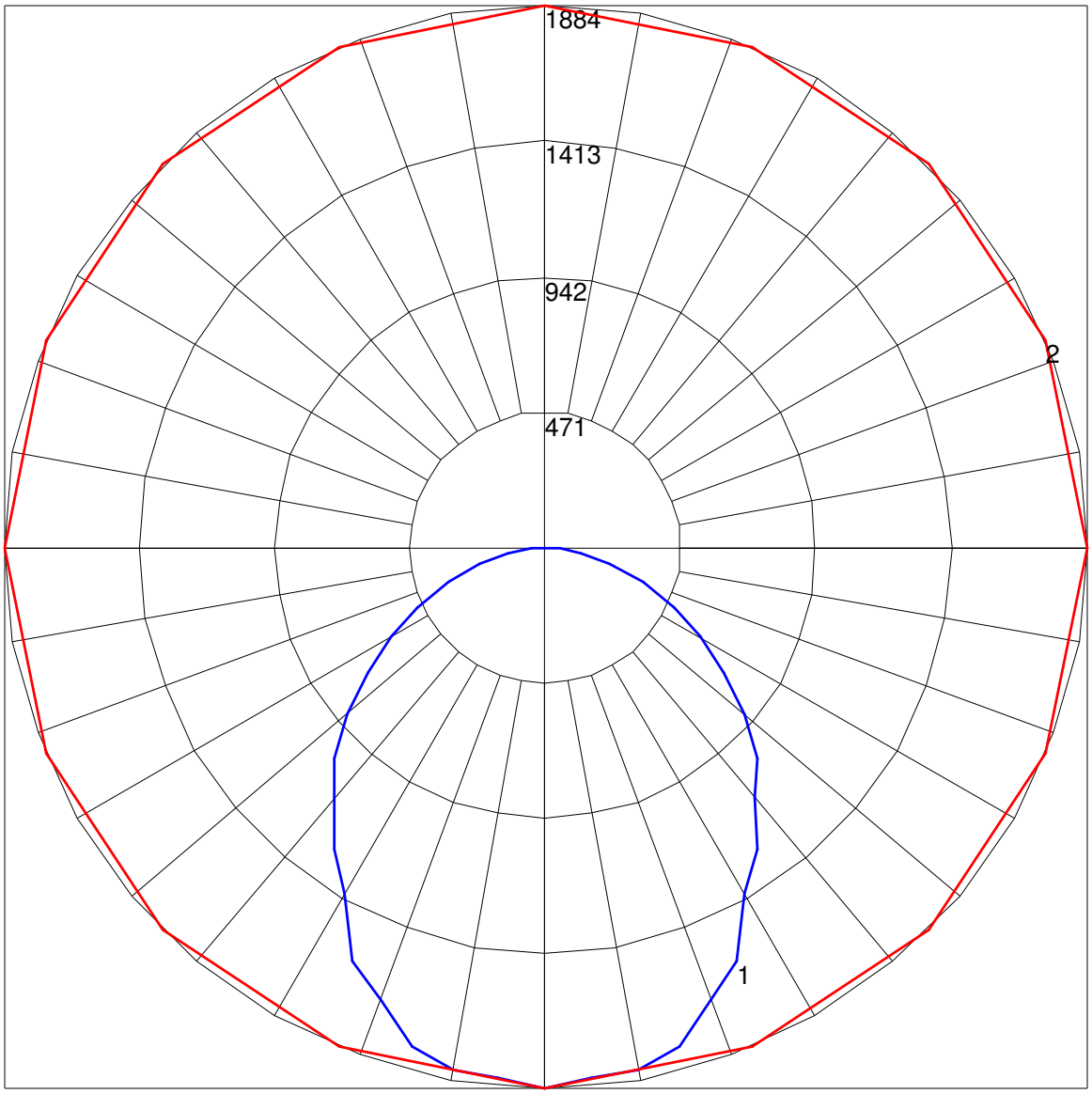
POLAR GRAPH



Maximum Candela = 1884.45 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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