H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PTDC-24-L90-930-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] 2022-05-06
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2x4' RECESSED LED LUMINAIRE
[MORE] w/RIBBED FROSTED ACRYLIC CENTER DIFFUSER
[LUMCAT] PTDC-24-L90-930-RA-DIM-UNV
[LAMPCAT] HLM 90 CRI 3000K CCT
[_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	7485
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	105
Total Luminaire Watts	71.4
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	3210	3387	3560
55	2877	3149	3402
65	2529	2996	3405
75	1957	3006	3721
85	1182	3944	4519

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2863.575	2863.575	2863.575	2863.575	2863.575
5	2819.849	2815.962	2815.962	2806.245	2801.387
10	2811.103	2811.103	2815.962	2819.849	2819.849
15	2737.255	2741.142	2746.000	2752.802	2757.660
20	2556.520	2566.237	2577.898	2593.445	2598.303
25	2411.738	2420.483	2443.804	2464.210	2473.927
30	2113.429	2048.326	2314.569	2237.805	2226.145
35	1949.213	1967.675	2011.401	2048.326	2062.901
40	1734.469	1757.790	1806.374	1854.959	1873.421
45	1584.829	1605.234	1672.281	1734.469	1757.790
50	1376.887	1408.953	1482.801	1547.905	1570.253
55	1152.426	1187.407	1261.256	1335.104	1362.311
60	939.626	976.550	1060.115	1135.907	1164.086
65	746.259	794.844	884.239	972.663	1004.729
70	549.977	607.307	713.222	806.504	838.570
75	353.696	424.629	543.176	637.430	672.411
80	194.338	286.649	422.686	514.996	543.176
85	71.905	164.216	240.008	270.130	274.989
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1038.04	N.A.	13.90
0-30	2151.33	N.A.	28.70
0-40	3406.32	N.A.	45.50
0-60	5817.25	N.A.	77.70
0-80	7261.28	N.A.	97.00
0-90	7485.13	N.A.	100.00
10-90	7215.95	N.A.	96.40
20-40	2368.28	N.A.	31.60
20-50	3648.32	N.A.	48.70
40-70	3283.92	N.A.	43.90
60-80	1444.03	N.A.	19.30
70-80	571.05	N.A.	7.60
80-90	223.85	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	7485.13	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	269.18
10-20	768.86
20-30	1113.29
30-40	1254.98
40-50	1280.05
50-60	1130.89
60-70	872.98
70-80	571.05
80-90	223.85
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	15.3	17.0	15.7	17.3	17.6	16.4	18.0	16.7	18.3	18.6
	3H	17.0	18.5	17.4	18.8	19.2	18.5	20.0	18.9	20.4	20.7
	4H	17.6	19.0	18.0	19.3	19.7	19.5	20.9	19.9	21.3	21.7
	6H	17.9	19.3	18.4	19.6	20.0	20.6	21.9	21.0	22.2	22.6
	8H	18.1	19.3	18.5	19.7	20.1	21.0	22.2	21.4	22.6	23.0
	12H	18.1	19.3	18.6	19.7	20.1	21.3	22.5	21.8	22.9	23.3
4H	2H	16.1	17.5	16.5	17.9	18.3	16.9	18.3	17.3	18.7	19.0
	3H	18.0	19.2	18.5	19.6	20.0	19.4	20.6	19.8	21.0	21.3
	4H	18.7	19.8	19.2	20.2	20.7	20.5	21.6	21.0	22.0	22.5
	6H	19.3	20.2	19.7	20.7	21.1	21.8	22.7	22.2	23.2	23.6
	8H	19.4	20.3	19.9	20.8	21.2	22.3	23.2	22.8	23.6	24.1
	12H	19.6	20.4	20.1	20.8	21.3	22.7	23.5	23.2	24.0	24.5
8H	4H	19.3	20.2	19.8	20.7	21.1	20.9	21.8	21.3	22.2	22.7
	6H	20.1	20.8	20.6	21.3	21.8	22.3	23.1	22.8	23.6	24.0
	8H	20.4	21.0	20.9	21.5	22.0	23.0	23.7	23.5	24.2	24.6
	12H	20.6	21.2	21.1	21.7	22.2	23.6	24.1	24.1	24.6	25.2
12H	4H	19.5	20.3	20.0	20.8	21.2	20.9	21.7	21.4	22.2	22.7
	6H	20.3	21.0	20.9	21.5	22.0	22.4	23.1	23.0	23.6	24.1
	8H	20.7	21.3	21.2	21.8	22.4	23.2	23.7	23.7	24.2	24.8

Maximum UGR = 25.2

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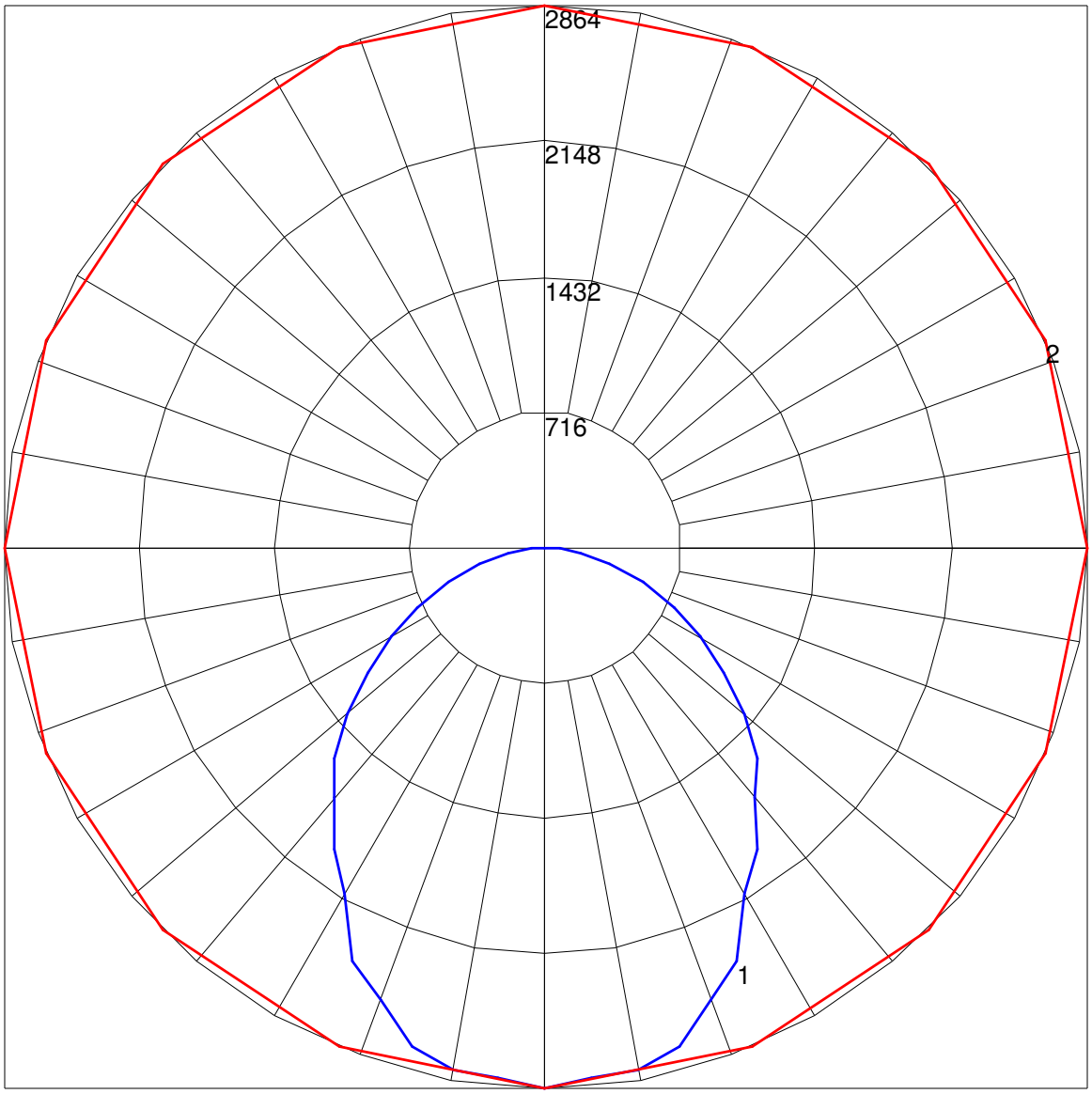
POLAR GRAPH



Maximum Candela = 2863.575 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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