H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-827-SA-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] BALLABS TEST NO. 20789.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-06-23
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 1-84 LED 22"ARRAY 2x2 LUMINAIRE
[MORE] WHITE REFLECTOR w/FROST SQUARED RIBBED LENS
[MORE] ADVANCE #C1042C092V045CNN1
[LUMCAT] PT-22-L43-827-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4191
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	130
Total Luminaire Watts	32.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.18
Spacing Criterion (90-270)	1.14
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.92 ft
Luminous Width (90-270)	1.98 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	3746	3691	3639
55	3366	3397	3491
65	2947	3213	3609
75	2297	3235	4183
85	1195	3012	4057

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1660.783	1660.783	1660.783	1660.783	1660.783
5	1660.783	1650.068	1643.180	1643.946	1642.415
10	1625.578	1617.159	1610.271	1607.210	1604.914
15	1568.177	1562.055	1554.401	1548.279	1546.748
20	1503.124	1493.174	1474.806	1470.979	1467.153
25	1408.222	1404.395	1382.966	1372.251	1365.363
30	1300.309	1294.186	1279.645	1262.808	1251.327
35	1178.620	1180.151	1161.783	1144.945	1138.057
40	1053.870	1057.697	1039.329	1027.849	1023.257
45	934.478	932.182	920.701	916.875	907.691
50	807.431	809.727	799.013	808.197	800.543
55	681.151	688.039	687.273	706.407	706.407
60	557.166	561.758	581.657	607.678	619.158
65	439.304	450.784	479.102	516.603	538.033
70	319.911	339.810	387.261	435.477	461.499
75	209.703	244.908	295.420	351.290	381.904
80	110.974	150.772	207.407	262.511	290.828
85	36.736	61.227	92.606	113.270	124.750
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	594.34	N.A.	14.20
0-30	1232.32	N.A.	29.40
0-40	1958.95	N.A.	46.70
0-60	3293.2	N.A.	78.60
0-80	4087.28	N.A.	97.50
0-90	4190.54	N.A.	100.00
10-90	4034.38	N.A.	96.30
20-40	1364.62	N.A.	32.60
20-50	2077.35	N.A.	49.60
40-70	1814.85	N.A.	43.30
60-80	794.08	N.A.	18.90
70-80	313.48	N.A.	7.50
80-90	103.25	N.A.	2.50
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	4190.54	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	156.15
10-20	438.18
20-30	637.98
30-40	726.64
40-50	712.73
50-60	621.52
60-70	480.60
70-80	313.48
80-90	103.25
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	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	80	72	65	88	78	71	64	75	69	63	72	67	62	70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54	65	58	53	62	57	53	51
5	76	63	54	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	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	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	16.4	17.9	18.2	16.4	18.0	16.7	18.3	18.6
	3H	17.6	19.1	18.0	19.4	19.8	18.6	20.1	19.0	20.4	20.8
	4H	18.2	19.6	18.6	19.9	20.3	19.7	21.1	20.1	21.4	21.8
	6H	18.5	19.8	19.0	20.2	20.6	20.7	22.0	21.1	22.4	22.8
	8H	18.7	19.9	19.1	20.3	20.7	21.1	22.3	21.5	22.7	23.1
	12H	18.7	19.9	19.1	20.3	20.7	21.4	22.5	21.8	22.9	23.4
4H	2H	16.7	18.0	17.1	18.4	18.8	17.0	18.4	17.4	18.7	19.1
	3H	18.5	19.7	19.0	20.1	20.5	19.5	20.6	19.9	21.0	21.4
	4H	19.3	20.3	19.7	20.7	21.2	20.7	21.8	21.2	22.2	22.6
	6H	19.8	20.7	20.2	21.2	21.6	21.9	22.9	22.4	23.3	23.8
	8H	19.9	20.8	20.4	21.2	21.7	22.4	23.3	22.8	23.7	24.2
	12H	20.0	20.8	20.5	21.3	21.7	22.7	23.5	23.2	24.0	24.4
8H	4H	19.8	20.7	20.2	21.1	21.6	21.0	21.9	21.5	22.4	22.8
	6H	20.5	21.2	21.0	21.7	22.2	22.4	23.2	22.9	23.6	24.1
	8H	20.7	21.3	21.2	21.8	22.3	23.0	23.6	23.5	24.2	24.6
	12H	20.8	21.4	21.3	21.9	22.5	23.4	24.0	23.9	24.5	25.0
12H	4H	19.9	20.7	20.4	21.2	21.6	21.1	21.9	21.5	22.3	22.8
	6H	20.6	21.3	21.2	21.8	22.3	22.5	23.2	23.0	23.6	24.1
	8H	20.9	21.5	21.4	22.0	22.6	23.1	23.7	23.6	24.2	24.7

Maximum UGR = 25.0

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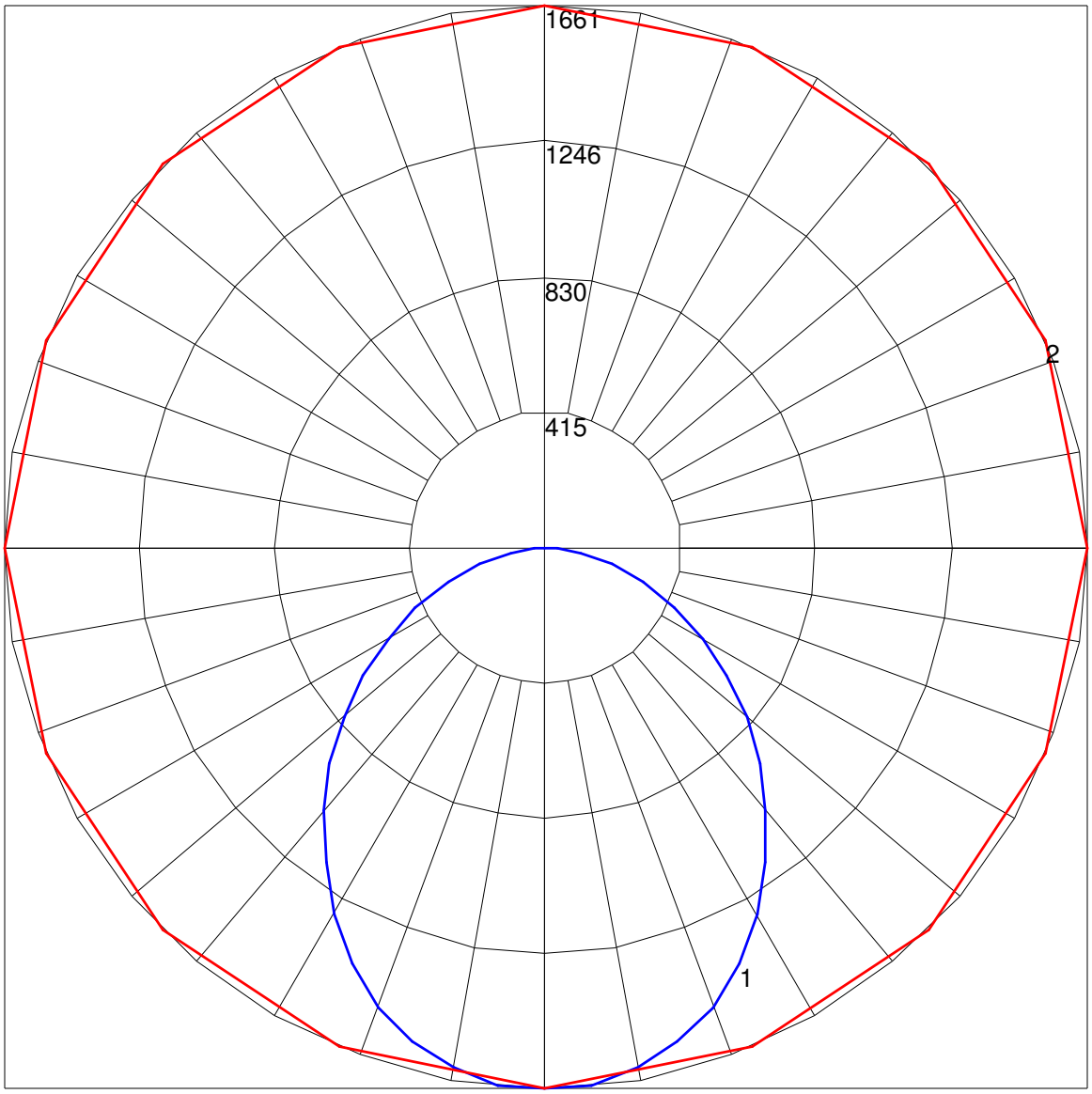
POLAR GRAPH



Maximum Candela = 1660.783 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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