H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L52-830-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-L52-830-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	5436
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	131
Total Luminaire Watts	41.6
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	4860	4788	4721
55	4367	4406	4529
65	3823	4169	4682
75	2980	4197	5426
85	1550	3907	5264

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	2154.551	2154.551	2154.551	2154.551	2154.551
5	2154.551	2140.650	2131.714	2132.707	2130.722
10	2108.878	2097.957	2089.021	2085.049	2082.070
15	2034.412	2026.469	2016.540	2008.597	2006.612
20	1950.017	1937.110	1913.281	1908.316	1903.352
25	1826.900	1821.936	1794.135	1780.235	1771.299
30	1686.904	1678.961	1660.096	1638.253	1623.360
35	1529.036	1531.022	1507.193	1485.349	1476.413
40	1367.196	1372.161	1348.332	1333.439	1327.481
45	1212.307	1209.328	1194.435	1189.471	1177.556
50	1047.489	1050.468	1036.567	1048.482	1038.553
55	883.664	892.600	891.607	916.429	916.429
60	722.817	728.774	754.589	788.347	803.240
65	569.913	584.807	621.543	670.194	697.995
70	415.024	440.839	502.398	564.949	598.707
75	272.049	317.722	383.252	455.732	495.447
80	143.968	195.597	269.071	340.558	377.295
85	47.658	79.430	120.139	146.946	161.840
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	771.04	N.A.	14.20
0-30	1598.7	N.A.	29.40
0-40	2541.37	N.A.	46.70
0-60	4272.3	N.A.	78.60
0-80	5302.48	N.A.	97.50
0-90	5436.42	N.A.	100.00
10-90	5233.84	N.A.	96.30
20-40	1770.33	N.A.	32.60
20-50	2694.96	N.A.	49.60
40-70	2354.42	N.A.	43.30
60-80	1030.17	N.A.	18.90
70-80	406.68	N.A.	7.50
80-90	133.95	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	5436.42	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	202.58
10-20	568.46
20-30	827.66
30-40	942.67
40-50	924.63
50-60	806.31
60-70	623.49
70-80	406.68
80-90	133.95
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	91	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	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	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	16.9	18.5	17.3	18.8	19.1	17.3	18.9	17.6	19.2	19.5
	3H	18.5	20.0	18.9	20.3	20.7	19.5	21.0	19.9	21.3	21.7
	4H	19.1	20.5	19.5	20.8	21.2	20.6	22.0	21.0	22.3	22.7
	6H	19.5	20.7	19.9	21.1	21.5	21.6	22.9	22.0	23.3	23.7
	8H	19.6	20.8	20.0	21.2	21.6	22.0	23.2	22.4	23.6	24.0
	12H	19.6	20.8	20.0	21.2	21.6	22.3	23.4	22.7	23.8	24.3
4H	2H	17.6	18.9	18.0	19.3	19.7	17.9	19.3	18.3	19.6	20.0
	3H	19.4	20.6	19.9	21.0	21.4	20.4	21.6	20.8	21.9	22.3
	4H	20.2	21.2	20.6	21.6	22.1	21.6	22.7	22.1	23.1	23.5
	6H	20.7	21.6	21.1	22.1	22.5	22.8	23.8	23.3	24.2	24.7
	8H	20.8	21.7	21.3	22.1	22.6	23.3	24.2	23.8	24.6	25.1
	12H	20.9	21.7	21.4	22.2	22.6	23.6	24.4	24.1	24.9	25.3
8H	4H	20.7	21.6	21.1	22.0	22.5	21.9	22.8	22.4	23.3	23.7
	6H	21.4	22.1	21.9	22.6	23.1	23.3	24.1	23.8	24.5	25.0
	8H	21.6	22.2	22.1	22.7	23.2	23.9	24.5	24.4	25.1	25.5
	12H	21.7	22.3	22.2	22.8	23.4	24.3	24.9	24.8	25.4	25.9
12H	4H	20.8	21.6	21.3	22.1	22.5	22.0	22.8	22.4	23.2	23.7
	6H	21.5	22.2	22.1	22.7	23.2	23.4	24.1	23.9	24.5	25.0
	8H	21.8	22.4	22.3	22.9	23.5	24.0	24.6	24.5	25.1	25.6

Maximum UGR = 25.9

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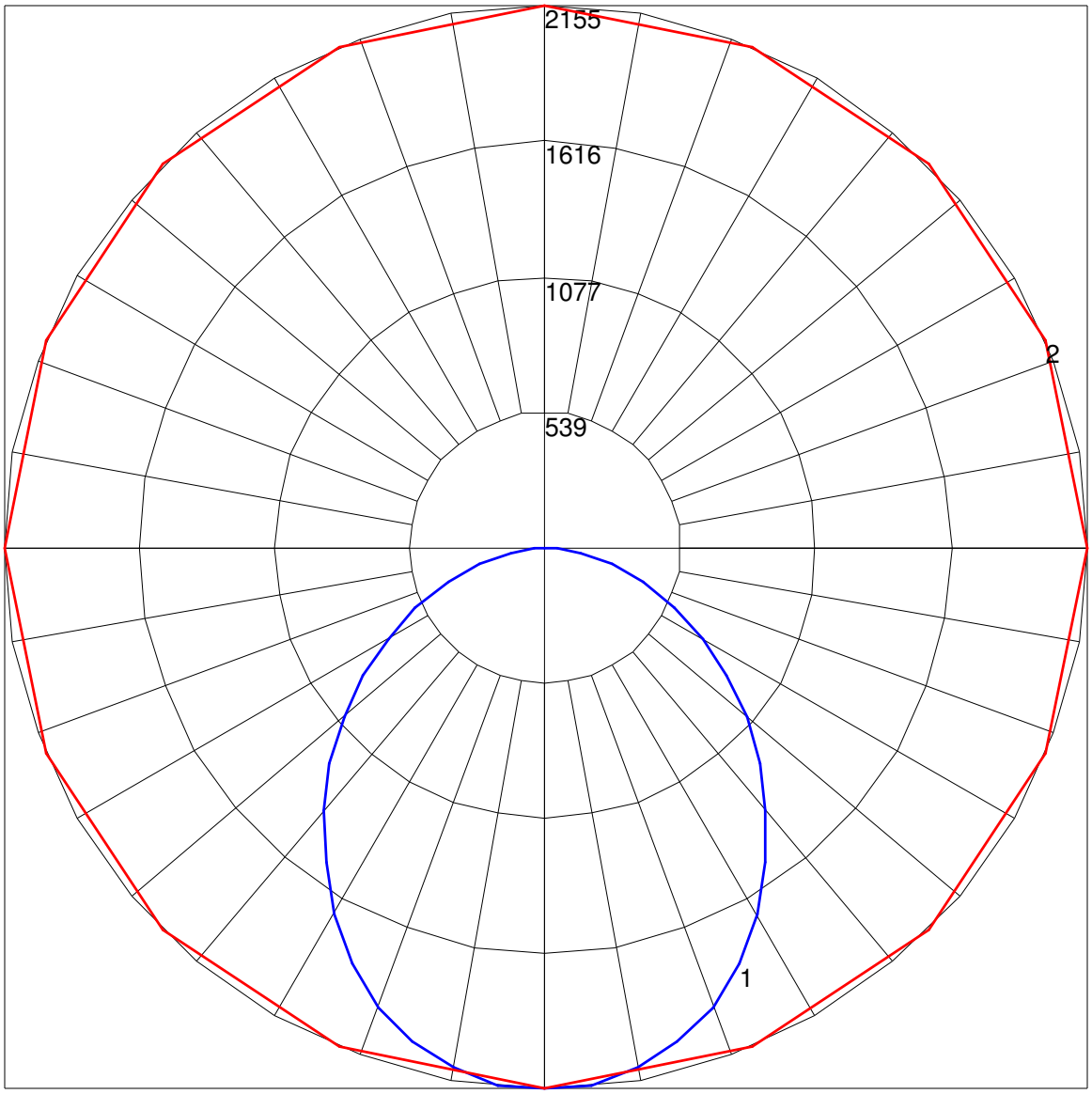
POLAR GRAPH



Maximum Candela = 2154.551 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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