H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : PT-22-L43-850-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-L43-850-SA-DIM-UNV
[LAMPCAT] HLM 80 CRI 3500K CCT

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4579
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	142
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	4094	4033	3976
55	3679	3712	3815
65	3220	3512	3944
75	2510	3536	4571
85	1306	3291	4434

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	1814.877	1814.877	1814.877	1814.877	1814.877
5	1814.877	1803.168	1795.641	1796.477	1794.804
10	1776.405	1767.205	1759.678	1756.332	1753.823
15	1713.679	1706.988	1698.624	1691.933	1690.261
20	1642.589	1631.716	1611.644	1607.462	1603.280
25	1538.882	1534.700	1511.282	1499.573	1492.046
30	1420.956	1414.266	1398.375	1379.975	1367.430
35	1287.977	1289.650	1269.577	1251.178	1243.651
40	1151.652	1155.834	1135.762	1123.216	1118.198
45	1021.182	1018.673	1006.128	1001.946	991.910
50	882.348	884.857	873.148	883.184	874.821
55	744.350	751.877	751.041	771.950	771.950
60	608.862	613.880	635.625	664.061	676.606
65	480.064	492.609	523.554	564.535	587.953
70	349.594	371.339	423.192	475.882	504.318
75	229.160	267.632	322.831	383.884	417.338
80	121.271	164.761	226.651	286.868	317.813
85	40.145	66.908	101.198	123.780	136.325
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	649.48	N.A.	14.20
0-30	1346.66	N.A.	29.40
0-40	2140.71	N.A.	46.70
0-60	3598.76	N.A.	78.60
0-80	4466.52	N.A.	97.50
0-90	4579.35	N.A.	100.00
10-90	4408.71	N.A.	96.30
20-40	1491.23	N.A.	32.60
20-50	2270.09	N.A.	49.60
40-70	1983.24	N.A.	43.30
60-80	867.76	N.A.	18.90
70-80	342.57	N.A.	7.50
80-90	112.83	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	4579.35	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	170.64
10-20	478.84
20-30	697.18
30-40	794.06
40-50	778.86
50-60	679.19
60-70	525.19
70-80	342.57
80-90	112.83
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	16.3	17.9	16.7	18.2	18.5	16.7	18.3	17.0	18.6	18.9
	3H	17.9	19.4	18.3	19.7	20.1	18.9	20.4	19.3	20.7	21.1
	4H	18.5	19.9	18.9	20.2	20.6	20.0	21.4	20.4	21.7	22.1
	6H	18.8	20.1	19.3	20.5	20.9	21.0	22.3	21.4	22.7	23.1
	8H	19.0	20.2	19.4	20.6	21.0	21.4	22.6	21.8	23.0	23.4
	12H	19.0	20.2	19.4	20.6	21.0	21.7	22.8	22.1	23.2	23.7
4H	2H	17.0	18.3	17.4	18.7	19.1	17.3	18.7	17.7	19.0	19.4
	3H	18.8	20.0	19.3	20.4	20.8	19.8	20.9	20.2	21.3	21.7
	4H	19.6	20.6	20.0	21.0	21.5	21.0	22.1	21.5	22.5	22.9
	6H	20.1	21.0	20.5	21.5	21.9	22.2	23.2	22.7	23.6	24.1
	8H	20.2	21.1	20.7	21.5	22.0	22.7	23.6	23.1	24.0	24.5
	12H	20.3	21.1	20.8	21.6	22.0	23.0	23.8	23.5	24.3	24.7
8H	4H	20.1	21.0	20.5	21.4	21.9	21.3	22.2	21.8	22.7	23.1
	6H	20.8	21.5	21.3	22.0	22.5	22.7	23.5	23.2	23.9	24.4
	8H	21.0	21.6	21.5	22.1	22.6	23.3	23.9	23.8	24.5	24.9
	12H	21.1	21.7	21.6	22.2	22.8	23.7	24.3	24.2	24.8	25.3
12H	4H	20.2	21.0	20.7	21.5	21.9	21.4	22.2	21.8	22.6	23.1
	6H	20.9	21.6	21.5	22.1	22.6	22.8	23.5	23.3	23.9	24.4
	8H	21.2	21.8	21.7	22.3	22.9	23.4	24.0	23.9	24.5	25.0

Maximum UGR = 25.3

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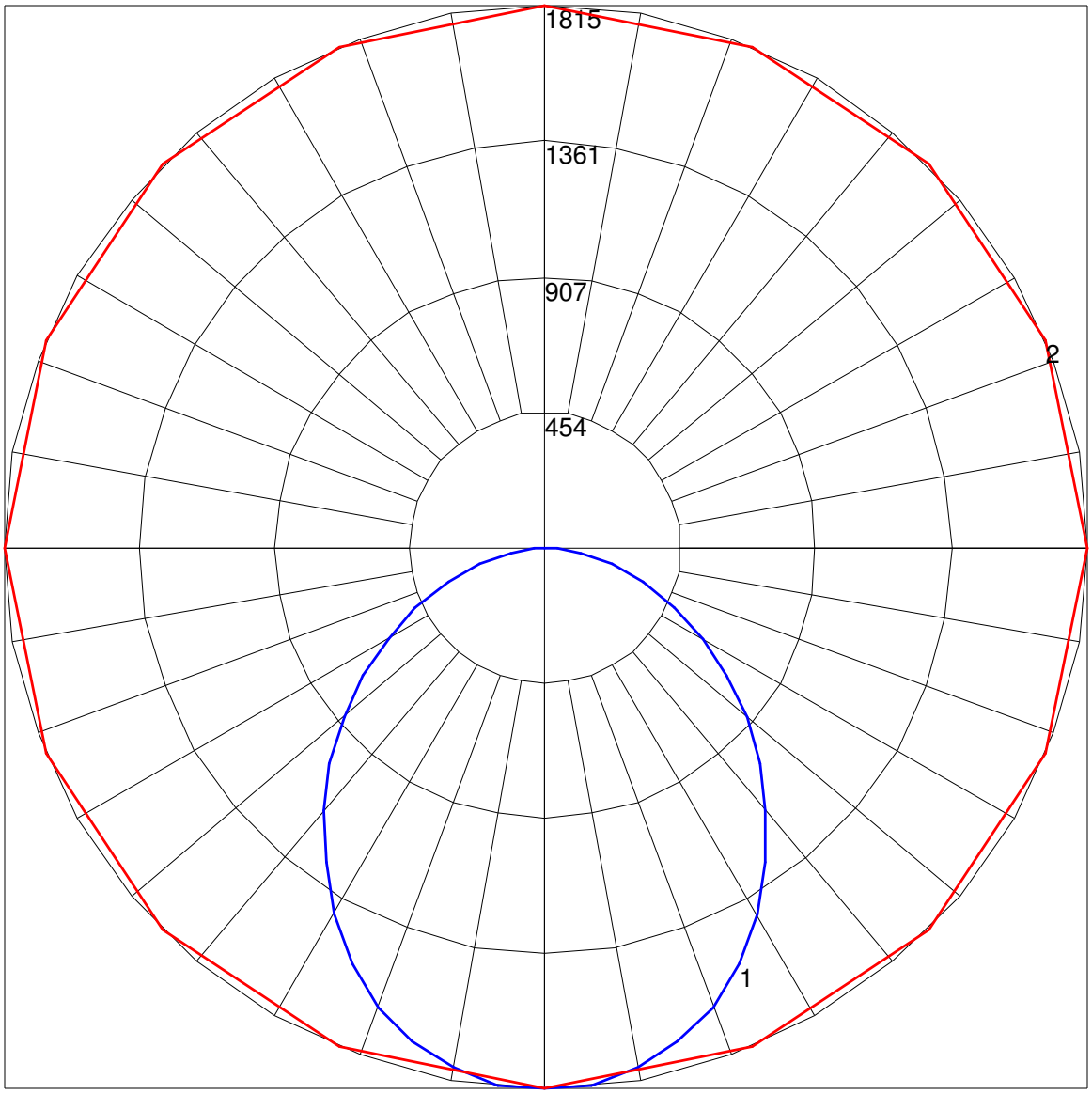
POLAR GRAPH



Maximum Candela = 1814.877 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.)