H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-840-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19438.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2023-07-17
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 48 INCH, LOW PROFILE HIGHBAY LUMINAIRE
[MORE] WHITE REFLECTOR w/OPEN BOTTOM
[MORE] 0-10V DIMMING DRIVERS
[LUMCAT] GL-4-L200-840-DIM-UNV
[LAMPCAT] 22 INCH HLM LED ARRAYS
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Commercial, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Pendant, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	20095
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	151
Total Luminaire Watts	133
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.24
Spacing Criterion (90-270)	1.24
Spacing Criterion (Diagonal)	1.42
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	4.00 ft
Luminous Width (90-270)	1.05 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	18670	18712	18917
55	17236	17987	13559
65	16212	12987	13221
75	12426	8282	7651
85	6817	4412	5017

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	7308.874	7308.874	7308.874	7308.874	7308.874
5	7203.707	7201.694	7203.707	7206.223	7208.236
10	7197.166	7192.134	7197.166	7206.223	7206.223
15	7046.711	7055.768	7075.896	7078.412	7075.896
20	6772.974	6779.516	6791.089	6800.146	6800.146
25	6385.516	6403.631	6417.217	6392.057	6392.057
30	6016.172	6036.803	6020.701	6016.172	6013.656
35	5621.669	5648.842	5630.727	5642.300	5644.313
40	5371.079	5405.296	5377.621	5393.723	5409.825
45	5165.776	5192.949	5177.350	5216.096	5234.211
50	4565.971	4609.245	4650.507	4682.208	4653.023
55	3868.546	3934.464	4037.115	3175.649	3043.310
60	3241.568	3305.473	3307.989	2619.118	2630.692
65	2681.011	2715.228	2147.627	2211.532	2186.372
70	1964.968	2056.045	1680.161	1470.329	1178.477
75	1258.485	1039.596	838.822	854.924	774.917
80	699.941	626.978	360.286	250.590	220.902
85	232.475	150.455	150.455	168.570	171.086
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2677.11	N.A.	13.30
0-30	5632.56	N.A.	28.00
0-40	9190.06	N.A.	45.70
0-60	16487.07	N.A.	82.00
0-80	19887.87	N.A.	99.00
0-90	20094.79	N.A.	100.00
10-90	19406.02	N.A.	96.60
20-40	6512.95	N.A.	32.40
20-50	10460.67	N.A.	52.10
40-70	9645.38	N.A.	48.00
60-80	3400.81	N.A.	16.90
70-80	1052.44	N.A.	5.20
80-90	206.91	N.A.	1.00
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	20094.79	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	688.77
10-20	1988.34
20-30	2955.45
30-40	3557.5
40-50	3947.72
50-60	3349.29
60-70	2348.37
70-80	1052.44
80-90	206.91
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	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	66	89	79	72	66	76	70	65	73	68	64	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	52	46	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	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
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	22.3	24.0	22.7	24.3	24.6	20.8	22.4	21.2	22.7	23.0
	3H	24.1	25.6	24.5	25.9	26.3	22.3	23.7	22.6	24.0	24.4
	4H	24.6	26.0	25.0	26.3	26.7	22.6	24.0	23.0	24.3	24.7
	6H	24.9	26.2	25.4	26.6	27.0	22.7	24.0	23.1	24.4	24.8
	8H	25.0	26.2	25.5	26.6	27.0	22.7	24.0	23.2	24.3	24.7
	12H	25.1	26.2	25.5	26.6	27.0	22.8	23.9	23.2	24.3	24.7
4H	2H	22.7	24.1	23.1	24.4	24.8	21.5	22.8	21.8	23.2	23.5
	3H	24.7	25.9	25.1	26.3	26.7	23.1	24.3	23.5	24.7	25.1
	4H	25.3	26.3	25.7	26.7	27.2	23.6	24.6	24.0	25.0	25.5
	6H	25.8	26.6	26.2	27.1	27.5	23.7	24.6	24.2	25.1	25.5
	8H	25.9	26.7	26.3	27.2	27.6	23.8	24.6	24.2	25.0	25.5
	12H	25.9	26.7	26.4	27.2	27.6	23.8	24.5	24.3	25.0	25.5
8H	4H	25.4	26.2	25.9	26.7	27.1	23.8	24.7	24.3	25.1	25.6
	6H	25.9	26.6	26.4	27.1	27.6	24.0	24.7	24.5	25.2	25.7
	8H	26.1	26.7	26.6	27.2	27.7	24.0	24.7	24.5	25.2	25.6
	12H	26.2	26.7	26.7	27.2	27.8	24.1	24.7	24.6	25.2	25.7
12H	4H	25.4	26.1	25.9	26.6	27.1	23.8	24.6	24.3	25.1	25.5
	6H	25.9	26.5	26.4	27.0	27.5	24.0	24.7	24.5	25.1	25.6
	8H	26.1	26.6	26.6	27.1	27.7	24.1	24.6	24.6	25.1	25.7

Maximum UGR = 27.8

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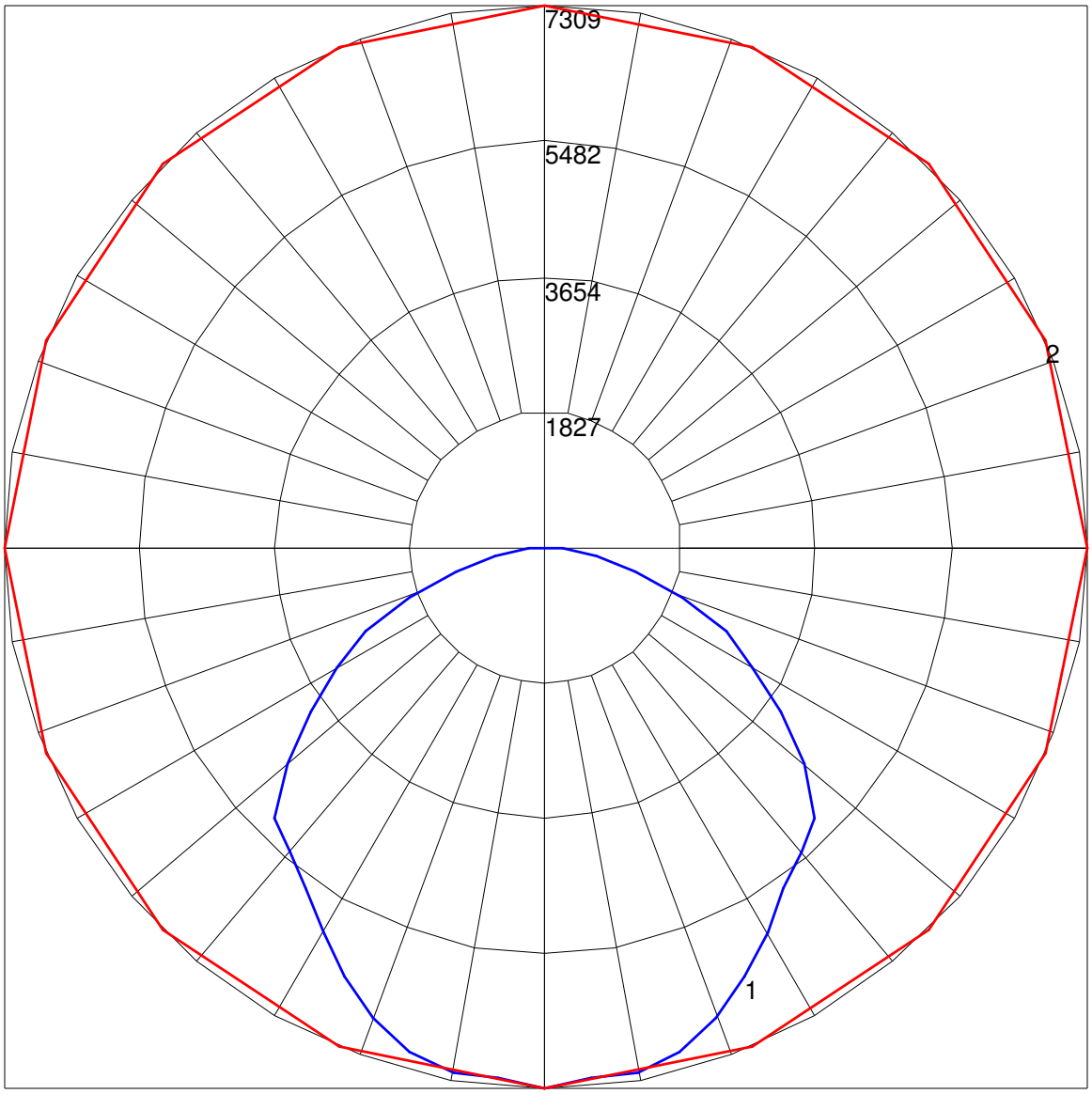
POLAR GRAPH



Maximum Candela = 7308.874 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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