H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GL-4-L200-935-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-L200-935-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	16076
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	121
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	14936	14969	15134
55	13789	14390	10848
65	12970	10389	10577
75	9941	6626	6121
85	5453	3529	4013

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	5847.100	5847.100	5847.100	5847.100	5847.100
5	5762.966	5761.356	5762.966	5764.979	5766.589
10	5757.733	5753.707	5757.733	5764.979	5764.979
15	5637.369	5644.615	5660.717	5662.730	5660.717
20	5418.380	5423.613	5432.872	5440.118	5440.118
25	5108.413	5122.905	5133.774	5113.646	5113.646
30	4812.938	4829.443	4816.561	4812.938	4810.925
35	4497.336	4519.074	4504.582	4513.840	4515.451
40	4296.864	4324.237	4302.097	4314.979	4327.860
45	4132.622	4154.359	4141.880	4172.877	4187.369
50	3652.777	3687.397	3720.406	3745.767	3722.419
55	3094.837	3147.571	3229.692	2540.520	2434.648
60	2593.254	2644.379	2646.391	2095.295	2104.553
65	2144.809	2172.183	1718.101	1769.226	1749.098
70	1571.974	1644.837	1344.129	1176.263	942.782
75	1006.788	831.677	671.058	683.940	619.933
80	559.953	501.583	288.229	200.472	176.721
85	185.980	120.364	120.364	134.856	136.868
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2141.69	N.A.	13.30
0-30	4506.05	N.A.	28.00
0-40	7352.05	N.A.	45.70
0-60	13189.65	N.A.	82.00
0-80	15910.3	N.A.	99.00
0-90	16075.83	N.A.	100.00
10-90	15524.82	N.A.	96.60
20-40	5210.36	N.A.	32.40
20-50	8368.53	N.A.	52.10
40-70	7716.3	N.A.	48.00
60-80	2720.64	N.A.	16.90
70-80	841.95	N.A.	5.20
80-90	165.53	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	16075.83	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	551.01
10-20	1590.67
20-30	2364.36
30-40	2846.00
40-50	3158.18
50-60	2679.43
60-70	1878.69
70-80	841.95
80-90	165.53
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	21.5	23.2	21.9	23.5	23.8	20.0	21.6	20.4	21.9	22.2
	3H	23.3	24.8	23.7	25.1	25.5	21.5	22.9	21.8	23.2	23.6
	4H	23.8	25.2	24.2	25.5	25.9	21.8	23.2	22.2	23.5	23.9
	6H	24.1	25.4	24.6	25.8	26.2	21.9	23.2	22.3	23.6	24.0
	8H	24.2	25.4	24.7	25.8	26.2	21.9	23.2	22.4	23.5	23.9
	12H	24.3	25.4	24.7	25.8	26.2	22.0	23.1	22.4	23.5	23.9
4H	2H	21.9	23.3	22.3	23.6	24.0	20.7	22.0	21.0	22.4	22.7
	3H	23.9	25.1	24.3	25.5	25.9	22.3	23.5	22.7	23.9	24.3
	4H	24.5	25.5	24.9	25.9	26.4	22.8	23.8	23.2	24.2	24.7
	6H	25.0	25.8	25.4	26.3	26.7	22.9	23.8	23.4	24.3	24.7
	8H	25.1	25.9	25.5	26.4	26.8	23.0	23.8	23.4	24.2	24.7
	12H	25.1	25.9	25.6	26.4	26.8	23.0	23.7	23.5	24.2	24.7
8H	4H	24.6	25.4	25.1	25.9	26.3	23.0	23.9	23.5	24.3	24.8
	6H	25.1	25.8	25.6	26.3	26.8	23.2	23.9	23.7	24.4	24.9
	8H	25.3	25.9	25.8	26.4	26.9	23.2	23.9	23.7	24.4	24.8
	12H	25.4	25.9	25.9	26.4	27.0	23.3	23.9	23.8	24.4	24.9
12H	4H	24.6	25.3	25.1	25.8	26.3	23.0	23.8	23.5	24.3	24.7
	6H	25.1	25.7	25.6	26.2	26.7	23.2	23.9	23.7	24.3	24.8
	8H	25.3	25.8	25.8	26.3	26.9	23.3	23.8	23.8	24.3	24.9

Maximum UGR = 27.0

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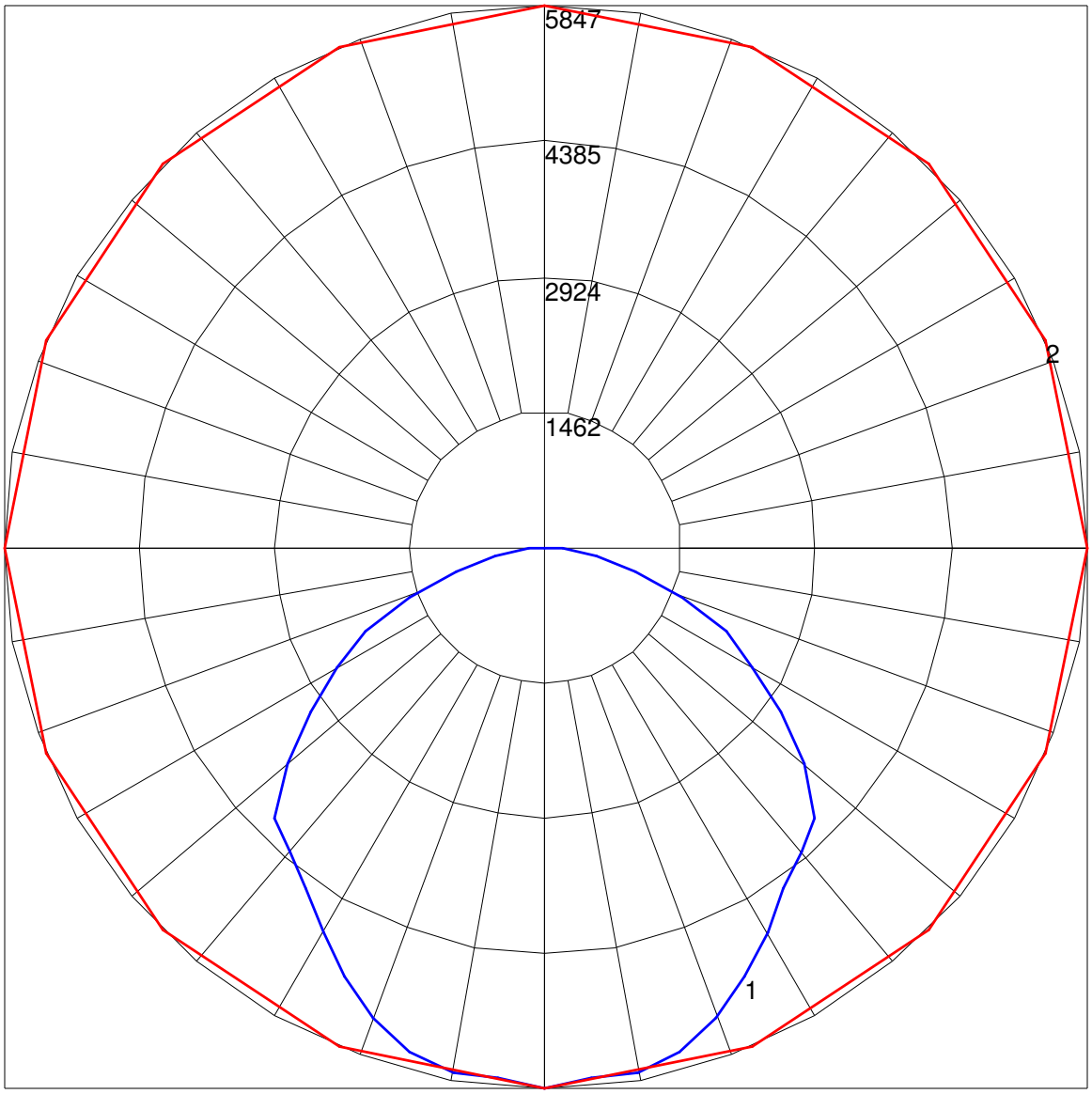
POLAR GRAPH



Maximum Candela = 5847.1 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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