H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP4-L400-850-W-CL-DIM-UNV_30C_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 19517.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 23-SEP-2020
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4-192 LED 22"ARRAYS EACH ON ALUM HEATSINK 24X19"HIGHBAY
[MORE] LUMINAIRE w/CLEAR ACRYLIC LENSES OVER LEDS & CENTER DRIVER
[MORE] HOUSING 4 ADVANCE #XI095C275V054DNF1 WITH 18K RESISTORS
[LUMCAT] GP4-L400-850-W-CL-DIM-UNV 30C
[LAMPCAT] D5638D192C2560A8N50
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	35500
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	112
Total Luminaire Watts	317
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.30
Spacing Criterion (90-270)	1.36
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	1.88 ft
Luminous Width (90-270)	1.58 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	42914	45776	45801
55	39789	44298	46109
65	32731	37966	35040
75	18783	25399	22021
85	5427	11197	11300

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	12227.162	12227.162	12227.162	12227.162	12227.162
5	12227.162	12259.384	12269.298	12198.244	12207.332
10	12117.275	12203.201	12121.406	11998.300	11947.074
15	11888.413	11965.251	11816.532	11796.703	11795.051
20	11543.881	11568.668	11567.842	11667.814	11605.848
25	11109.292	11061.372	11253.054	11022.539	11141.514
30	10593.734	10544.161	10610.258	10986.186	11139.862
35	9988.944	10027.776	10210.370	10734.190	10520.201
40	9225.521	9242.872	9916.237	9730.339	9535.352
45	8375.345	8181.185	8933.867	8889.251	8938.824
50	7433.460	7510.298	7825.912	8298.507	8296.855
55	6299.066	6888.984	7012.916	7399.585	7299.613
60	5070.484	5514.161	6071.031	5461.284	5345.614
65	3817.941	4249.226	4428.514	3974.922	4087.288
70	2488.561	3184.234	2752.950	2927.281	3066.085
75	1341.774	1787.930	1814.369	1555.764	1573.114
80	518.863	758.466	784.078	777.469	808.865
85	130.542	274.304	269.346	256.953	271.825
90	6.610	89.231	69.402	50.399	47.094
95	2.479	26.439	71.055	83.448	81.795
100	7.436	11.567	17.351	34.701	29.744
105	9.915	19.829	19.829	17.351	17.351
110	9.915	19.829	21.482	23.134	23.134
115	11.567	19.829	27.265	25.613	27.265
120	12.393	23.134	29.744	29.744	32.222
125	12.393	23.960	29.744	35.527	38.006
130	12.393	25.613	29.744	35.527	38.006
135	16.524	27.265	32.222	36.353	36.353
140	18.177	29.744	33.875	36.353	36.353
145	24.786	33.875	38.006	38.832	40.485
150	29.744	38.006	43.789	45.442	44.616
155	37.180	41.311	47.920	51.225	52.052
160	46.268	47.920	54.530	58.661	59.488
165	53.704	54.530	58.661	61.140	62.792
170	58.661	57.009	59.488	61.966	62.792
175	59.488	58.661	58.661	58.661	59.488
180	59.488	59.488	59.488	59.488	59.488

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	4515.55	N.A.	12.70
0-30	9664.8	N.A.	27.20
0-40	16081.68	N.A.	45.30
0-60	28949.52	N.A.	81.50
0-80	34934.5	N.A.	98.40
0-90	35289.97	N.A.	99.40
10-90	34127.34	N.A.	96.10
20-40	11566.13	N.A.	32.60
20-50	18284.29	N.A.	51.50
40-70	17017.64	N.A.	47.90
60-80	5984.98	N.A.	16.90
70-80	1835.17	N.A.	5.20
80-90	355.47	N.A.	1.00
90-110	72.29	N.A.	0.20
90-120	95.22	N.A.	0.30
90-130	120.43	N.A.	0.30
90-150	166.63	N.A.	0.50
90-180	210.01	N.A.	0.60
110-180	137.72	N.A.	0.40
0-180	35499.98	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1162.63
10-20	3352.93
20-30	5149.24
30-40	6416.88
40-50	6718.17
50-60	6149.67
60-70	4149.81
70-80	1835.17
80-90	355.47
90-100	52.16
100-110	20.13
110-120	22.93
120-130	25.21
130-140	23.59
140-150	22.62
150-160	21.52
160-170	16.20
170-180	5.66

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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	101	101	101	99
1	109	105	101	97	106	102	99	95	98	95	92	94	92	89	90	88	87	84
2	100	92	85	79	97	90	84	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	70	57	48	42	68	56	48	42	54	47	41	53	46	41	51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36	48	41	36	46	40	36	34
8	61	47	39	33	59	46	38	33	45	38	32	44	37	32	43	37	32	30
9	57	43	35	29	55	43	35	29	41	34	29	40	34	29	39	33	29	27
10	53	40	32	27	52	39	32	27	38	31	26	37	31	26	36	30	26	24

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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	25.2	26.8	25.6	27.1	27.5	25.5	27.1	25.9	27.5	27.8
	3H	26.6	28.0	26.9	28.3	28.7	26.8	28.3	27.2	28.6	29.0
	4H	26.9	28.2	27.3	28.6	29.0	27.2	28.5	27.6	28.9	29.3
	6H	27.0	28.2	27.4	28.6	29.0	27.4	28.6	27.8	29.0	29.4
	8H	27.0	28.2	27.4	28.6	29.0	27.4	28.6	27.8	29.0	29.4
	12H	27.0	28.1	27.4	28.5	29.0	27.4	28.5	27.8	28.9	29.4
4H	2H	25.8	27.2	26.3	27.5	27.9	26.1	27.4	26.5	27.8	28.2
	3H	27.4	28.5	27.8	28.9	29.3	27.6	28.7	28.0	29.1	29.5
	4H	27.8	28.8	28.3	29.2	29.7	27.9	29.0	28.4	29.4	29.8
	6H	28.0	28.9	28.5	29.3	29.8	28.2	29.1	28.7	29.5	30.0
	8H	28.0	28.8	28.5	29.3	29.8	28.2	29.1	28.7	29.5	30.0
	12H	28.0	28.8	28.5	29.2	29.7	28.3	29.0	28.8	29.5	30.0
8H	4H	28.0	28.8	28.5	29.3	29.8	28.1	28.9	28.6	29.4	29.9
	6H	28.2	28.9	28.7	29.4	29.9	28.4	29.1	28.9	29.6	30.1
	8H	28.3	28.9	28.8	29.4	29.9	28.5	29.1	29.0	29.6	30.1
	12H	28.3	28.9	28.8	29.4	29.9	28.6	29.1	29.1	29.6	30.2
12H	4H	28.0	28.7	28.5	29.2	29.7	28.1	28.8	28.6	29.3	29.8
	6H	28.2	28.9	28.8	29.3	29.9	28.4	29.0	29.0	29.5	30.1
	8H	28.3	28.9	28.9	29.4	30.0	28.5	29.1	29.1	29.6	30.2

Maximum UGR = 30.2

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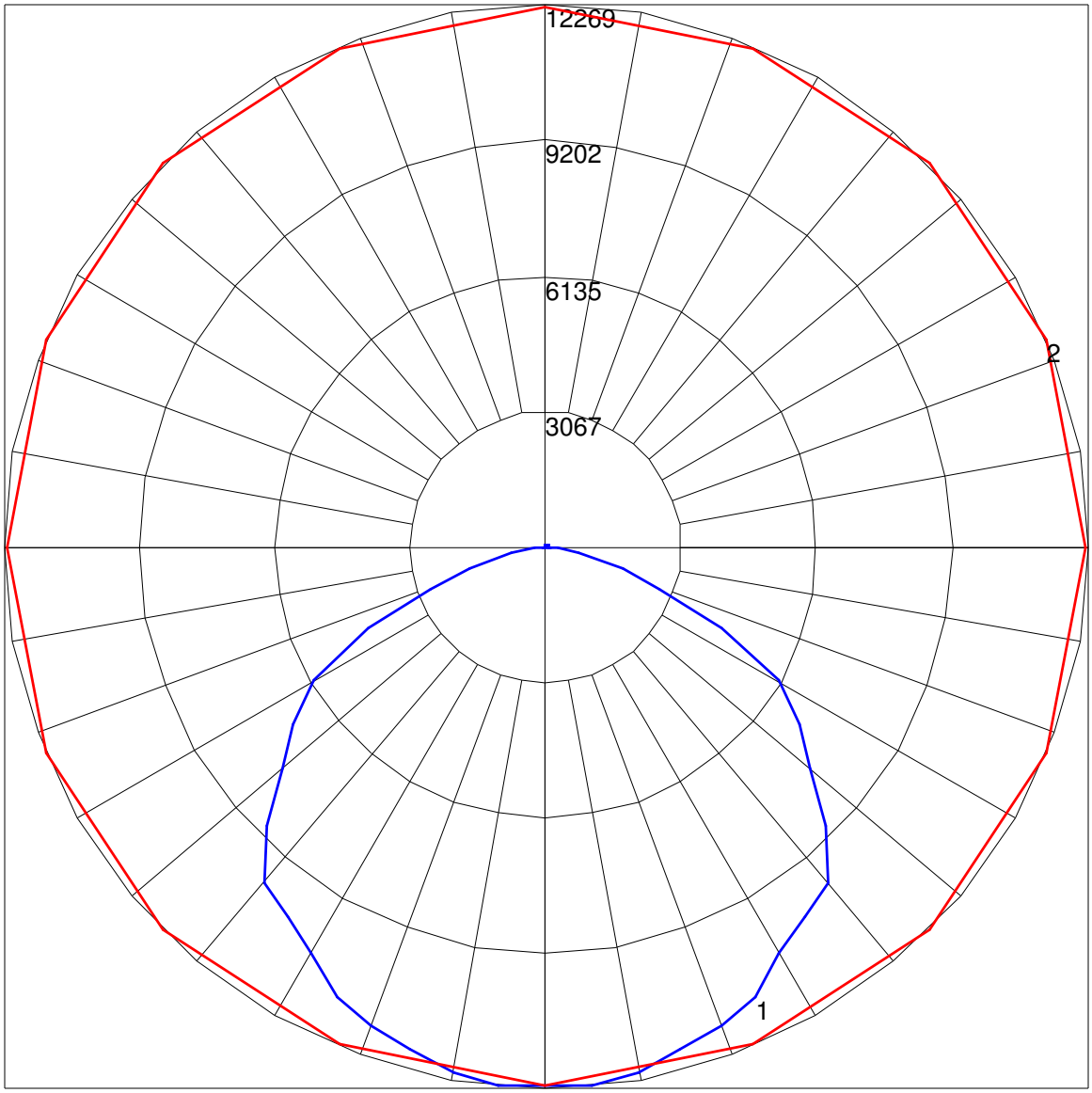
POLAR GRAPH



Maximum Candela = 12269.298 Located At Horizontal Angle = 45, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (45 - 225) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)

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