IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP4-L460-850-W-DIM-UNV.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 19478.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 06-NOV-2019
[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/ NO DIFFUSER/OPEN BOTTOM & CENTER DRIVER HOUSING
[LUMCAT] GP4-L460-840-W-DIM-UNV
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Industrial, Manufacturing, Warehouse, High Bay
[_SEARCH_MOUNTING] Cable, Pendant, Suspended
[_SEARCH_CERTIFICATION] DLC

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	45793
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	122
Total Luminaire Watts	375
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.28
Spacing Criterion (90-270)	1.30
Spacing Criterion (Diagonal)	1.40
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	59184	60284	53267
55	55567	49888	52261
65	47671	46172	36273
75	35348	25951	17856
85	12291	4484	3903

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	16990.335	16990.335	16990.335	16990.335	16990.335
5	16936.397	17017.304	16976.351	16909.429	16909.429
10	16721.646	16842.506	16829.521	16748.615	16761.600
15	16452.957	16492.911	16479.926	16452.957	16492.911
20	15956.531	15929.563	16023.454	16009.470	16063.408
25	15338.247	15311.278	15446.122	15446.122	15472.092
30	14559.149	14586.118	14760.915	14773.900	14773.900
35	13713.128	13686.159	13941.863	14008.786	14035.755
40	12692.310	12692.310	12880.092	13081.859	13000.952
45	11550.631	11537.646	11765.382	11027.237	10395.967
50	10248.138	10221.170	10194.201	9267.274	9361.165
55	8796.818	8837.771	7897.859	8085.641	8273.424
60	7158.714	7333.512	6688.259	6904.009	7024.869
65	5560.564	5748.347	5385.766	4889.341	4231.103
70	4002.368	3814.585	3385.082	2981.549	2981.549
75	2525.077	2431.186	1853.854	1396.384	1275.524
80	1235.570	899.958	564.347	322.627	376.564
85	295.658	174.798	107.875	93.891	93.891
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	6262.14	N.A.	13.70
0-30	13363.98	N.A.	29.20
0-40	22035.34	N.A.	48.10
0-60	38305.95	N.A.	83.60
0-80	45539.41	N.A.	99.40
0-90	45793.48	N.A.	100.00
10-90	44180.41	N.A.	96.50
20-40	15773.21	N.A.	34.40
20-50	24537.55	N.A.	53.60
40-70	21434.53	N.A.	46.80
60-80	7233.46	N.A.	15.80
70-80	2069.54	N.A.	4.50
80-90	254.07	N.A.	0.60
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	45793.48	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1613.06
10-20	4649.07
20-30	7101.84
30-40	8671.36
40-50	8764.34
50-60	7506.27
60-70	5163.92
70-80	2069.54
80-90	254.07
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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	100	92	86	81	98	91	85	80	87	82	78	84	80	76	81	77	74	72
3	92	82	74	68	89	80	73	67	77	71	66	74	69	65	72	67	64	61
4	84	72	64	58	82	71	63	57	69	62	56	66	60	56	64	59	55	53
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	71	58	50	43	70	57	49	43	56	48	43	54	47	42	52	47	42	40
7	66	53	44	38	64	52	44	38	51	43	38	49	43	38	48	42	37	35
8	62	48	40	34	60	48	40	34	46	39	34	45	39	34	44	38	34	32
9	58	44	36	31	56	44	36	31	43	36	31	42	35	30	41	35	30	28
10	54	41	33	28	53	40	33	28	39	33	28	38	32	28	38	32	28	26

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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	26.4	27.9	26.7	28.3	28.6	25.9	27.5	26.2	27.8	28.1
	3H	27.8	29.3	28.2	29.6	29.9	26.9	28.4	27.3	28.7	29.0
	4H	28.3	29.6	28.7	30.0	30.4	27.1	28.4	27.5	28.8	29.2
	6H	28.5	29.8	28.9	30.1	30.5	27.1	28.4	27.5	28.7	29.1
	8H	28.6	29.8	29.0	30.1	30.5	27.1	28.3	27.5	28.7	29.1
	12H	28.6	29.7	29.0	30.1	30.5	27.1	28.2	27.5	28.6	29.0
4H	2H	26.9	28.2	27.3	28.5	28.9	26.5	27.8	26.9	28.2	28.5
	3H	28.5	29.6	28.9	30.0	30.4	27.7	28.8	28.1	29.2	29.6
	4H	29.0	30.0	29.5	30.4	30.9	27.9	28.9	28.3	29.3	29.7
	6H	29.3	30.2	29.8	30.7	31.1	27.9	28.8	28.4	29.2	29.7
	8H	29.4	30.2	29.9	30.7	31.1	27.9	28.7	28.3	29.1	29.6
	12H	29.4	30.1	29.9	30.6	31.1	27.9	28.6	28.3	29.1	29.5
8H	4H	29.1	29.9	29.6	30.4	30.8	28.0	28.8	28.5	29.3	29.7
	6H	29.4	30.1	29.9	30.6	31.1	28.1	28.7	28.6	29.2	29.7
	8H	29.5	30.1	30.0	30.6	31.1	28.0	28.6	28.6	29.1	29.6
	12H	29.6	30.1	30.1	30.6	31.1	28.0	28.6	28.5	29.0	29.6
12H	4H	29.1	29.8	29.6	30.3	30.8	28.0	28.7	28.5	29.2	29.7
	6H	29.4	30.0	29.9	30.5	31.0	28.1	28.7	28.6	29.1	29.7
	8H	29.5	30.0	30.0	30.5	31.1	28.1	28.6	28.6	29.1	29.6

Maximum UGR = 31.1

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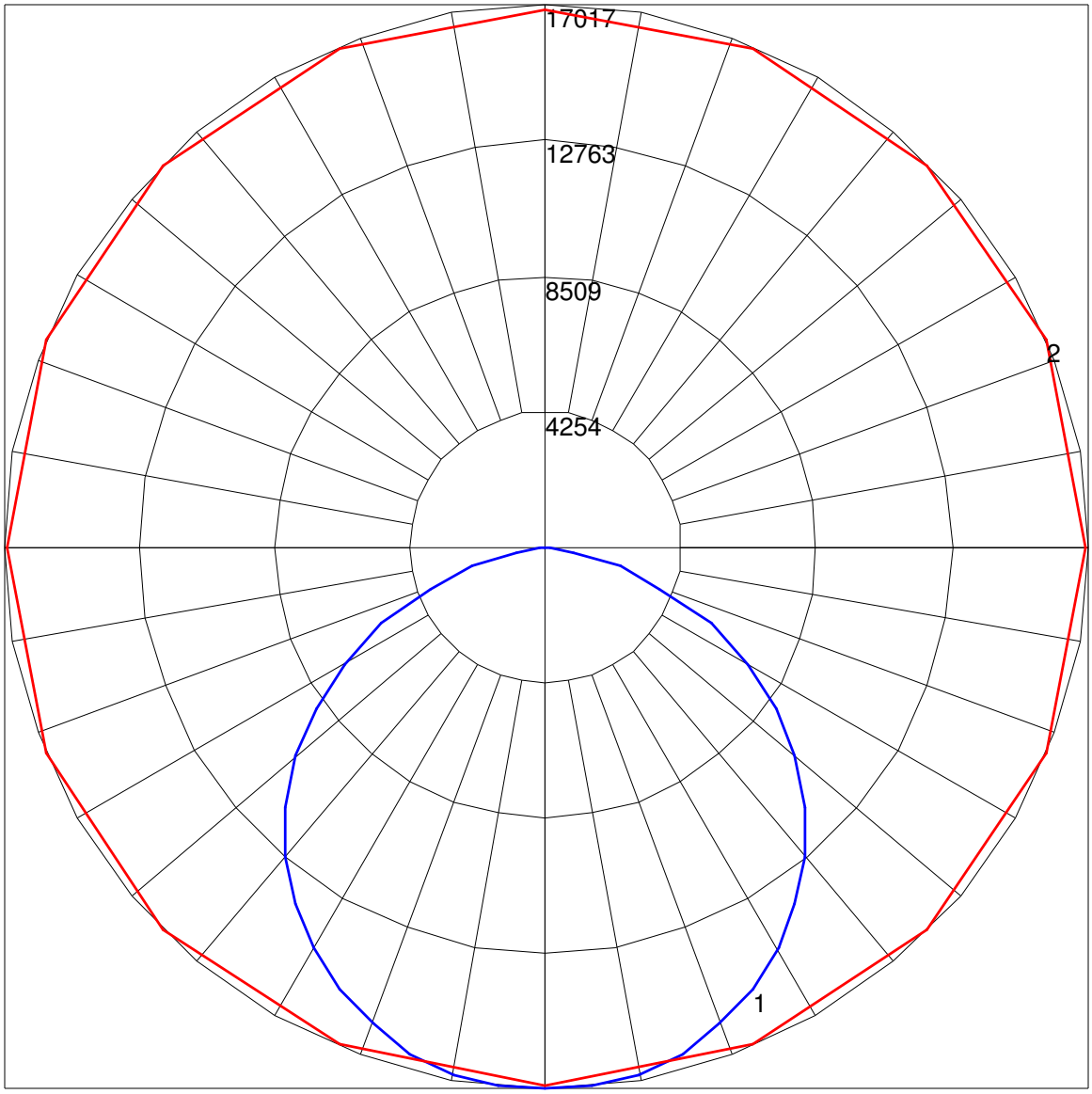
POLAR GRAPH



Maximum Candela = 17017.304 Located At Horizontal Angle = 22.5, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (22.5 - 202.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)