H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP4-L460-840-W-CL-DIM-UNV_40C_.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] 18-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-L460-840-W-CL-DIM-UNV 40C
[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	40893
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	109
Total Luminaire Watts	375
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	49433	52730	52759
55	45834	51028	53114
65	37704	43733	40363
75	21636	29257	25367
85	6251	12898	13017

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	14084.658	14084.658	14084.658	14084.658	14084.658
5	14084.658	14121.775	14133.196	14051.347	14061.816
10	13958.078	14057.058	13962.836	13821.028	13762.021
15	13694.448	13782.959	13611.648	13588.806	13586.903
20	13297.577	13326.129	13325.177	13440.336	13368.957
25	12796.967	12741.766	12962.568	12697.035	12834.084
30	12203.087	12145.983	12222.121	12655.159	12832.181
35	11506.420	11551.152	11761.484	12364.881	12118.383
40	10627.021	10647.008	11422.668	11208.529	10983.920
45	9647.691	9424.034	10291.060	10239.667	10296.771
50	8562.718	8651.229	9014.790	9559.180	9557.276
55	7255.992	7935.528	8078.287	8523.697	8408.538
60	5840.769	6351.848	6993.315	6290.938	6157.695
65	4397.946	4894.749	5101.275	4578.775	4708.210
70	2866.612	3667.969	3171.166	3371.981	3531.871
75	1545.610	2059.545	2090.000	1792.108	1812.095
80	597.687	873.688	903.192	895.578	931.744
85	150.373	315.974	310.264	295.988	313.119
90	7.614	102.787	79.945	58.056	54.249
95	2.855	30.455	81.849	96.125	94.221
100	8.566	13.324	19.986	39.973	34.262
105	11.421	22.842	22.842	19.986	19.986
110	11.421	22.842	24.745	26.648	26.648
115	13.324	22.842	31.407	29.504	31.407
120	14.276	26.648	34.262	34.262	37.117
125	14.276	27.600	34.262	40.924	43.780
130	14.276	29.504	34.262	40.924	43.780
135	19.035	31.407	37.117	41.876	41.876
140	20.938	34.262	39.021	41.876	41.876
145	28.552	39.021	43.780	44.731	46.635
150	34.262	43.780	50.442	52.345	51.393
155	42.828	47.587	55.200	59.007	59.959
160	53.297	55.200	62.814	67.573	68.525
165	61.862	62.814	67.573	70.428	72.332
170	67.573	65.669	68.525	71.380	72.332
175	68.525	67.573	67.573	67.573	68.525
180	68.525	68.525	68.525	68.525	68.525

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	5201.54	N.A.	12.70
0-30	11133.03	N.A.	27.20
0-40	18524.74	N.A.	45.30
0-60	33347.4	N.A.	81.50
0-80	40241.59	N.A.	98.40
0-90	40651.06	N.A.	99.40
10-90	39311.82	N.A.	96.10
20-40	13323.2	N.A.	32.60
20-50	21061.96	N.A.	51.50
40-70	19602.89	N.A.	47.90
60-80	6894.19	N.A.	16.90
70-80	2113.96	N.A.	5.20
80-90	409.47	N.A.	1.00
90-110	83.27	N.A.	0.20
90-120	109.69	N.A.	0.30
90-130	138.72	N.A.	0.30
90-150	191.95	N.A.	0.50
90-180	241.92	N.A.	0.60
110-180	158.65	N.A.	0.40
0-180	40892.98	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	1339.25
10-20	3862.29
20-30	5931.49
30-40	7391.71
40-50	7738.76
50-60	7083.9
60-70	4780.23
70-80	2113.96
80-90	409.47
90-100	60.08
100-110	23.19
110-120	26.42
120-130	29.04
130-140	27.18
140-150	26.05
150-160	24.79
160-170	18.66
170-180	6.52

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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	25.7	27.3	26.1	27.6	28.0	26.0	27.6	26.4	28.0	28.3
	3H	27.1	28.5	27.4	28.8	29.2	27.3	28.8	27.7	29.1	29.5
	4H	27.4	28.7	27.8	29.1	29.5	27.7	29.0	28.1	29.4	29.8
	6H	27.5	28.7	27.9	29.1	29.5	27.9	29.1	28.3	29.5	29.9
	8H	27.5	28.7	27.9	29.1	29.5	27.9	29.1	28.3	29.5	29.9
	12H	27.5	28.6	27.9	29.0	29.5	27.9	29.0	28.3	29.4	29.9
4H	2H	26.3	27.7	26.8	28.0	28.4	26.6	27.9	27.0	28.3	28.7
	3H	27.9	29.0	28.3	29.4	29.8	28.1	29.2	28.5	29.6	30.0
	4H	28.3	29.3	28.8	29.7	30.2	28.4	29.5	28.9	29.9	30.3
	6H	28.5	29.4	29.0	29.8	30.3	28.7	29.6	29.2	30.0	30.5
	8H	28.5	29.3	29.0	29.8	30.3	28.7	29.6	29.2	30.0	30.5
	12H	28.5	29.3	29.0	29.7	30.2	28.8	29.5	29.3	30.0	30.5
8H	4H	28.5	29.3	29.0	29.8	30.3	28.6	29.4	29.1	29.9	30.4
	6H	28.7	29.4	29.2	29.9	30.4	28.9	29.6	29.4	30.1	30.6
	8H	28.8	29.4	29.3	29.9	30.4	29.0	29.6	29.5	30.1	30.6
	12H	28.8	29.4	29.3	29.9	30.4	29.1	29.6	29.6	30.1	30.7
12H	4H	28.5	29.2	29.0	29.7	30.2	28.6	29.3	29.1	29.8	30.3
	6H	28.7	29.4	29.3	29.8	30.4	28.9	29.5	29.5	30.0	30.6
	8H	28.8	29.4	29.4	29.9	30.5	29.0	29.6	29.6	30.1	30.7

Maximum UGR = 30.7

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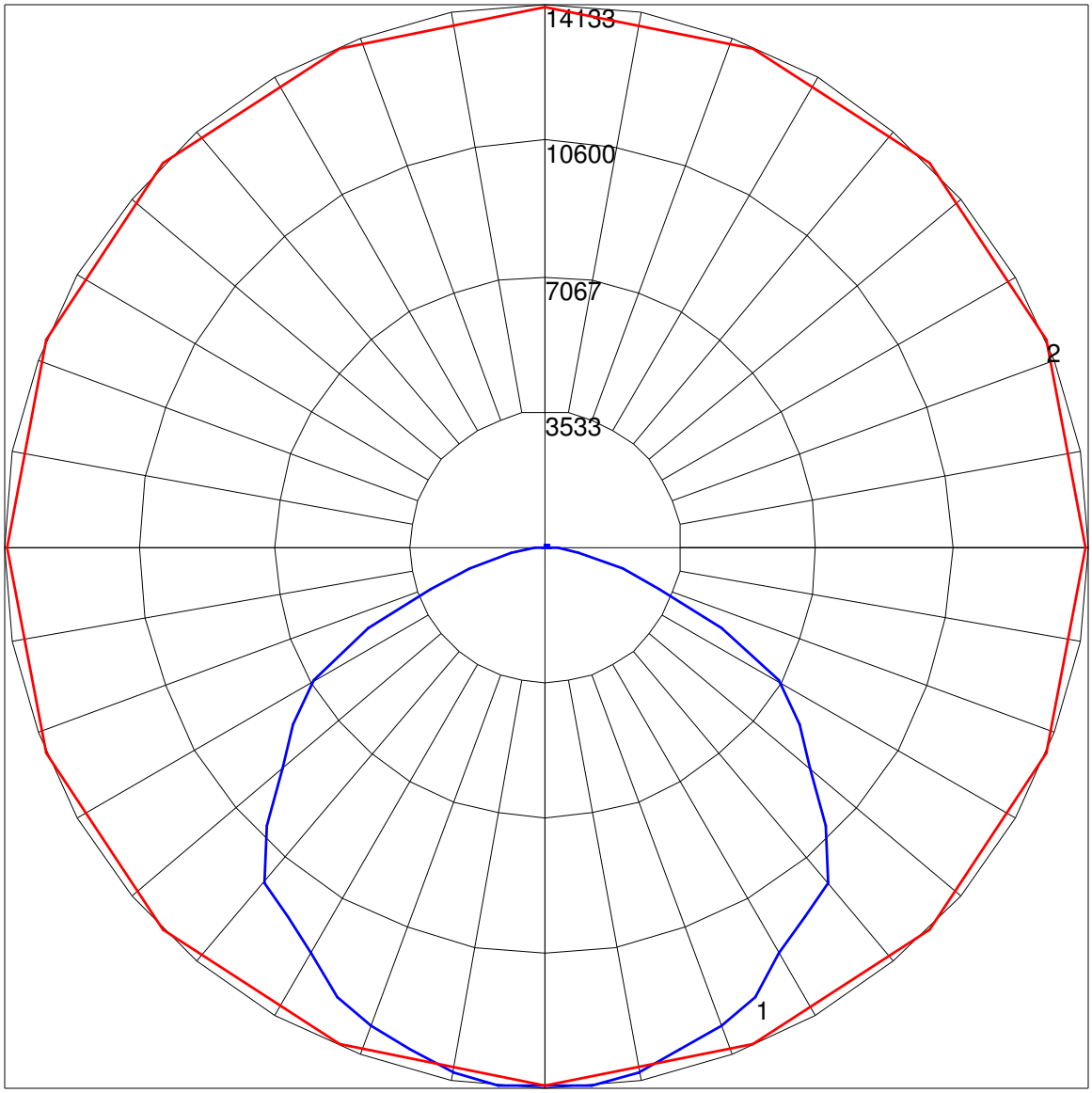
POLAR GRAPH



Maximum Candela = 14133.196 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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