H.E. WILLIAMS, INC.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-840-W-CL-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN FROM BALLABS TEST NO. 20797.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 01-MAY-2019
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 2-192 LED 22"ARRAYS EACH ON ALUM HEATSINK 24x14"HIGHBAY
[MORE] LUMINAIRE w/CLEAR ACRYLIC LENSES OVER LEDS & CENTER DRIVER
[MORE] HOUSING 2-ADVANCE #XI095C275V054BSF1 @ 1750mA
[LUMCAT] GP2-L230-840-W-CL-DIM-UNV
[LAMPCAT] MADE #10560431

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	21912
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	187
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.26
Spacing Criterion (90-270)	1.34
Spacing Criterion (Diagonal)	1.44
Basic Luminous Shape	Rectangular w/Sides
Luminous Length (0-180)	1.87 ft
Luminous Width (90-270)	1.20 ft
Luminous Height	0.08 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	31429	34586	35580
55	27601	32227	32908
65	21136	26438	25895
75	10910	15162	14804
85	1288	4467	3963

Photometric Toolbox - Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-840-W-CL-DIM-UNV_.IES

CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	7594.374	7594.374	7594.374	7594.374	7594.374
5	7605.291	7564.050	7697.476	7699.902	7705.967
10	7507.040	7670.791	7826.050	7832.115	7826.050
15	7316.605	7526.448	7725.374	7636.828	7596.800
20	7065.521	7493.698	7442.753	7416.068	7439.114
25	6744.085	7151.642	7161.345	7143.151	7188.031
30	6394.752	6774.410	6735.595	6832.632	6819.289
35	5922.908	6324.400	6462.678	6459.039	6534.243
40	5411.037	5824.658	5850.130	6039.353	6152.159
45	4822.749	5229.092	5489.880	5618.454	5589.343
50	4219.905	4583.795	4882.184	5056.851	5001.055
55	3498.191	3937.284	4281.766	4280.554	4309.665
60	2764.347	3270.154	3543.071	3517.599	3534.580
65	2032.929	2599.384	2721.893	2562.995	2611.514
70	1319.706	1827.938	1796.401	1710.281	1715.133
75	684.112	1090.456	1060.131	1005.548	1001.909
80	214.695	448.797	441.519	492.464	514.297
85	35.176	150.408	155.260	134.639	128.574
90	0.000	106.741	133.426	143.130	144.343
95	0.000	25.472	188.010	255.936	268.065
100	0.000	10.917	42.454	121.297	146.769
105	0.000	0.000	9.704	18.194	37.602
110	0.000	0.000	0.000	10.917	10.917
115	0.000	0.000	0.000	0.000	0.000
120	0.000	0.000	0.000	0.000	0.000
125	0.000	0.000	0.000	0.000	0.000
130	0.000	0.000	0.000	0.000	0.000
135	0.000	0.000	0.000	0.000	0.000
140	0.000	0.000	0.000	0.000	0.000
145	0.000	0.000	0.000	0.000	0.000
150	0.000	0.000	0.000	0.000	0.000
155	0.000	0.000	0.000	0.000	0.000
160	0.000	0.000	0.000	0.000	0.000
165	0.000	0.000	0.000	0.000	0.000
170	0.000	0.000	0.000	0.000	0.000
175	0.000	0.000	0.000	0.000	0.000
180	0.000	0.000	0.000	0.000	0.000

Photometric Toolbox - Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-840-W-CL-DIM-UNV_.IES

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2878.17	N.A.	13.10
0-30	6151.5	N.A.	28.10
0-40	10124.05	N.A.	46.20
0-60	17922.34	N.A.	81.80
0-80	21535.23	N.A.	98.30
0-90	21756.32	N.A.	99.30
10-90	21023.00	N.A.	95.90
20-40	7245.88	N.A.	33.10
20-50	11385.56	N.A.	52.00
40-70	10317.7	N.A.	47.10
60-80	3612.89	N.A.	16.50
70-80	1093.48	N.A.	5.00
80-90	221.09	N.A.	1.00
90-110	154.17	N.A.	0.70
90-120	155.20	N.A.	0.70
90-130	155.20	N.A.	0.70
90-150	155.20	N.A.	0.70
90-180	155.20	N.A.	0.70
110-180	1.04	N.A.	0.00
0-180	21911.52	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	733.31
10-20	2144.86
20-30	3273.33
30-40	3972.55
40-50	4139.68
50-60	3658.61
60-70	2519.41
70-80	1093.48
80-90	221.09
90-100	130.33
100-110	23.84
110-120	1.04
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

Photometric Toolbox - Copyright 2002-2019 by Lighting Analysts, Inc.
Calculations based on published IES Methods and recommendations, values rounded for display purposes.
Results derived from content of manufacturers photometric file.

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-840-W-CL-DIM-UNV_.IES

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	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	76	73	71
3	91	81	73	67	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	74	63	55	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	46	41	51	46	41	39
7	66	52	44	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	36	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

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-840-W-CL-DIM-UNV_.IES

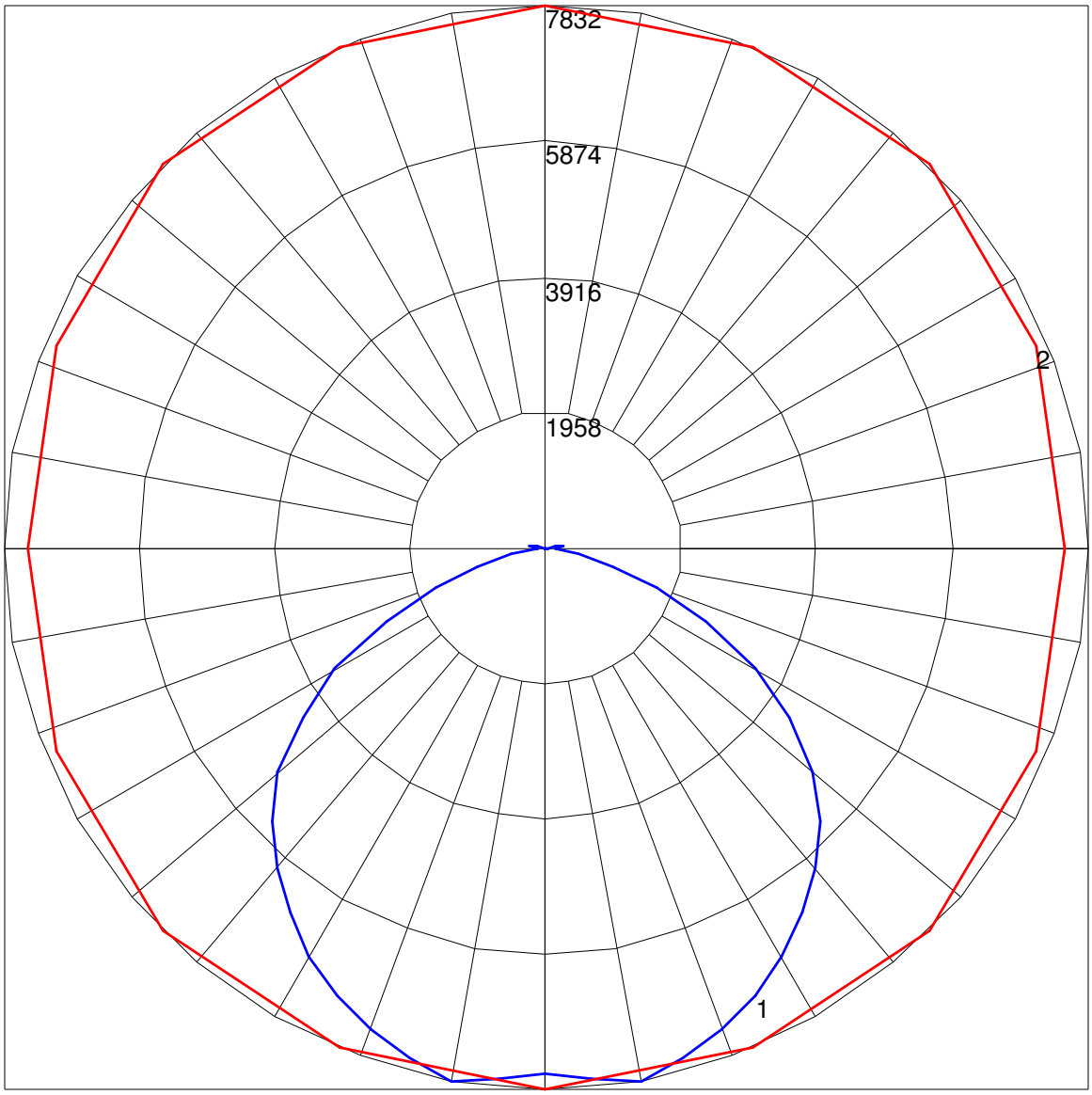
UGR TABLE - CORRECTED

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	23.7	25.3	24.1	25.6	26.0	24.4	26.0	24.8	26.3	26.7
	3H	25.0	26.4	25.3	26.7	27.1	25.7	27.1	26.0	27.4	27.8
	4H	25.2	26.6	25.6	26.9	27.3	26.0	27.3	26.4	27.7	28.1
	6H	25.3	26.5	25.7	26.9	27.3	26.1	27.4	26.6	27.8	28.2
	8H	25.3	26.5	25.7	26.9	27.3	26.2	27.3	26.6	27.8	28.2
	12H	25.3	26.4	25.7	26.8	27.2	26.2	27.3	26.6	27.7	28.1
4H	2H	24.4	25.7	24.8	26.1	26.5	24.9	26.3	25.4	26.7	27.1
	3H	25.8	26.9	26.2	27.3	27.8	26.3	27.4	26.7	27.8	28.3
	4H	26.2	27.2	26.6	27.6	28.1	26.7	27.7	27.1	28.1	28.6
	6H	26.4	27.2	26.8	27.7	28.2	27.0	27.8	27.4	28.3	28.8
	8H	26.3	27.2	26.8	27.6	28.1	27.0	27.8	27.5	28.3	28.8
	12H	26.3	27.1	26.8	27.5	28.0	27.0	27.7	27.5	28.2	28.7
8H	4H	26.4	27.2	26.9	27.6	28.1	26.8	27.7	27.3	28.1	28.6
	6H	26.5	27.2	27.1	27.7	28.2	27.1	27.8	27.6	28.3	28.8
	8H	26.6	27.2	27.1	27.7	28.2	27.2	27.8	27.7	28.3	28.8
	12H	26.6	27.1	27.1	27.6	28.2	27.2	27.7	27.7	28.2	28.8
12H	4H	26.4	27.1	26.9	27.6	28.1	26.8	27.6	27.3	28.1	28.5
	6H	26.6	27.2	27.1	27.6	28.2	27.1	27.7	27.7	28.2	28.8
	8H	26.6	27.1	27.1	27.6	28.2	27.2	27.7	27.7	28.2	28.8

Maximum UGR = 28.8

IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-840-W-CL-DIM-UNV_.IES

POLAR GRAPH



Maximum Candela = 7832.115 Located At Horizontal Angle = 67.5, Vertical Angle = 10
1 - Vertical Plane Through Horizontal Angles (67.5 - 247.5) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (10) (Through Max. Cd.)