IES INDOOR REPORT
PHOTOMETRIC FILENAME : GP2-L230-840-W-DL-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] 20-NOV-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/DIFFUSE POLYCARBONATE LENSES OVER LEDS & CENTER DRIVER
[MORE] HOUSING 2-ADVANCE #XI095C275V054BSF1 @ 1750mA
[LUMCAT] GP2-L230-840-W-DL-DIM-UNV

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	17716
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	95
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	25411	27963	28768
55	22316	26056	26607
65	17089	21375	20937
75	8821	12259	11970
85	1041	3611	3204

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CANDELA TABULATION

	0.0	22.5	45.0	67.5	90.0
0	6140.244	6140.244	6140.244	6140.244	6140.244
5	6149.071	6115.726	6223.605	6225.566	6230.470
10	6069.633	6202.029	6327.560	6332.464	6327.560
15	5915.661	6085.324	6246.161	6174.569	6142.206
20	5712.653	6058.845	6017.655	5996.079	6014.713
25	5452.764	5782.284	5790.130	5775.419	5811.705
30	5170.319	5477.282	5445.899	5524.356	5513.569
35	4788.822	5113.438	5225.239	5222.297	5283.101
40	4374.961	4709.384	4729.979	4882.970	4974.176
45	3899.315	4227.854	4438.707	4542.663	4519.126
50	3411.901	3706.114	3947.370	4088.593	4043.480
55	2828.376	3183.394	3461.917	3460.936	3484.473
60	2235.045	2644.002	2864.663	2844.068	2857.798
65	1643.675	2101.668	2200.720	2072.247	2111.475
70	1067.016	1477.935	1452.436	1382.805	1386.728
75	553.122	881.661	857.143	813.011	810.069
80	173.586	362.864	356.980	398.169	415.822
85	28.441	121.608	125.531	108.859	103.956
90	0.000	86.303	107.878	115.724	116.705
95	0.000	20.595	152.011	206.930	216.738
100	0.000	8.826	34.325	98.071	118.666
105	0.000	0.000	7.846	14.711	30.402
110	0.000	0.000	0.000	8.826	8.826
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

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	2327.07	N.A.	13.10
0-30	4973.64	N.A.	28.10
0-40	8185.55	N.A.	46.20
0-60	14490.67	N.A.	81.80
0-80	17411.78	N.A.	98.30
0-90	17590.53	N.A.	99.30
10-90	16997.63	N.A.	95.90
20-40	5858.48	N.A.	33.10
20-50	9205.51	N.A.	52.00
40-70	8342.12	N.A.	47.10
60-80	2921.11	N.A.	16.50
70-80	884.10	N.A.	5.00
80-90	178.76	N.A.	1.00
90-110	124.65	N.A.	0.70
90-120	125.49	N.A.	0.70
90-130	125.49	N.A.	0.70
90-150	125.49	N.A.	0.70
90-180	125.49	N.A.	0.70
110-180	0.84	N.A.	0.00
0-180	17716.02	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	592.90
10-20	1734.17
20-30	2646.57
30-40	3211.91
40-50	3347.04
50-60	2958.08
60-70	2037.01
70-80	884.10
80-90	178.76
90-100	105.37
100-110	19.27
110-120	0.84
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	117	117	117	117	114	114	114	114	109	109	109	104	104	104	99	99	99	97
1	107	103	99	95	104	100	97	94	96	93	91	92	90	88	89	87	85	83
2	98	90	84	78	95	88	82	77	85	80	75	81	77	73	78	75	72	70
3	89	79	71	65	87	78	70	65	75	68	63	72	67	62	69	65	61	59
4	82	70	62	55	79	69	61	55	66	60	54	64	58	53	62	57	53	50
5	75	63	54	48	73	62	53	47	59	52	47	57	51	46	56	50	46	44
6	69	56	48	42	67	56	47	41	54	46	41	52	46	41	50	45	40	38
7	64	51	43	37	63	50	42	37	49	42	36	47	41	36	46	40	36	34
8	60	47	38	33	58	46	38	33	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	54	42	35	29	41	34	29	40	34	29	39	33	29	27
10	52	39	32	27	51	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	23.1	24.7	23.5	25.0	25.4	23.8	25.4	24.2	25.7	26.1
	3H	24.4	25.8	24.7	26.1	26.5	25.1	26.5	25.4	26.8	27.2
	4H	24.6	26.0	25.0	26.3	26.7	25.4	26.7	25.8	27.1	27.5
	6H	24.7	25.9	25.1	26.3	26.7	25.5	26.8	26.0	27.2	27.6
	8H	24.7	25.9	25.1	26.3	26.7	25.6	26.7	26.0	27.2	27.6
	12H	24.7	25.8	25.1	26.2	26.6	25.6	26.7	26.0	27.1	27.5
4H	2H	23.8	25.1	24.2	25.5	25.9	24.3	25.7	24.8	26.1	26.5
	3H	25.2	26.3	25.6	26.7	27.2	25.7	26.8	26.1	27.2	27.7
	4H	25.6	26.6	26.0	27.0	27.5	26.1	27.1	26.5	27.5	28.0
	6H	25.8	26.6	26.2	27.1	27.6	26.4	27.2	26.8	27.7	28.2
	8H	25.7	26.6	26.2	27.0	27.5	26.4	27.2	26.9	27.7	28.2
	12H	25.7	26.5	26.2	26.9	27.4	26.4	27.1	26.9	27.6	28.1
8H	4H	25.8	26.6	26.3	27.0	27.5	26.2	27.1	26.7	27.5	28.0
	6H	25.9	26.6	26.5	27.1	27.6	26.5	27.2	27.0	27.7	28.2
	8H	26.0	26.6	26.5	27.1	27.6	26.6	27.2	27.1	27.7	28.2
	12H	26.0	26.5	26.5	27.0	27.6	26.6	27.1	27.1	27.6	28.2
12H	4H	25.8	26.5	26.3	27.0	27.5	26.2	27.0	26.7	27.5	27.9
	6H	26.0	26.6	26.5	27.0	27.6	26.5	27.1	27.1	27.6	28.2
	8H	26.0	26.5	26.5	27.0	27.6	26.6	27.1	27.1	27.6	28.2

Maximum UGR = 28.2

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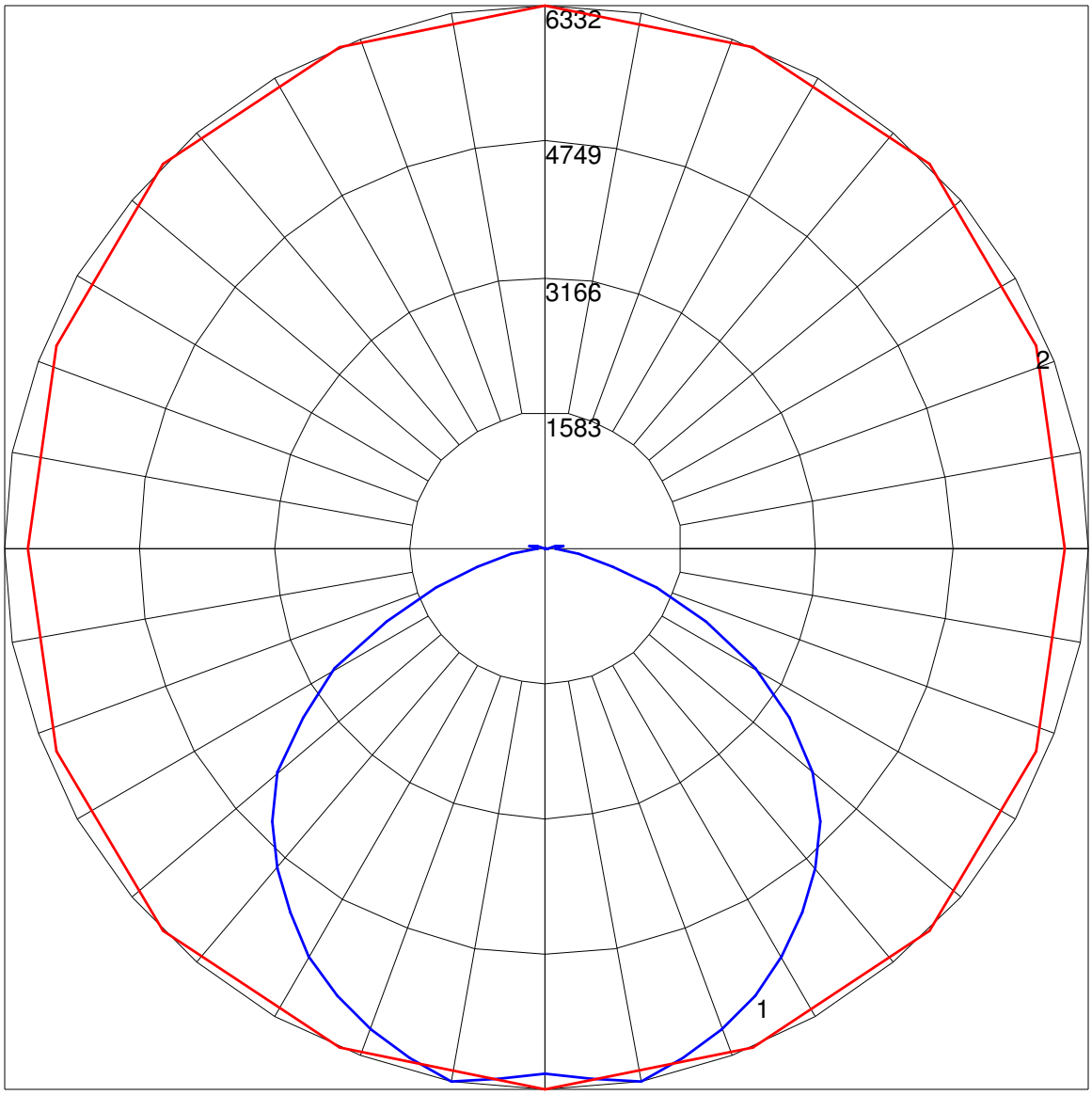
POLAR GRAPH



Maximum Candela = 6332.464 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.)

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