

IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S14-L28-835-WPR-DIM-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002

[TEST] GEN from BALLABS TEST NO. 20960.0

[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC

[ISSUEDATE] 10-APR-2023

[MANUFAC] WILLIAMS INDOOR

[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836

[LUMINAIRE] 1X4' RECESSED LED TROFFER

[MORE] WITH PERFORATED CENTER BASKET W/OVERLAY

[LUMCAT] DIG-S14-L28-835-WPR-DIM-UNV

[LAMPCAT] HLM 80 CRI, 3500K CCT

[_SEARCH_SOURCETYPE] LED

[_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Commercial, Educational, Office, Direct, Indirect

[_SEARCH_MOUNTING] Ceiling, Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2729
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	31.2
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.32
Spacing Criterion (Diagonal)	1.40
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	3.90 ft
Luminous Width (90-270)	0.90 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	2691	3113	3013
55	2346	2670	2616
65	1852	2105	2098
75	1327	1370	1305
85	581	517	484

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	1050.755	1050.755	1050.755	1050.755	1050.755
5	1063.547	1048.014	1043.445	1040.704	1041.618
10	1043.445	1030.654	1029.740	1029.740	1030.654
15	1012.380	1002.329	1005.070	1010.552	1015.121
20	973.090	964.867	975.832	987.710	995.933
25	923.751	920.096	940.197	957.558	967.608
30	856.137	863.446	894.512	923.751	934.715
35	787.609	802.229	840.604	871.670	886.289
40	709.945	729.133	783.041	814.107	815.020
45	617.661	651.468	714.513	709.945	691.671
50	529.946	565.580	625.884	591.164	584.768
55	436.749	490.657	497.053	485.175	487.002
60	343.551	401.114	387.409	384.668	387.409
65	254.009	314.313	288.729	287.815	287.815
70	179.999	189.136	199.187	195.532	195.532
75	111.471	106.903	115.126	106.903	109.644
80	59.390	52.081	49.340	44.771	41.116
85	16.447	14.619	14.619	13.705	13.705
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	384.09	N.A.	14.10
0-30	817.61	N.A.	30.00
0-40	1341.3	N.A.	49.10
0-60	2299.91	N.A.	84.30
0-80	2708.1	N.A.	99.20
0-90	2729.36	N.A.	100.00
10-90	2629.95	N.A.	96.40
20-40	957.22	N.A.	35.10
20-50	1482.74	N.A.	54.30
40-70	1245.11	N.A.	45.60
60-80	408.19	N.A.	15.00
70-80	121.68	N.A.	4.50
80-90	21.26	N.A.	0.80
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	2729.36	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	99.40
10-20	284.68
20-30	433.52
30-40	523.70
40-50	525.52
50-60	433.09
60-70	286.51
70-80	121.68
80-90	21.26
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	116	116	116	116	113	113	113	113	108	108	108	103	103	103	99	99	99	97
1	107	103	99	95	104	100	97	94	96	93	91	93	90	88	89	87	85	84
2	98	90	84	79	95	88	83	78	85	80	76	82	78	74	79	76	73	71
3	89	80	72	66	87	78	71	66	75	69	64	73	68	63	70	66	62	60
4	82	71	63	57	80	70	62	56	67	61	55	65	59	55	63	58	54	52
5	76	64	55	49	74	62	55	49	60	53	48	59	52	48	57	51	47	45
6	70	57	49	43	68	56	48	43	55	48	42	53	47	42	52	46	42	40
7	65	52	44	38	63	51	43	38	50	43	38	48	42	37	47	41	37	35
8	60	48	39	34	59	47	39	34	46	39	34	44	38	33	43	38	33	31
9	56	44	36	31	55	43	36	30	42	35	30	41	35	30	40	34	30	28
10	53	40	33	28	52	40	33	28	39	32	28	38	32	27	37	31	27	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

X=2H	Y=2H	15.4	17.0	15.8	17.3	17.6	UGR Viewed Endwise			
	3H	16.6	18.0	17.0	18.4	18.7	15.4	17.0	15.8	17.3
	4H	16.9	18.3	17.3	18.6	19.0	16.7	18.1	17.1	18.4
	6H	17.2	18.4	17.6	18.8	19.1	17.0	18.4	17.4	18.7
	8H	17.2	18.4	17.6	18.8	19.2	17.2	18.4	17.6	18.8
	12H	17.2	18.3	17.6	18.7	19.1	17.2	18.3	17.6	18.7

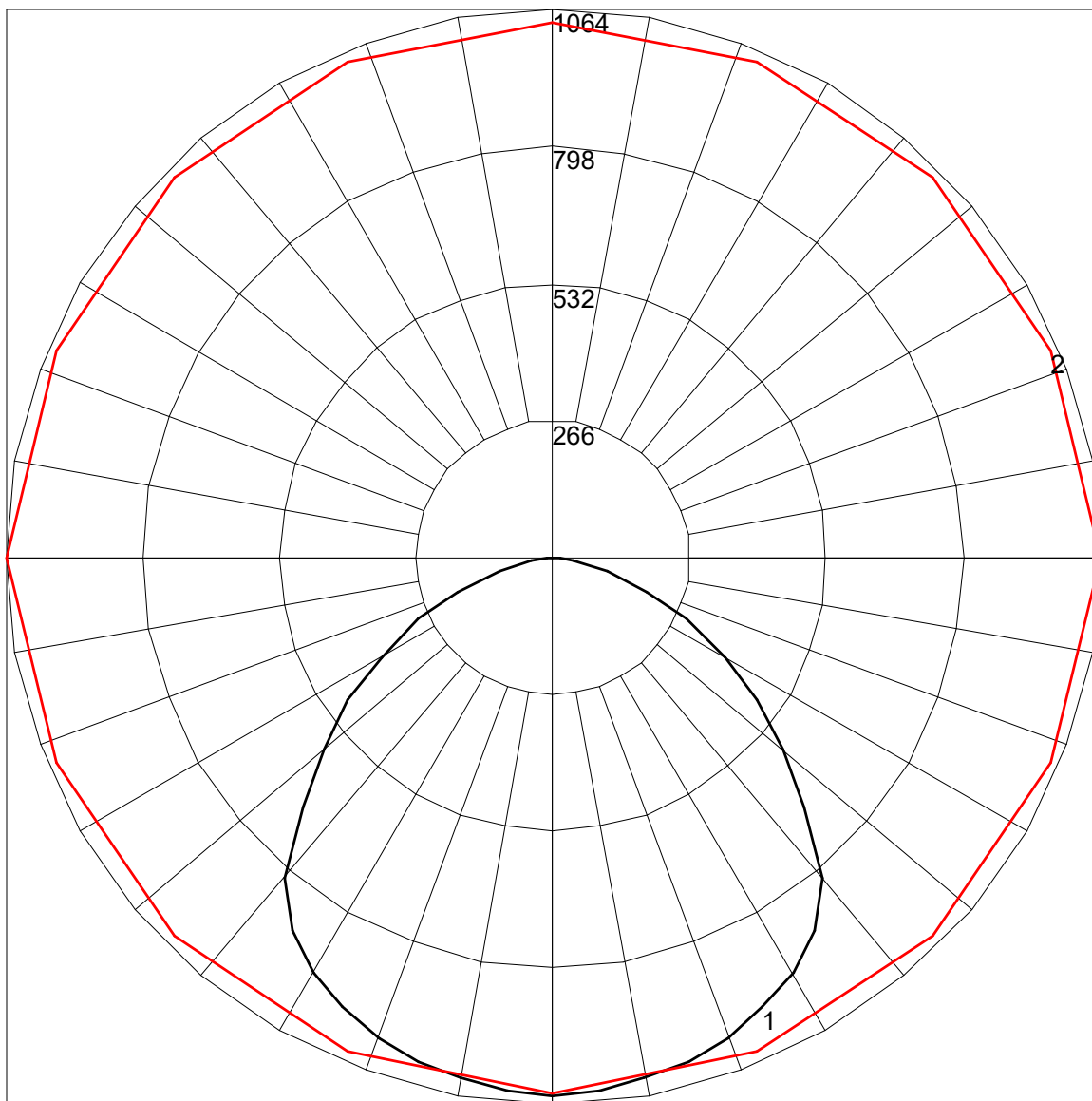
4H	2H	15.9	17.2	16.3	17.6	18.0	15.9	17.2	16.3	17.6
	3H	17.3	18.4	17.7	18.8	19.2	17.4	18.5	17.8	18.9
	4H	17.7	18.7	18.1	19.1	19.5	17.8	18.8	18.2	19.2
	6H	18.0	18.8	18.4	19.3	19.7	18.0	18.8	18.4	19.3
	8H	18.0	18.8	18.5	19.3	19.7	18.0	18.8	18.4	19.2
	12H	18.1	18.8	18.5	19.3	19.7	18.0	18.7	18.5	19.2

8H	4H	17.8	18.7	18.3	19.1	19.6	17.9	18.7	18.4	19.2
	6H	18.2	18.8	18.7	19.3	19.8	18.1	18.8	18.6	19.3
	8H	18.3	18.8	18.8	19.4	19.8	18.2	18.8	18.7	19.3
	12H	18.3	18.8	18.8	19.3	19.9	18.2	18.7	18.7	19.2

12H	4H	17.8	18.6	18.3	19.0	19.5	17.9	18.6	18.4	19.1
	6H	18.2	18.8	18.7	19.2	19.8	18.1	18.7	18.7	19.2
	8H	18.3	18.8	18.8	19.3	19.9	18.2	18.7	18.7	19.2

Maximum UGR = 19.9

POLAR GRAPH



Maximum Candela = 1063.547 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (90 - 270)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)