



IES INDOOR REPORT

PHOTOMETRIC FILENAME : DIG-S14-L47-850-WPR-(L45)-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] 08-04-2021

[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-L47-850-WPR-(L45)-DIM-UNV

[LAMPCAT] HLM 80 CRI, 5000K 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	5335
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	87
Total Luminaire Watts	61
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	5260	6085	5890
55	4585	5218	5113
65	3619	4114	4101
75	2594	2679	2551
85	1136	1010	947

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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	2053.984	2053.984	2053.984	2053.984	2053.984
5	2078.989	2048.626	2039.695	2034.337	2036.123
10	2039.695	2014.690	2012.904	2012.904	2014.690
15	1978.969	1959.322	1964.680	1975.397	1984.327
20	1902.168	1886.093	1907.526	1930.745	1946.820
25	1805.720	1798.575	1837.869	1871.804	1891.451
30	1673.550	1687.839	1748.565	1805.720	1827.153
35	1539.595	1568.172	1643.187	1703.914	1732.491
40	1387.779	1425.286	1530.665	1591.391	1593.177
45	1207.385	1273.470	1396.709	1387.779	1352.057
50	1035.922	1105.579	1223.460	1155.589	1143.087
55	853.743	959.121	971.624	948.405	951.977
60	671.563	784.086	757.295	751.937	757.295
65	496.528	614.409	564.399	562.613	562.613
70	351.856	369.717	389.364	382.220	382.220
75	217.901	208.971	225.045	208.971	214.329
80	116.095	101.806	96.448	87.518	80.373
85	32.149	28.577	28.577	26.791	26.791
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	750.80	N.A.	14.10
0-30	1598.23	N.A.	30.00
0-40	2621.94	N.A.	49.10
0-60	4495.8	N.A.	84.30
0-80	5293.71	N.A.	99.20
0-90	5335.26	N.A.	100.00
10-90	5140.95	N.A.	96.40
20-40	1871.14	N.A.	35.10
20-50	2898.41	N.A.	54.30
40-70	2433.91	N.A.	45.60
60-80	797.91	N.A.	15.00
70-80	237.86	N.A.	4.50
80-90	41.55	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	5335.26	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	194.31
10-20	556.49
20-30	847.43
30-40	1023.71
40-50	1027.27
50-60	846.58
60-70	560.06
70-80	237.86
80-90	41.55
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	102	98	107	103	100	96	99	96	93	95	93	91	92	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	90	80	73	67	77	71	66	75	70	65	72	68	64	62
4	84	73	65	58	82	72	64	58	69	62	57	67	61	56	65	60	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	55	48	43	53	47	43	41
7	67	54	45	39	65	53	45	39	51	44	39	50	43	38	48	43	38	36
8	62	49	41	35	61	48	40	35	47	40	35	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

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UGR TABLE - CORRECTED

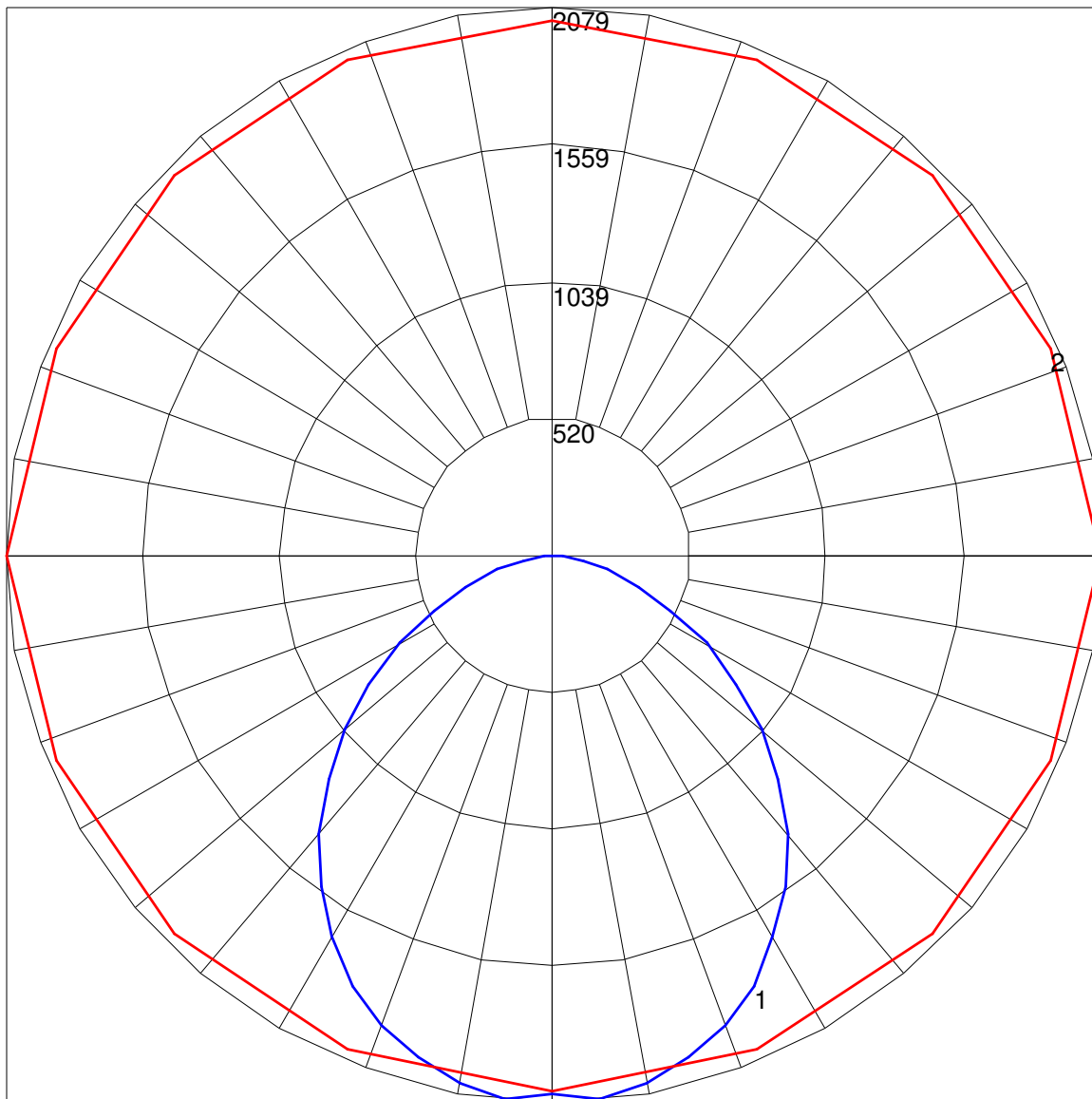
Reflectances

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	17.6	19.2	18.0	19.5	19.8	17.6	19.2	18.0	19.5	19.8
	3H	18.8	20.2	19.2	20.6	20.9	18.9	20.3	19.3	20.6	21.0
	4H	19.1	20.5	19.5	20.8	21.2	19.2	20.6	19.6	20.9	21.3
	6H	19.4	20.6	19.8	21.0	21.3	19.4	20.6	19.8	21.0	21.3
	8H	19.4	20.6	19.8	21.0	21.4	19.4	20.5	19.8	20.9	21.3
	12H	19.4	20.5	19.8	20.9	21.3	19.4	20.5	19.8	20.9	21.3
4H	2H	18.1	19.4	18.5	19.8	20.2	18.1	19.4	18.5	19.8	20.2
	3H	19.5	20.6	19.9	21.0	21.4	19.6	20.7	20.0	21.1	21.5
	4H	19.9	20.9	20.3	21.3	21.7	20.0	21.0	20.4	21.4	21.8
	6H	20.2	21.0	20.6	21.5	21.9	20.2	21.0	20.6	21.5	21.9
	8H	20.2	21.0	20.7	21.5	21.9	20.2	21.0	20.6	21.4	21.9
	12H	20.3	21.0	20.7	21.5	21.9	20.2	20.9	20.7	21.4	21.8
8H	4H	20.0	20.9	20.5	21.3	21.8	20.1	20.9	20.6	21.4	21.8
	6H	20.4	21.0	20.9	21.5	22.0	20.3	21.0	20.8	21.5	22.0
	8H	20.5	21.0	21.0	21.6	22.0	20.4	21.0	20.9	21.5	22.0
	12H	20.5	21.0	21.0	21.5	22.1	20.4	20.9	20.9	21.4	22.0
12H	4H	20.0	20.8	20.5	21.2	21.7	20.1	20.8	20.6	21.3	21.8
	6H	20.4	21.0	20.9	21.4	22.0	20.3	20.9	20.9	21.4	21.9
	8H	20.5	21.0	21.0	21.5	22.1	20.4	20.9	20.9	21.4	22.0

Maximum UGR = 22.1

POLAR GRAPH



Maximum Candela = 2078.989 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)