IES INDOOR REPORT
PHOTOMETRIC FILENAME : 4DR-TL-L20-8TW-DIM-UNV-OW-OF-CS_4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
[TEST] GEN from BALLABS TEST NO. 20685.0
[TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
[ISSUEDATE] 2026-10-14
[MANUFAC] WILLIAMS INDOOR
[OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO
[LUMINAIRE] 4" RND RECESSED LED DOWNLIGHT
[MORE] OPEN SEMI-SPEC SPUN ALUMINUM REFLECTOR (WIDE)
[LUMCAT] 4DR-TL-L20-8TW-DIM-UNV-OW-OF-CS_4000K_
[LAMPCAT] BRIDGELUX V13 BXRE
[_SEARCH_SOURCETYPE] LED
[_SEARCH_APPLICATION] Indoor, Classroom, Commercial, Corridor, Hotel, Industrial, Office, Downlight
[_SEARCH_MOUNTING] Recessed

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	2104
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	117
Total Luminaire Watts	18
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.22
Spacing Criterion (Diagonal)	0.94
Basic Luminous Shape	Circular
Luminous Length (0-180)	0.37 ft (Diameter)
Luminous Width (90-270)	0.37 ft (Diameter)
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	6380	6380	6380
55	1966	1966	1966
65	243	243	243
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	0
0	1805.709
5	1859.581
10	1915.448
15	1955.353
20	2042.147
25	2225.711
30	1743.856
35	306.272
40	79.810
45	43.896
50	22.945
55	10.974
60	4.988
65	0.998
70	0.998
75	0.000
80	0.000
85	0.000
90	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	737.93	N.A.	35.10
0-30	1687.9	N.A.	80.20
0-40	2054.21	N.A.	97.60
0-60	2101.68	N.A.	99.90
0-80	2103.91	N.A.	100.00
0-90	2103.91	N.A.	100.00
10-90	1925.04	N.A.	91.50
20-40	1316.28	N.A.	62.60
20-50	1352.69	N.A.	64.30
40-70	49.44	N.A.	2.30
60-80	2.22	N.A.	0.10
70-80	0.26	N.A.	0.00
80-90	0.00	N.A.	0.00
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	2103.91	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	178.86
10-20	559.06
20-30	949.97
30-40	366.31
40-50	36.41
50-60	11.06
60-70	1.96
70-80	0.26
80-90	0.00
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	114	111	109	106	111	109	107	105	105	103	102	101	100	98	98	97	96	94
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88
3	103	97	92	88	101	95	91	87	93	89	86	90	87	85	88	86	83	82
4	98	91	85	81	96	90	85	81	87	83	80	85	82	79	84	81	78	77
5	93	85	79	75	92	84	79	75	82	78	74	81	77	74	79	76	73	72
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67
7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63
8	80	71	65	61	79	70	65	61	69	64	61	68	64	60	67	63	60	59
9	76	67	61	57	75	66	61	57	66	60	57	65	60	57	64	60	57	55
10	73	63	58	54	72	63	57	54	62	57	54	61	57	53	61	56	53	52

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UGR TABLE - CORRECTED

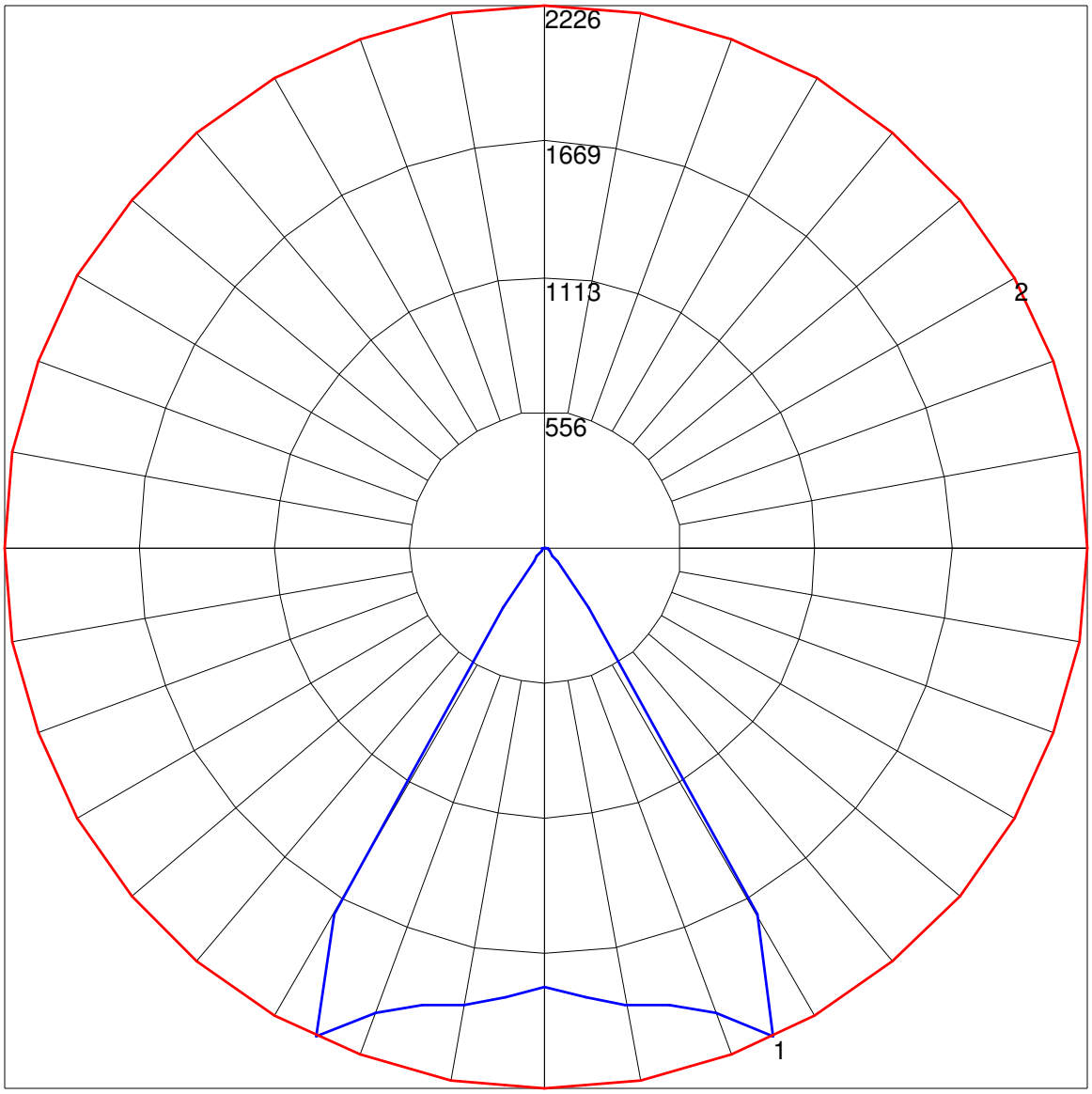
Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	3H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	4H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	6H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	8H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	12H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
4H	2H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	3H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	4H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	6H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	8H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	12H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
8H	4H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	6H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	8H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	12H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
12H	4H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	6H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
	8H	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6

Maximum UGR = 2.6

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POLAR GRAPH



Maximum Candela = 2225.711 Located At Horizontal Angle = 0, Vertical Angle = 25
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (25) (Through Max. Cd.)

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