



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 4DR-TL-L30-840-DIM-UNV-OW-OF-CS-WET-CC_.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] 20 APRIL 2020

[MANUFAC] WILLIAMS INDOOR

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

[LUMINAIRE] 4" RND RECESSED LED CAST HOUSING DOWNLIGHT

[MORE] OPEN SEMI-SPEC SPUN ALUMINUM REFLECTOR (WIDE)

[LUMCAT] 4DR-TL-L30-835-DIM-UNV-OW-OF-CS-WET-CC

[LAMPCAT] V13 BXRE-35E2000

[_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	2562
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	91
Total Luminaire Watts	28
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	7769	7769	7769
55	2394	2394	2394
65	295	295	295
75	0	0	0
85	0	0	0

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CANDELA TABULATION

	<u>0</u>
0	2198.777
5	2264.376
10	2332.405
15	2380.996
20	2486.683
25	2710.206
30	2123.460
35	372.942
40	97.184
45	53.451
50	27.940
55	13.363
60	6.074
65	1.215
70	1.215
75	0.000
80	0.000
85	0.000
90	0.000

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Zone	Lumens	%Lamp	%Fixt
0-20	898.56	N.A.	35.10
0-30	2055.32	N.A.	80.20
0-40	2501.37	N.A.	97.60
0-60	2559.18	N.A.	99.90
0-80	2561.89	N.A.	100.00
0-90	2561.89	N.A.	100.00
10-90	2344.09	N.A.	91.50
20-40	1602.81	N.A.	62.60
20-50	1647.15	N.A.	64.30
40-70	60.20	N.A.	2.30
60-80	2.70	N.A.	0.10
70-80	0.32	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	2561.89	N.A.	100.00

Total Luminaire Efficiency = N.A.%

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	217.80
10-20	680.76
20-30	1156.76
30-40	446.05
40-50	44.34
50-60	13.47
60-70	2.39
70-80	0.32
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

X=2H	Y=2H	3.3	3.3	3.3	3.3	3.3	UGR Viewed Endwise				
	3H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	4H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	6H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	8H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	12H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

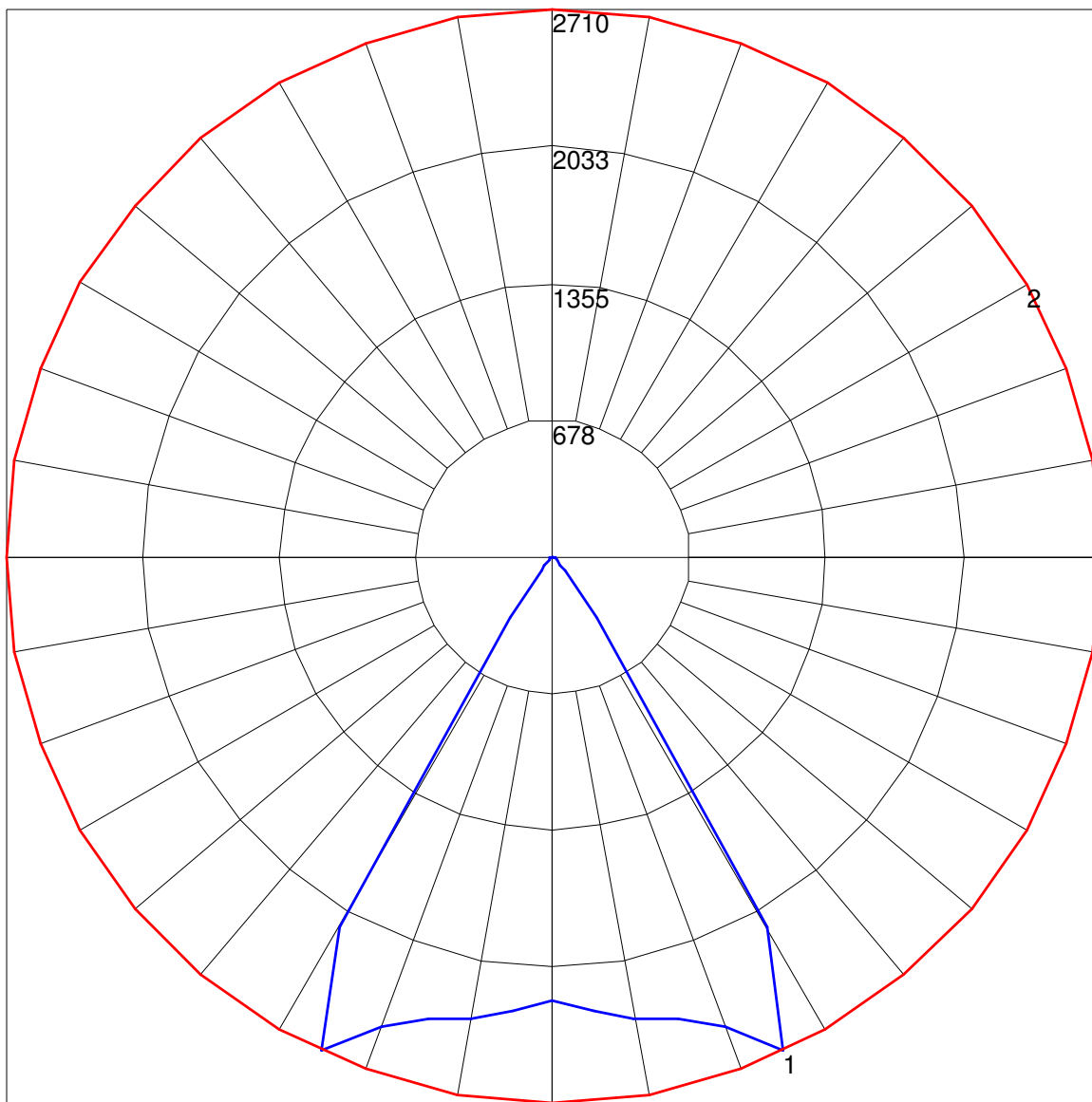
4H	2H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	3H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	4H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	6H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	8H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	12H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

8H	4H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	6H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	8H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	12H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

12H	4H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	6H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	8H	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3

Maximum UGR = 3.3

POLAR GRAPH



Maximum Candela = 2710.206 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.)