



IES INDOOR REPORT

PHOTOMETRIC FILENAME : 8CRDI-TL-L20-8TWU-L20-8TWD-XXX-DALI-UNV-OW-CSU-ON-CSD-WM 4000K_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN from UL #13537338.03
 [TESTLAB] UL Verification Services Inc.
 [ISSUE DATE] 24-FEB-2021
 [MANUFAC] WILLIAMS INDOOR
 [MORE] H.E. WILLIAMS, INC. - CARTHAGE, MO
 [LUMCAT] 8CRDI-TL-L20-8TWU-L20-8TWD-xxx-DALI-UNV-OW-CSU-ON-CSD-WM 4000k
 [LUMINAIRE] White formed aluminum housing, wide distribution reflector
 [MORE] trims, clear uplight glass lens enclosure, no downlight enclosure
 [LAMP] Two white LEDs (one up/one down)
 [SEARCH_SOURCETYPE] LED
 [SEARCH_APPLICATION] INDOOR, DIRECT, INDIRECT
 [SEARCH_MOUNTING] WALL

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	4464
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	93
Total Luminaire Watts	48
Ballast Factor	1.00
CIE Type	General Diffuse
Spacing Criterion (0-180)	N.A.
Spacing Criterion (90-270)	N.A.
Spacing Criterion (Diagonal)	N.A.
Basic Luminous Shape	Circular w/ Sides
Luminous Length (0-180)	0.65 ft (Diameter)
Luminous Width (90-270)	0.65 ft (Diameter)
Luminous Height	2.17 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	121	121	121
55	34	34	34
65	8	8	8
75	0	0	0
85	0	0	0

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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>	<u>112.5</u>	<u>135.0</u>	<u>157.5</u>	<u>180.0</u>	<u>202.5</u>
0	23311.046	23311.046	23311.046	23311.046	23311.046	23311.046	23311.046	23311.046	23311.046	23311.046
5	10415.799	10415.799	10415.799	10415.799	10415.799	10415.799	10415.799	10415.799	10415.799	10415.799
10	3736.125	3736.125	3736.125	3736.125	3736.125	3736.125	3736.125	3736.125	3736.125	3736.125
15	2153.093	2153.093	2153.093	2153.093	2153.093	2153.093	2153.093	2153.093	2153.093	2153.093
20	1650.846	1650.846	1650.846	1650.846	1650.846	1650.846	1650.846	1650.846	1650.846	1650.846
25	1081.844	1081.844	1081.844	1081.844	1081.844	1081.844	1081.844	1081.844	1081.844	1081.844
30	799.993	799.993	799.993	799.993	799.993	799.993	799.993	799.993	799.993	799.993
35	256.421	256.421	256.421	256.421	256.421	256.421	256.421	256.421	256.421	256.421
40	22.252	22.252	22.252	22.252	22.252	22.252	22.252	22.252	22.252	22.252
45	13.775	13.775	13.775	13.775	13.775	13.775	13.775	13.775	13.775	13.775
50	8.477	8.477	8.477	8.477	8.477	8.477	8.477	8.477	8.477	8.477
55	4.238	4.238	4.238	4.238	4.238	4.238	4.238	4.238	4.238	4.238
60	2.119	2.119	2.119	2.119	2.119	2.119	2.119	2.119	2.119	2.119
65	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060
70	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060	1.060
75	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	4.216	4.216	4.216	4.216	4.216	4.216	4.216	4.216	4.216	4.216
95	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785	4.785
100	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789	5.789
105	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162	7.162
110	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035	9.035
115	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846	11.846
120	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397	16.397
125	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830	24.830
130	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453	39.453
135	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843	62.843
140	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337	250.337
145	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783	889.783
150	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772
155	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574
160	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761
165	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714
170	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434
175	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538
180	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506

Vert. Horizontal Angles

	<u>225.0</u>	<u>247.5</u>	<u>270.0</u>	<u>292.5</u>	<u>315.0</u>	<u>337.5</u>	<u>360.0</u>
0	23311.046	23311.046	23311.046	23311.046	23311.046	23311.046	23311.046
5	10415.799	10415.799	10415.799	10415.799	10415.799	10415.799	10415.799
10	3736.125	3736.125	3736.125	3736.125	3736.125	3736.125	3736.125
15	2153.093	2153.093	2153.093	2153.093	2153.093	2153.093	2153.093
20	1650.846	1650.846	1650.846	1650.846	1650.846	1650.846	1650.846
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45	13.775	13.775	13.775	13.775	13.775	13.775	13.775
50	8.477	8.477	8.477	8.477	8.477	8.477	8.477
55	4.238	4.238	4.238	4.238	4.238	4.238	4.238
60	2.119	2.119	2.119	2.119	2.119	2.119	2.119

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65	1.060	1.060	1.060	1.060	1.060	1.060	1.060
70	1.060	1.060	1.060	1.060	1.060	1.060	1.060
75	0.000	0.000	0.000	0.000	0.000	0.000	0.000
80	0.000	0.000	0.000	0.000	0.000	0.000	0.000
85	0.000	0.000	0.000	0.000	0.000	0.000	0.000
90	4.216	4.216	4.216	4.216	4.216	4.216	4.216
95	4.785	4.785	4.785	4.785	4.785	4.785	4.785
100	5.789	5.789	5.789	5.789	5.789	5.789	5.789
105	7.162	7.162	7.162	7.162	7.162	7.162	7.162
110	9.035	9.035	9.035	9.035	9.035	9.035	9.035
115	11.846	11.846	11.846	11.846	11.846	11.846	11.846
120	16.397	16.397	16.397	16.397	16.397	16.397	16.397
125	24.830	24.830	24.830	24.830	24.830	24.830	24.830
130	39.453	39.453	39.453	39.453	39.453	39.453	39.453
135	62.843	62.843	62.843	62.843	62.843	62.843	62.843
140	250.337	250.337	250.337	250.337	250.337	250.337	250.337
145	889.783	889.783	889.783	889.783	889.783	889.783	889.783
150	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772	1574.772
155	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574	1867.574
160	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761	1829.761
165	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714	1731.714
170	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434	1659.434
175	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538	1514.538
180	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506	1404.506

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Zone	Lumens	%Lamp	%Fixt
0-20	1572.3	N.A.	35.20
0-30	2097.05	N.A.	47.00
0-40	2299.11	N.A.	51.50
0-60	2314.51	N.A.	51.80
0-80	2316.1	N.A.	51.90
0-90	2317.25	N.A.	51.90
10-90	1407.8	N.A.	31.50
20-40	726.82	N.A.	16.30
20-50	737.98	N.A.	16.50
40-70	16.71	N.A.	0.40
60-80	1.59	N.A.	0.00
70-80	0.28	N.A.	0.00
80-90	1.15	N.A.	0.00
90-110	13.04	N.A.	0.30
90-120	25.19	N.A.	0.60
90-130	48.70	N.A.	1.10
90-150	680.50	N.A.	15.20
90-180	2147.03	N.A.	48.10
110-180	2133.99	N.A.	47.80
0-180	4464.28	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	909.45
10-20	662.84
20-30	524.76
30-40	202.06
40-50	11.17
50-60	4.23
60-70	1.31
70-80	0.28
80-90	1.15
90-100	5.34
100-110	7.70
110-120	12.15
120-130	23.51
130-140	78.66
140-150	553.14
150-160	823.41
160-170	494.68
170-180	148.44

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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	108	108	108	108	100	100	100	100	84	84	84	71	71	71	58	58	58	52
1	101	98	96	93	94	91	89	87	79	77	76	67	66	65	56	55	55	50
2	95	90	86	82	89	84	81	78	74	71	69	63	62	60	54	53	52	48
3	90	84	78	74	84	78	74	71	69	66	63	60	58	57	52	51	50	46
4	85	78	72	68	80	73	69	65	65	62	59	58	55	53	50	49	48	45
5	81	73	67	63	76	69	64	60	62	58	55	55	52	51	49	47	46	43
6	77	68	62	58	72	65	60	56	59	55	52	53	50	48	47	45	44	42
7	73	64	59	55	69	61	56	53	56	52	49	51	48	46	46	44	43	40
8	70	61	55	52	66	58	53	50	53	50	47	49	46	44	44	42	41	39
9	67	58	53	49	63	56	51	48	51	47	45	47	44	42	43	41	40	38
10	64	55	50	46	61	53	49	45	49	46	43	45	43	41	42	40	39	37

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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	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	3H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

UGR Viewed Endwise

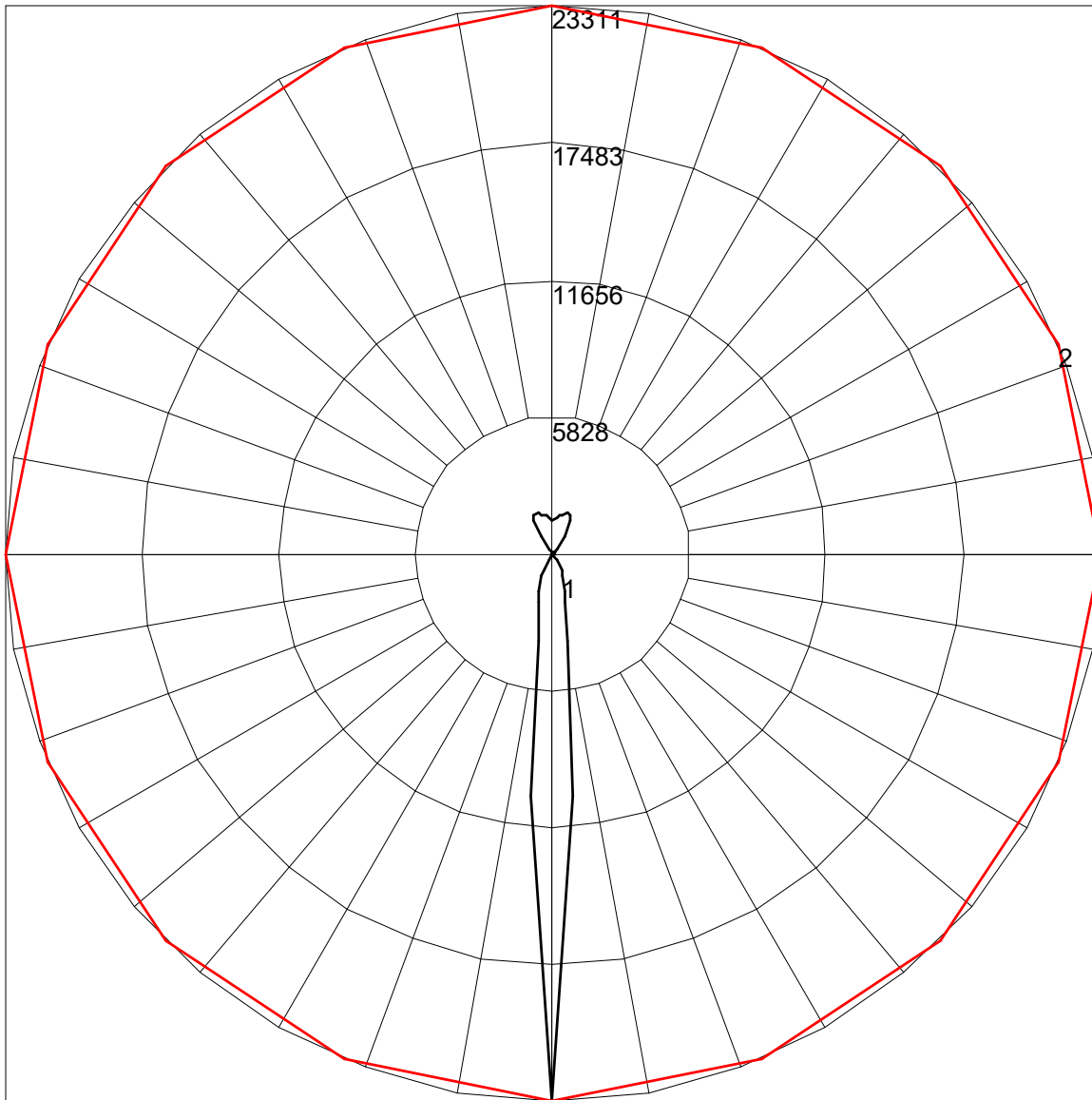
4H	2H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	3H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
8H	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	12H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
12H	4H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	6H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
	8H	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2

Maximum UGR = 5.2

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POLAR GRAPH



Maximum Candela = 23311.046 Located At Horizontal Angle = 0, Vertical Angle = 0

1 - Vertical Plane Through Horizontal Angles (90 - 270)

2 - Horizontal Cone Through Vertical Angle (0) (Through Max. Cd.)