

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: 236P177C

Luminaire Tested: **I8-232-TBW-UNV-EB81-UPL**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236P177C
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: I8-232-TBW-UNV-EB81-UPL
Description: I8 SERIES LUMINAIRE WITH SPECULAR ALUMINUM MEDIUM
DISTRIBUTION REFLECTOR, UPLIGHT, AND THIN WHITE LOUVER
Light Source: TWO 32 WATTS T8 - 2800 LUMENS EA - SYLVANIA - F032/735
Ballast/Driver: ULTRAMAX GE-232-MAX-N/ULTRA

Summary

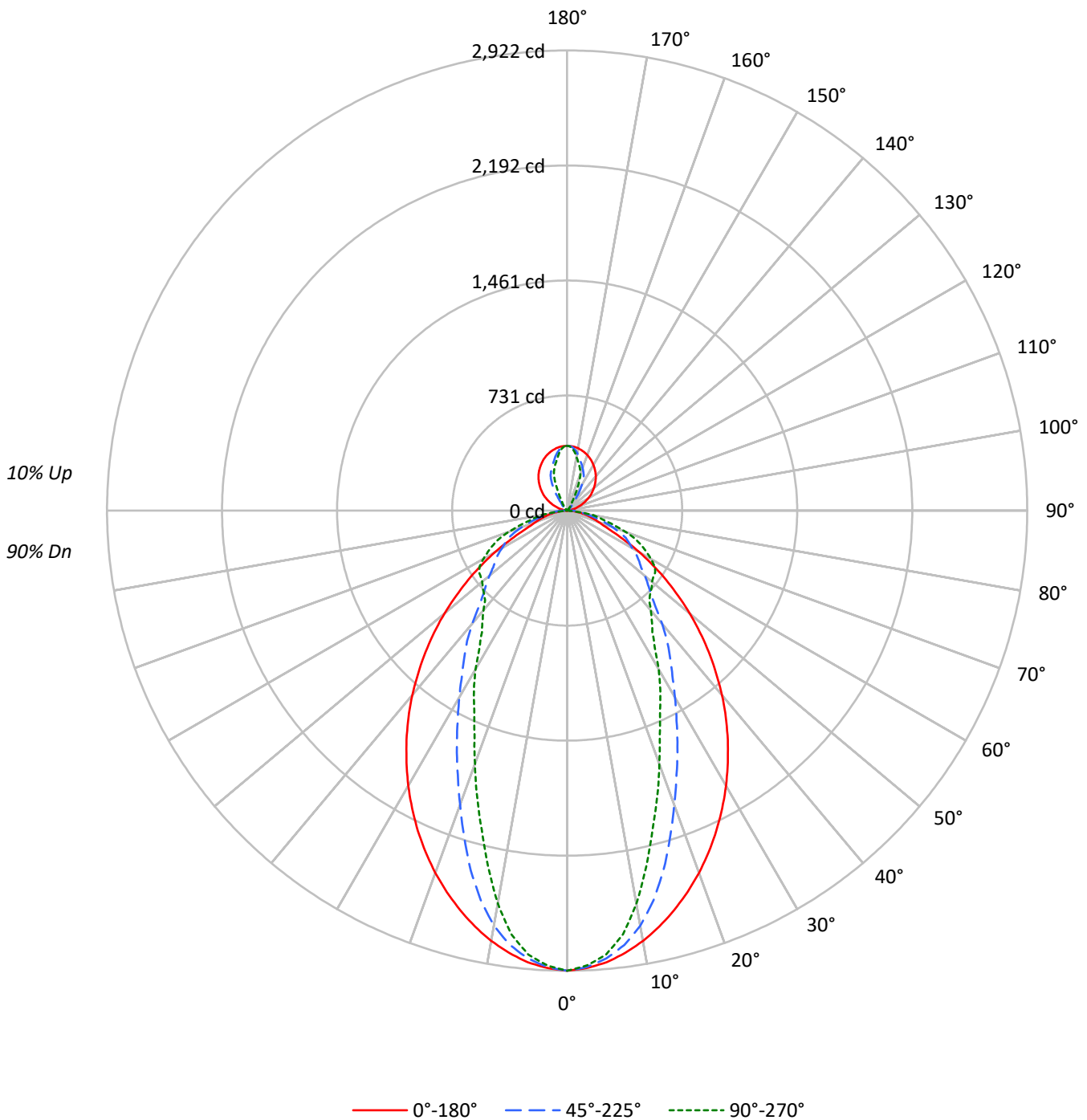
Lumens per Lamp: 2800 (2 lamps)
Luminaire Lumens: 4904.7 lumens
Efficiency: 87.6%
Efficacy: 87.6 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.84' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 56
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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
RCR																				
0	102	102	102	102	99	99	99	99	93	93	93		87	87	87		82	82	82	79
1	94	91	87	84	91	88	85	82	83	80	78		78	76	74		73	72	71	68
2	87	80	75	71	84	78	73	69	74	70	66		70	66	64		66	63	61	59
3	80	72	65	60	77	70	64	59	66	61	57		63	59	55		59	56	53	51
4	74	64	58	52	71	63	56	52	60	54	50		57	52	48		54	50	47	45
5	69	58	51	46	66	57	50	45	54	49	44		52	47	43		49	45	42	40
6	64	53	46	41	62	52	45	41	50	44	40		47	42	39		45	41	38	36
7	60	49	42	37	58	48	41	37	46	40	36		44	39	35		42	38	34	32
8	56	45	38	34	54	44	38	33	42	37	33		41	36	32		39	35	31	30
9	52	42	35	31	51	41	35	30	39	34	30		38	33	29		36	32	29	27
10	49	39	32	28	48	38	32	28	37	31	27		35	30	27		34	30	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9319	9319	9319
5°	9217	9140	9060
10°	8987	8669	8206
15°	8674	7805	6921
20°	8308	6747	5811
25°	7893	5831	4909
30°	7432	5038	4279
35°	6923	4439	3675
40°	6370	3901	3435
45°	5737	3396	3365
50°	5046	3195	3488
55°	4265	3092	3798
60°	3381	3043	3916
65°	2400	3102	3909
70°	1986	2853	3683
75°	1811	2452	3081
80°	1616	2075	3122
85°	1317	2562	659



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	266.6	5.4	4.8	0°	2922	2922	2922	2922	2922	
10°-20°	660.7	13.5	11.8	5°	2879	2870	2855	2842	2830	271
20°-30°	804.2	16.4	14.4	15°	2627	2568	2364	2167	2096	738
30°-40°	777.0	15.8	13.9	25°	2243	2059	1657	1452	1395	1030
40°-50°	673.7	13.7	12.0	35°	1778	1453	1140	983	944	1110
50°-60°	557.8	11.4	10.0	45°	1272	955	753	747	746	980
60°-70°	403.4	8.2	7.2	55°	767	579	556	634	683	685
70°-80°	219.0	4.5	3.9	65°	318	312	411	489	518	335
80°-90°	70.7	1.4	1.3	75°	147	158	199	252	250	156
90°-100°	8.2	0.2	0.1	85°	36	49	70	70	18	40
100°-110°	11.6	0.2	0.2	90°	1	15	34	44	11	2
110°-120°	22.2	0.5	0.4	95°	8	2	4	6	7	10
120°-130°	36.8	0.8	0.7	105°	53	4	5	6	6	57
130°-140°	62.2	1.3	1.1	115°	117	10	7	8	7	116
140°-150°	87.8	1.8	1.6	125°	189	45	8	8	9	168
150°-160°	111.3	2.3	2.0	135°	253	149	33	10	9	195
160°-170°	94.0	1.9	1.7	145°	310	230	104	50	41	194
170°-180°	37.4	0.8	0.7	155°	356	300	248	181	150	164
0°-30°	1731.5	35.3	30.9	165°	390	367	326	304	297	110
0°-40°	2508.4	51.1	44.8	175°	409	407	402	397	394	39
0°-60°	3739.9	76.3	66.8	180°	411	411	411	411	411	
0°-90°	4433.1	90.4	79.2							
90°-120°	42.0	0.9	0.8							
90°-150°	228.9	4.7	4.1							
90°-180°	472.0	9.6	8.4							
0°-180°	4904.7	100.0	87.6							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2922	2922	2922	2922	2922
2.5°	2907	2906	2901	2898	2891
5°	2879	2870	2855	2842	2830
7.5°	2832	2817	2782	2739	2714
10°	2775	2748	2677	2581	2534
12.5°	2705	2665	2533	2384	2317
15°	2627	2568	2364	2167	2096
17.5°	2540	2456	2175	1969	1902
20°	2448	2334	1988	1789	1712
22.5°	2348	2200	1815	1608	1537
25°	2243	2059	1657	1452	1395
27.5°	2131	1910	1505	1326	1282
30°	2018	1758	1368	1219	1162
32.5°	1898	1602	1243	1101	1036
35°	1778	1453	1140	983	944
37.5°	1655	1318	1043	901	883
40°	1530	1196	937	847	825
42.5°	1400	1073	831	793	771
45°	1272	955	753	747	746
47.5°	1144	842	697	714	728
50°	1017	746	644	690	703
52.5°	888	663	592	655	691
55°	767	579	556	634	683
57.5°	646	494	522	619	659
60°	530	423	477	587	614
62.5°	419	365	443	538	567
65°	318	312	411	489	518
67.5°	251	261	359	440	467
70°	213	219	306	385	395
72.5°	178	183	251	317	317
75°	147	158	199	252	250
77.5°	116	133	151	204	208
80°	88	102	113	175	170
82.5°	62	74	92	130	77
85°	36	49	70	70	18
87.5°	13	29	49	56	17
90°	1	15	34	44	11
92.5°	1	2	4	5	4
95°	8	2	4	6	7
97.5°	15	3	4	6	5
100°	26	3	5	6	6
102.5°	39	4	4	5	5
105°	53	4	5	6	6
107.5°	68	4	5	5	5
110°	84	5	7	6	6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	100	6	8	6	6
115°	117	10	7	8	7
117.5°	135	17	7	10	10
120°	153	24	7	9	11
122.5°	171	31	7	8	9
125°	189	45	8	8	9
127.5°	205	65	9	8	8
130°	221	92	15	9	8
132.5°	237	120	24	9	9
135°	253	149	33	10	9
137.5°	268	173	42	16	10
140°	283	194	52	27	17
142.5°	297	212	69	39	29
145°	310	230	104	50	41
147.5°	322	248	144	61	53
150°	334	265	185	85	65
152.5°	345	282	222	132	99
155°	356	300	248	181	150
157.5°	366	318	268	227	202
160°	375	336	287	260	247
162.5°	383	353	307	282	274
165°	390	367	326	304	297
167.5°	396	380	349	326	318
170°	402	392	371	352	345
172.5°	406	400	388	377	372
175°	409	407	402	397	394
177.5°	410	410	410	410	408
180°	411	411	411	411	411

(END OF REPORT)