

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: 236p179C

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p179C
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: I8-232-G-TBW-UNV-EB81-UPL
Description: I5 SERIES LUMINAIRE WITH HIGH REFLECTANCE WHITE WIDE
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

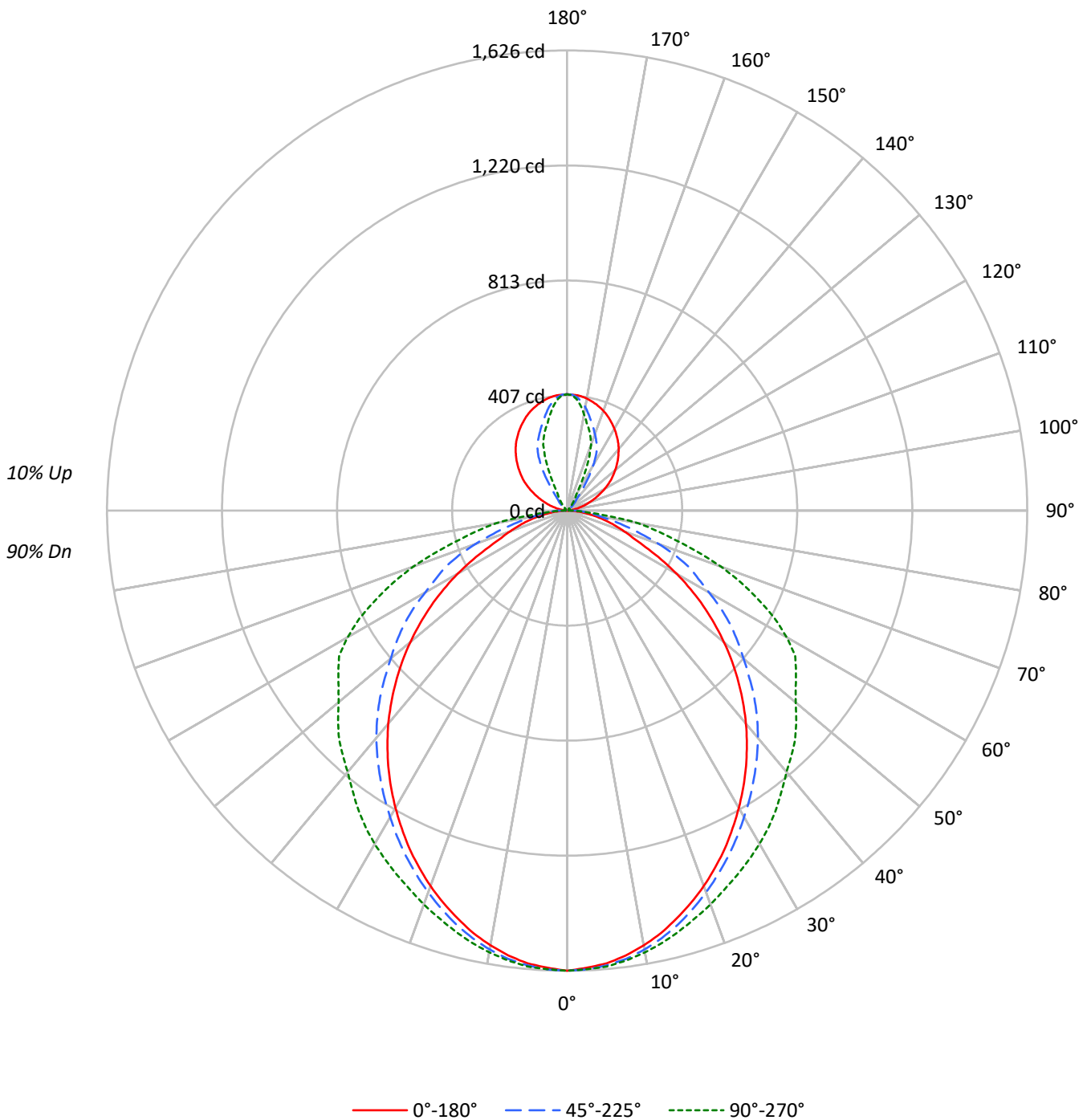
Lumens per Lamp: 2800 (2 lamps)
Luminaire Lumens: 4643.1 lumens
Efficiency: 82.9%
Efficacy: 82.9 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 1.25 / 1.29
Luminous Opening: Rectangular (W 0.84' x L: 4' x H: 0')
CIE Type: Semi-Direct

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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0													
RCR																																					
0	97	97	97	97	93	93	93	93	87	87	87	82	82	82	77	77	77	74																			
1	88	85	81	78	85	82	79	76	77	74	72	72	70	68	68	66	65	63																			
2	81	74	68	64	78	72	67	62	67	63	60	63	60	57	60	57	55	52																			
3	74	65	58	53	71	63	57	52	59	54	50	56	52	48	53	49	46	44																			
4	67	58	51	45	65	56	49	44	53	47	43	50	45	41	47	43	40	38																			
5	62	52	44	39	60	50	43	38	47	42	37	45	40	36	43	38	35	33																			
6	57	46	39	34	55	45	38	34	43	37	33	41	36	32	39	34	31	29																			
7	53	42	35	30	51	41	34	30	39	33	29	37	32	28	35	31	27	26																			
8	49	38	32	27	48	38	31	27	36	30	26	34	29	25	33	28	25	23																			
9	46	35	29	24	45	34	28	24	33	27	23	31	26	23	30	26	22	21																			
10	43	33	26	22	42	32	26	22	30	25	21	29	24	21	28	23	20	19																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5186	5186	5186
5°	5142	5164	5177
10°	5052	5101	5133
15°	4930	4999	5075
20°	4792	4874	5027
25°	4638	4740	5001
30°	4467	4607	5008
35°	4291	4485	5015
40°	4093	4367	5021
45°	3861	4217	5142
50°	3592	4039	5230
55°	3264	3920	5488
60°	2851	3693	5715
65°	2302	3600	5637
70°	1996	3208	5380
75°	1811	2637	4793
80°	1616	2186	4665
85°	1354	2562	2415



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	152.7	3.3	2.7	0°	1626	1626	1626	1626	1626	
10°-20°	426.9	9.2	7.6	5°	1606	1608	1613	1618	1617	152
20°-30°	626.1	13.5	11.2	15°	1493	1501	1514	1532	1537	420
30°-40°	733.4	15.8	13.1	25°	1318	1325	1347	1394	1421	606
40°-50°	741.3	16.0	13.2	35°	1102	1105	1152	1239	1288	689
50°-60°	660.2	14.2	11.8	45°	856	859	935	1055	1140	660
60°-70°	489.7	10.5	8.7	55°	587	600	705	863	987	523
70°-80°	260.0	5.6	4.6	65°	305	339	477	643	747	312
80°-90°	81.3	1.8	1.5	75°	147	162	214	317	389	157
90°-100°	8.3	0.2	0.1	85°	37	48	70	86	66	41
100°-110°	11.6	0.3	0.2	90°	1	14	33	47	12	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	1.9	1.6	125°	189	45	8	8	9	168
150°-160°	111.3	2.4	2.0	135°	253	149	33	10	9	195
160°-170°	94.0	2.0	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°	1205.6	26.0	21.5	165°	390	367	326	304	297	110
0°-40°	1939.0	41.8	34.6	175°	409	407	402	397	394	39
0°-60°	3340.5	71.9	59.7	180°	411	411	411	411	411	
0°-90°	4171.5	89.8	74.5							
90°-120°	42.1	0.9	0.8							
90°-150°	229.0	4.9	4.1							
90°-180°	472.0	10.2	8.4							
0°-180°	4643.1	100.0	82.9							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1626	1626	1626	1626	1626
2.5°	1617	1619	1623	1625	1622
5°	1606	1608	1613	1618	1617
7.5°	1586	1589	1598	1604	1603
10°	1560	1565	1575	1585	1585
12.5°	1530	1535	1547	1561	1563
15°	1493	1501	1514	1532	1537
17.5°	1454	1461	1476	1500	1509
20°	1412	1418	1436	1467	1481
22.5°	1366	1373	1392	1431	1450
25°	1318	1325	1347	1394	1421
27.5°	1266	1273	1300	1358	1391
30°	1213	1220	1251	1321	1360
32.5°	1159	1164	1202	1282	1326
35°	1102	1105	1152	1239	1288
37.5°	1043	1046	1101	1193	1246
40°	983	986	1049	1145	1206
42.5°	920	922	993	1097	1173
45°	856	859	935	1055	1140
47.5°	791	793	873	1012	1098
50°	724	729	814	962	1054
52.5°	655	664	759	907	1018
55°	587	600	705	863	987
57.5°	517	534	644	825	955
60°	447	469	579	781	896
62.5°	375	403	523	715	828
65°	305	339	477	643	747
67.5°	251	280	414	563	665
70°	214	231	344	484	577
72.5°	180	190	274	400	480
75°	147	162	214	317	389
77.5°	116	135	161	250	318
80°	88	103	119	206	254
82.5°	62	74	95	152	147
85°	37	48	70	86	66
87.5°	14	28	48	64	35
90°	1	14	33	47	12
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)