

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P184191

Luminaire Tested: **22FR-24-HP-UNV-L840-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P184191  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27146)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22FR-24-HP-UNV-L840-CD1-U  
Description: METALUX 2X2 FR TROFFER LED HIGH EFFICIENCY FIXTURE  
  
Light Source: EATON LED 4000K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

**Summary**

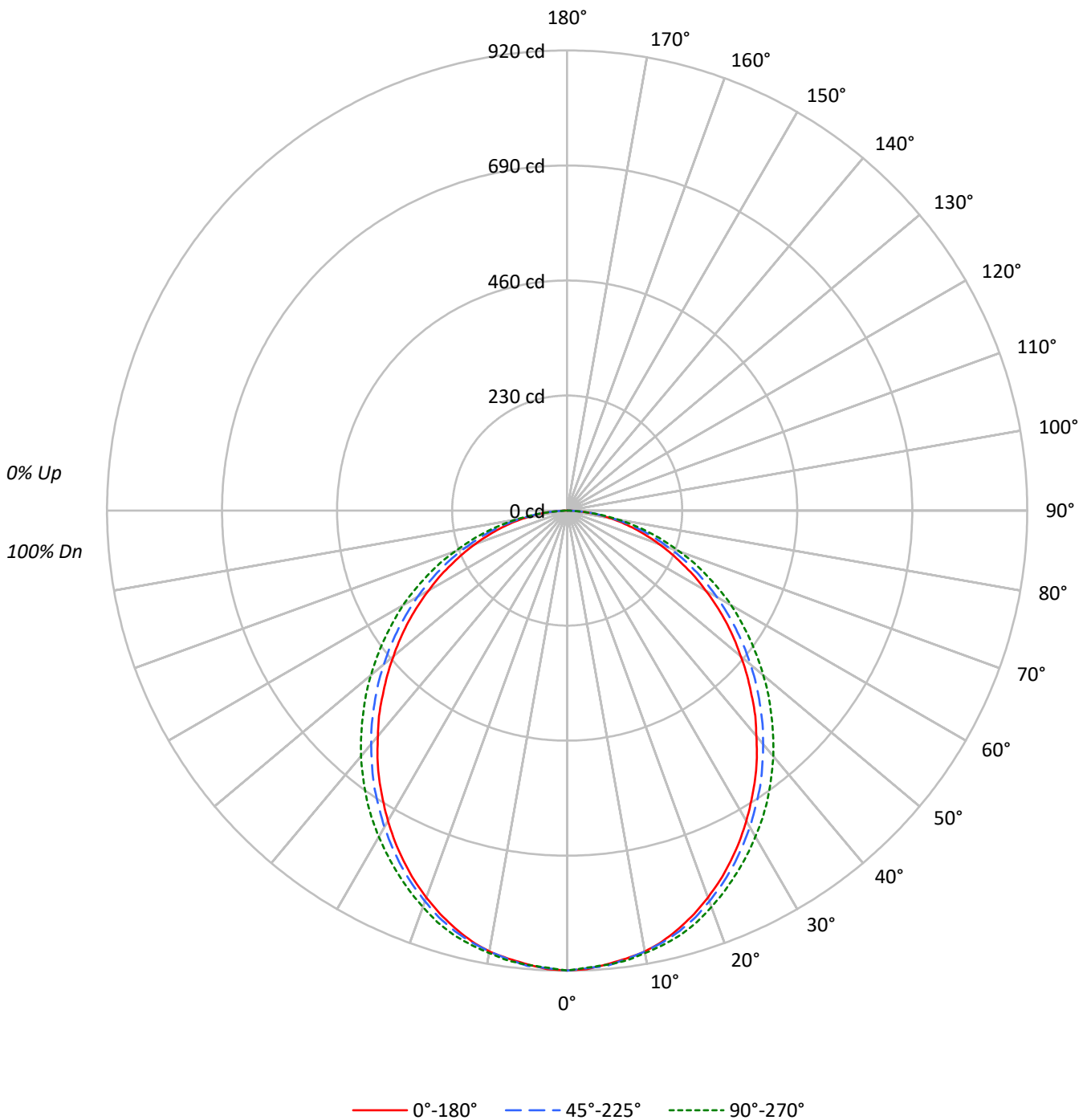
Lumens per Lamp: N/A  
Luminaire Lumens: 2393.8 lumens  
Efficiency: N/A  
Efficacy: 120.3 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.22 / 1.3  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 19.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	78	85	80	76	82	78	74	79	76	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	65	62	59
4	83	71	62	56	81	70	62	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2475	2475	2475
5°	2459	2468	2462
10°	2446	2446	2455
15°	2409	2423	2446
20°	2357	2380	2415
25°	2296	2329	2377
30°	2226	2270	2340
35°	2153	2210	2300
40°	2067	2142	2252
45°	1984	2073	2197
50°	1897	2004	2144
55°	1817	1931	2088
60°	1723	1859	2040
65°	1631	1786	1967
70°	1543	1703	1879
75°	1447	1617	1775
80°	1339	1495	1605
85°	1130	1223	1223



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.5	3.6
10°-20°	245.1	10.2
20°-30°	361.6	15.1
30°-40°	421.4	17.6
40°-50°	421.9	17.6
50°-60°	369.4	15.4
60°-70°	278.4	11.6
70°-80°	164.1	6.9
80°-90°	45.4	1.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	693.2	29.0
0°-40°	1114.6	46.6
0°-60°	1905.8	79.6
0°-90°	2393.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2393.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	920	920	920	920	920	
5°	910	912	914	910	912	86
15°	865	866	870	873	878	244
25°	773	776	784	794	801	356
35°	655	660	673	687	700	409
45°	521	528	545	564	577	403
55°	387	393	412	431	445	346
65°	256	263	280	297	309	254
75°	139	144	156	166	171	148
85°	37	39	40	40	40	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	919.6	919.6	919.6	919.6	919.6
2.5°	917.6	917.6	915.6	914.5	914.5
5°	910.5	911.5	913.5	909.5	911.5
7.5°	903.4	903.4	904.4	905.4	907.4
10°	895.2	895.2	895.2	898.3	898.3
12.5°	882.0	882.0	884.1	885.1	889.1
15°	864.8	865.8	869.8	872.9	878.0
17.5°	845.4	847.5	852.6	856.6	862.7
20°	823.1	827.2	831.2	837.3	843.4
22.5°	799.7	802.8	808.9	816.0	823.1
25°	773.3	776.3	784.5	793.6	800.7
27.5°	745.9	748.9	758.1	768.2	777.4
30°	716.4	720.5	730.6	742.8	753.0
32.5°	685.9	690.0	701.2	715.4	727.6
35°	655.4	659.5	672.7	686.9	700.1
37.5°	622.9	627.0	641.2	657.5	670.7
40°	588.4	594.5	609.7	628.0	641.2
42.5°	556.9	561.9	578.2	596.5	609.7
45°	521.3	528.4	544.7	564.0	577.2
47.5°	487.8	494.9	512.1	531.5	545.7
50°	453.2	460.3	478.6	497.9	512.1
52.5°	420.7	426.8	445.1	464.4	478.6
55°	387.2	393.3	411.5	430.9	445.1
57.5°	353.6	359.7	378.0	397.3	411.5
60°	320.1	327.2	345.5	363.8	379.0
62.5°	288.6	294.7	313.0	330.3	343.5
65°	256.1	263.2	280.5	296.7	308.9
67.5°	225.6	232.7	249.0	265.2	275.4
70°	196.1	202.2	216.4	231.7	238.8
72.5°	166.7	172.7	186.0	198.2	204.2
75°	139.2	144.3	155.5	165.6	170.7
77.5°	112.8	117.9	126.0	133.1	137.2
80°	86.4	89.4	96.5	100.6	103.6
82.5°	61.0	64.0	67.1	71.1	71.1
85°	36.6	38.6	39.6	39.6	39.6
87.5°	15.2	15.2	13.2	11.2	10.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)