

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: P272027

Luminaire Tested: **22CZ2-29HE-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P272027  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29HE-S-UNV-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (196) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2651.0 lumens  
Efficiency: N/A  
Efficacy: 119.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

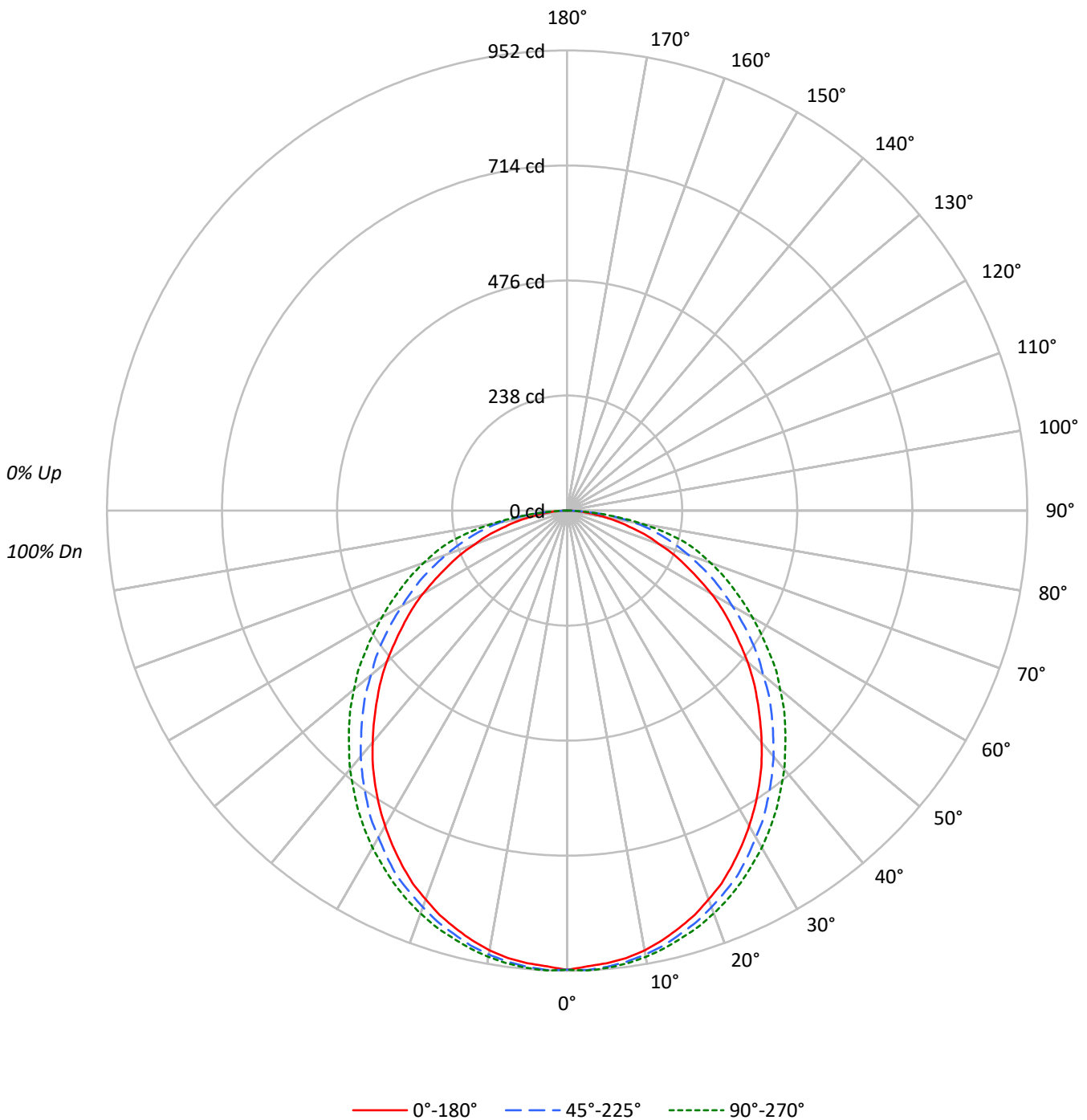
Input Watts (W): 22.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2556	2556	2556
5°	2539	2559	2566
10°	2525	2548	2562
15°	2491	2526	2550
20°	2451	2501	2540
25°	2402	2475	2523
30°	2341	2425	2502
35°	2276	2381	2479
40°	2199	2333	2455
45°	2118	2278	2429
50°	2040	2216	2408
55°	1944	2176	2391
60°	1857	2124	2383
65°	1733	2111	2410
70°	1596	2092	2482
75°	1440	2122	2611
80°	1246	2185	2453
85°	1031	1834	1834



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	89.8	3.4
10°-20°	255.7	9.6
20°-30°	382.5	14.4
30°-40°	453.0	17.1
40°-50°	461.7	17.4
50°-60°	413.8	15.6
60°-70°	324.0	12.2
70°-80°	208.9	7.9
80°-90°	61.7	2.3
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°	728.0	27.5
0°-40°	1181.0	44.5
0°-60°	2056.4	77.6
0°-90°	2651.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2651.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	950	950	950	950	950	
5°	940	942	948	949	950	89
15°	894	899	907	914	915	252
25°	809	816	834	845	850	372
35°	693	701	725	747	754	433
45°	557	569	599	630	638	430
55°	414	428	464	496	510	372
65°	272	288	332	364	378	270
75°	138	160	204	239	251	149
85°	33	46	59	59	59	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	949.9	949.9	949.9	949.9	949.9
2.5°	943.8	946.2	951.2	952.4	952.4
5°	940.0	942.5	947.5	948.7	949.9
7.5°	933.9	935.1	941.3	943.8	945.0
10°	924.0	926.4	932.6	936.3	937.6
12.5°	910.4	914.1	921.5	926.4	927.7
15°	894.3	899.2	906.6	914.1	915.3
17.5°	877.0	881.9	891.8	900.5	902.9
20°	855.9	862.1	873.2	883.1	886.9
22.5°	834.9	839.9	853.5	865.8	869.5
25°	808.9	816.4	833.7	844.8	849.7
27.5°	781.7	790.4	807.7	822.5	827.5
30°	753.3	761.9	780.5	799.0	805.2
32.5°	723.6	733.5	755.7	774.3	780.5
35°	692.7	701.3	724.8	747.1	754.5
37.5°	660.5	667.9	695.1	718.6	726.1
40°	625.9	635.8	664.2	691.4	698.8
42.5°	591.2	602.4	630.8	660.5	667.9
45°	556.6	569.0	598.7	629.6	638.2
47.5°	523.2	533.1	566.5	596.2	608.6
50°	487.3	497.2	529.4	562.8	575.2
52.5°	450.2	463.8	498.5	530.6	545.5
55°	414.4	428.0	463.8	496.0	509.6
57.5°	381.0	392.1	429.2	462.6	476.2
60°	345.1	355.0	394.6	430.4	442.8
62.5°	306.8	321.6	362.4	395.8	410.6
65°	272.1	288.2	331.5	363.6	378.5
67.5°	240.0	254.8	296.9	331.5	347.6
70°	202.9	222.6	265.9	300.6	315.4
72.5°	173.2	190.5	235.0	269.6	285.7
75°	138.5	159.6	204.1	238.7	251.1
77.5°	110.1	131.1	173.2	200.4	206.6
80°	80.4	101.4	141.0	154.6	158.3
82.5°	54.4	74.2	101.4	105.1	106.4
85°	33.4	45.8	59.4	59.4	59.4
87.5°	16.1	18.6	21.0	19.8	19.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)