

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: P476189

Luminaire Tested: **14GR-LD5-28-F1-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P476189  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14GR-LD5-28-F1-UNV-L840-CD1-U  
Description: GR 1'X4' LED TROFFER w/ F1 LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2877.1 lumens  
Efficiency: N/A  
Efficacy: 123.5 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.24 / 1.2  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

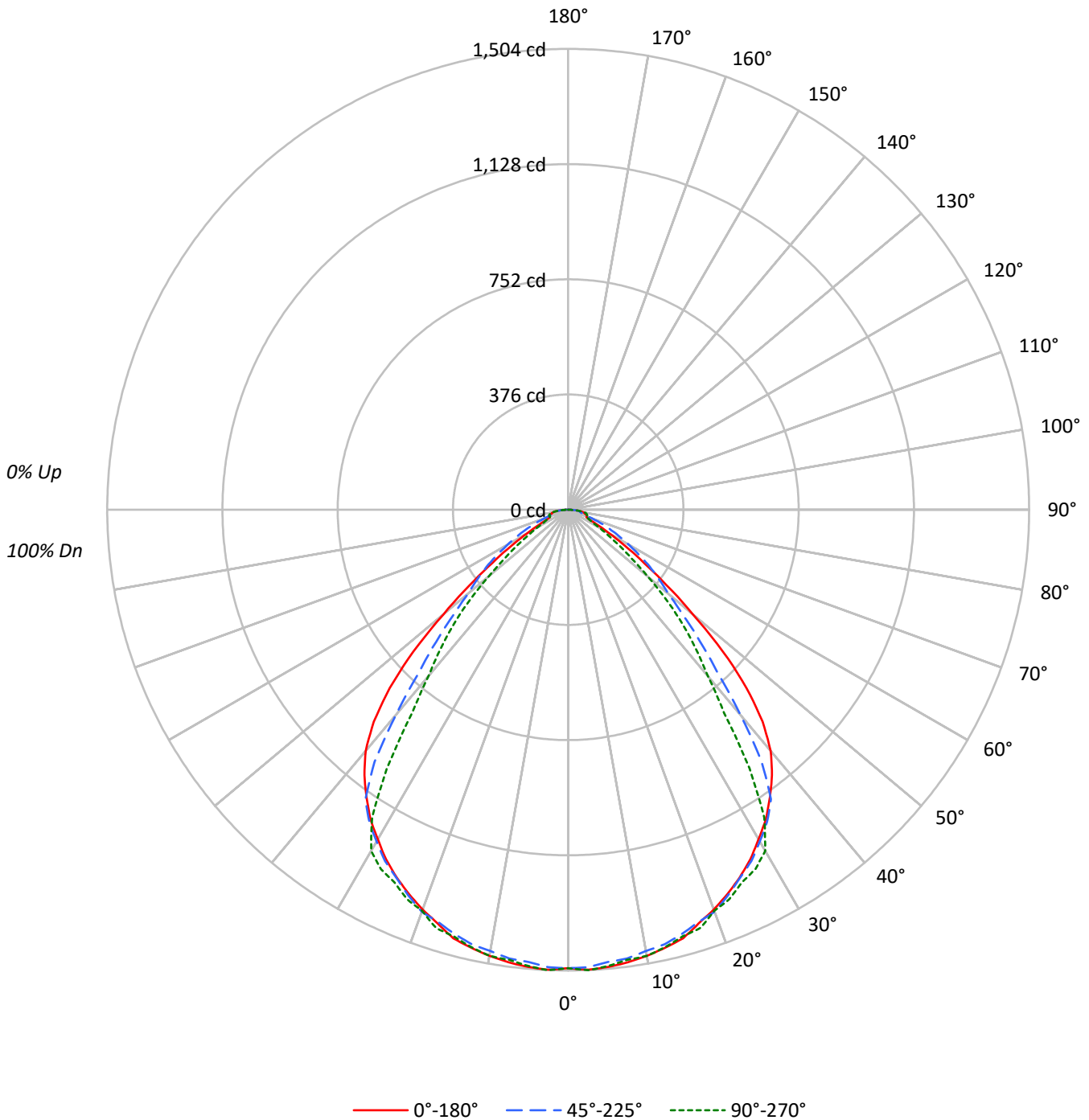
Input Watts (W): 23.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P476189

CATALOG NUMBER: 14GR-LD5-28-F1-UNV-L840-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P476189

CATALOG NUMBER: 14GR-LD5-28-F1-UNV-L840-CD1-U

**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	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					100			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88					88			
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77					77			
3	95	87	80	75	93	85	79	74	82	77	73	80	75	71	77	74	70	68					68			
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61					61			
5	82	71	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	54					54			
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	49					49			
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44					44			
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40					40			
9	63	51	44	39	62	50	43	39	49	43	38	48	42	38	47	42	38	36					36			
10	59	47	40	35	58	47	40	35	46	40	35	45	39	35	44	39	35	33					33			

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

	0°	45°	90°
0°	4027	4027	4027
5°	4046	4003	4038
10°	4040	3996	4040
15°	4034	3994	4016
20°	3976	3999	3990
25°	3931	3936	3984
30°	3859	3884	3994
35°	3767	3788	3386
40°	3610	3072	2490
45°	3132	2317	2011
50°	2225	1780	1409
55°	1413	1527	944
60°	832	1222	624
65°	492	954	482
70°	507	646	494
75°	620	502	653
80°	798	625	874
85°	846	846	846



TEST NUMBER: P476189

CATALOG NUMBER: 14GR-LD5-28-F1-UNV-L840-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.9	4.9
10°-20°	406.3	14.1
20°-30°	614.4	21.4
30°-40°	684.2	23.8
40°-50°	500.8	17.4
50°-60°	276.0	9.6
60°-70°	141.1	4.9
70°-80°	80.3	2.8
80°-90°	32.0	1.1
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°	1162.6	40.4
0°-40°	1846.8	64.2
0°-60°	2623.7	91.2
0°-90°	2877.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2877.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1498	1498	1482	1492	1495	142
15°	1448	1432	1434	1451	1442	407
25°	1324	1321	1326	1348	1342	609
35°	1147	1148	1153	1074	1031	716
45°	823	759	609	554	528	619
55°	301	354	325	279	201	281
65°	77	184	150	143	76	89
75°	60	103	48	92	63	63
85°	27	34	27	37	27	29
90°	0	0	0	0	0	



TEST NUMBER: P476189

CATALOG NUMBER: 14GR-LD5-28-F1-UNV-L840-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1496.3	1496.3	1496.3	1496.3	1496.3
2.5°	1502.7	1502.7	1494.7	1504.4	1504.4
5°	1497.9	1497.9	1481.8	1491.5	1494.7
7.5°	1489.9	1489.9	1477.0	1485.0	1481.8
10°	1478.6	1470.5	1462.5	1485.0	1478.6
12.5°	1464.1	1448.0	1452.8	1451.2	1462.5
15°	1448.0	1431.9	1433.5	1451.2	1441.5
17.5°	1415.8	1417.4	1410.9	1423.8	1431.9
20°	1388.4	1393.2	1396.4	1404.5	1393.2
22.5°	1357.8	1359.4	1362.6	1373.9	1375.5
25°	1324.0	1320.7	1325.6	1348.1	1341.7
27.5°	1286.9	1285.3	1293.4	1312.7	1322.4
30°	1241.8	1248.3	1249.9	1285.3	1285.3
32.5°	1199.9	1199.9	1208.0	1225.7	1190.3
35°	1146.8	1148.4	1153.2	1074.3	1030.8
37.5°	1092.0	1087.2	1037.3	893.9	835.9
40°	1027.6	1016.3	874.6	745.7	708.7
42.5°	939.0	905.2	721.6	644.3	616.9
45°	823.0	758.6	608.8	554.1	528.3
47.5°	684.5	624.9	505.7	468.7	433.3
50°	531.5	518.6	425.2	393.0	336.6
52.5°	404.3	430.0	373.7	331.8	259.3
55°	301.2	354.3	325.4	278.6	201.3
57.5°	220.7	294.8	273.8	236.8	151.4
60°	154.6	249.7	227.1	199.7	116.0
62.5°	109.5	215.8	186.8	170.7	88.6
65°	77.3	183.6	149.8	143.3	75.7
67.5°	64.4	154.6	114.4	127.2	64.4
70°	64.4	128.9	82.1	112.7	62.8
72.5°	64.4	112.7	61.2	103.1	66.0
75°	59.6	103.1	48.3	91.8	62.8
77.5°	54.8	87.0	41.9	78.9	61.2
80°	51.5	62.8	40.3	64.4	56.4
82.5°	41.9	45.1	37.0	49.9	43.5
85°	27.4	33.8	27.4	37.0	27.4
87.5°	12.9	17.7	12.9	16.1	11.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)