

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: P30820

Luminaire Tested: **2GR8-228T8A19/156-UNV-EB81**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30820
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2GR8-228T8A19/156-UNV-EB81
Description: METALUX 2' X 4' COMMERCIAL TROFFER W/ ACRYLIC PRISMATIC LENS, TYPE
19, 0.156" THK
Light Source: (2) DOUBLE BIPIN 28W T8 LINEAR FLUORESCENT LAMPS
Ballast/Driver: -
(1)GE232MAX-N/ULTRA

Summary

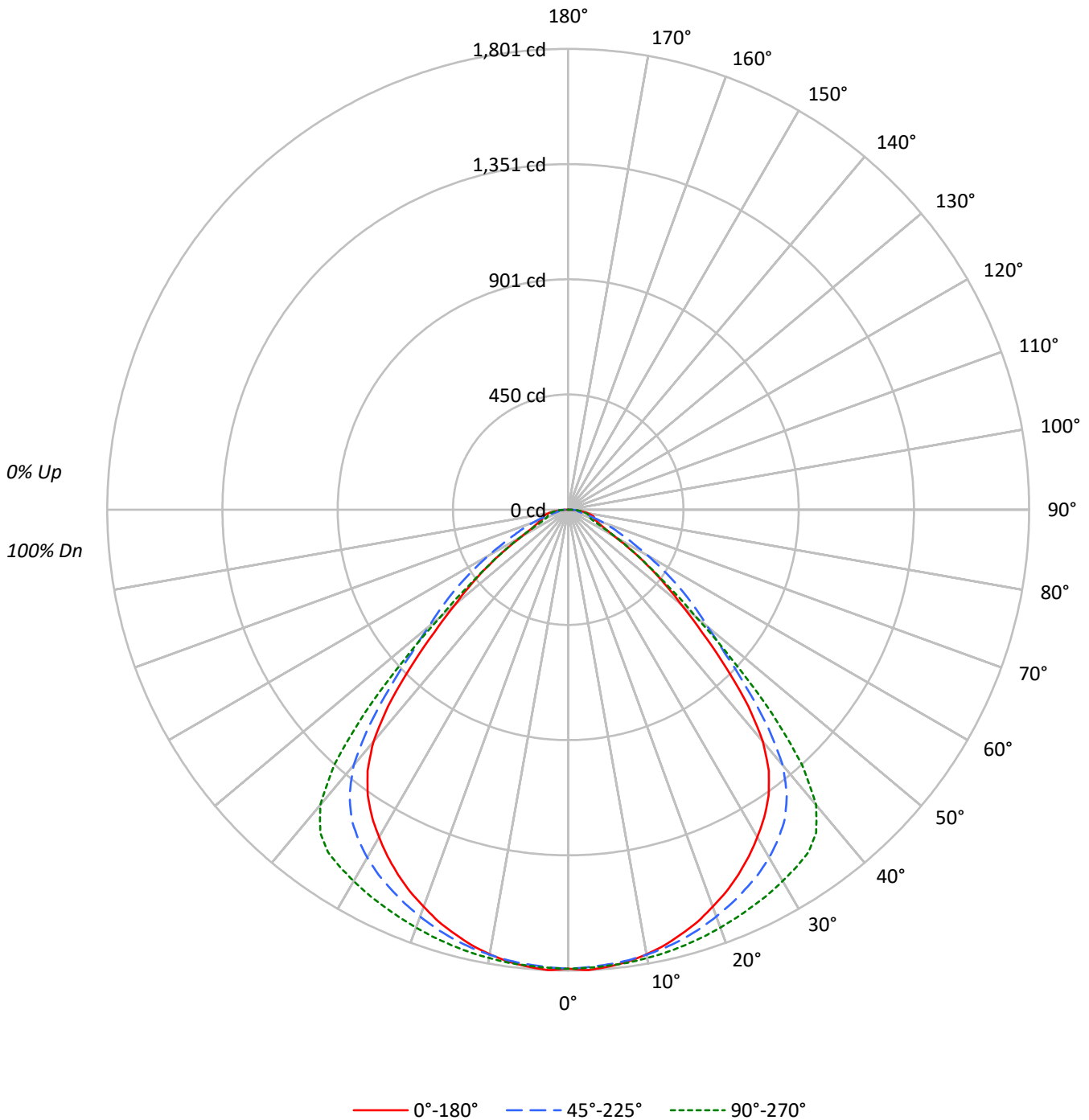
Lumens per Lamp: 2725 (2 lamps)
Luminaire Lumens: 3950.3 lumens
Efficiency: 72.5%
Efficacy: 83.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.4 / 1.32
Luminous Opening: Rectangular (W 1.88' x L: 3.92' x H: 0')
CIE Type: Direct

Input Watts (W): 47.3
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	50	30	10	0	
RCR																						
0	86	86	86	86	84	84	84	84	81	81	81	77	77	77	74	74	74	74	74	74	72	
1	80	77	75	72	78	76	73	71	73	71	69	70	68	67	67	66	65	65	65	65	63	
2	74	69	65	61	72	68	64	61	65	62	59	63	60	58	61	59	57	57	57	57	55	
3	68	62	57	53	67	61	56	52	59	55	51	57	53	50	55	52	50	50	50	50	48	
4	63	56	50	46	62	55	50	46	53	49	45	51	48	44	50	47	44	44	44	44	42	
5	59	50	45	40	57	50	44	40	48	43	40	47	43	39	46	42	39	39	39	39	37	
6	55	46	40	36	53	45	40	36	44	39	35	43	38	35	42	38	35	35	35	35	33	
7	51	42	36	32	50	41	36	32	40	35	32	39	35	31	38	34	31	31	31	31	30	
8	47	38	33	29	46	38	33	29	37	32	29	36	32	28	35	31	28	28	28	28	27	
9	44	35	30	26	44	35	30	26	34	29	26	33	29	26	33	29	26	26	26	26	25	
10	42	33	27	24	41	32	27	24	32	27	24	31	27	24	30	26	24	24	24	24	22	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2630	2630	2630
5°	2638	2625	2632
10°	2625	2628	2648
15°	2604	2634	2674
20°	2575	2639	2711
25°	2544	2647	2764
30°	2501	2657	2837
35°	2442	2641	2926
40°	2265	2495	2883
45°	1810	2048	2330
50°	1316	1617	1487
55°	966	1354	971
60°	616	1052	630
65°	482	798	416
70°	467	617	377
75°	583	419	464
80°	658	338	574
85°	639	639	723



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	169.9	4.3	3.1	0°	1794	1794	1794	1794	1794	
10°-20°	490.3	12.4	9.0	5°	1793	1784	1784	1783	1789	170
20°-30°	755.6	19.1	13.9	15°	1716	1717	1736	1750	1762	484
30°-40°	923.6	23.4	16.9	25°	1573	1590	1637	1684	1709	724
40°-50°	780.5	19.8	14.3	35°	1365	1394	1476	1584	1635	846
50°-60°	432.2	10.9	7.9	45°	873	969	988	1124	1124	672
60°-70°	227.7	5.8	4.2	55°	378	468	530	519	380	340
70°-80°	123.4	3.1	2.3	65°	139	260	230	277	120	144
80°-90°	47.1	1.2	0.9	75°	103	143	74	153	82	104
90°-100°	0.0	0.0	0.0	85°	38	58	38	50	43	42
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1415.8	35.8	26.0							
0°-40°	2339.4	59.2	42.9							
0°-60°	3552.1	89.9	65.2							
0°-90°	3950.3	100.0	72.5							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	3950.3	100.0	72.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1794	1794	1794	1794	1794
2.5°	1801	1792	1790	1787	1792
5°	1793	1784	1784	1783	1789
7.5°	1782	1775	1777	1778	1786
10°	1764	1760	1766	1771	1779
12.5°	1743	1742	1753	1762	1772
15°	1716	1717	1736	1750	1762
17.5°	1687	1690	1716	1735	1751
20°	1651	1661	1692	1720	1738
22.5°	1615	1626	1666	1703	1724
25°	1573	1590	1637	1684	1709
27.5°	1528	1549	1607	1664	1694
30°	1478	1502	1570	1640	1676
32.5°	1426	1450	1527	1613	1657
35°	1365	1394	1476	1584	1635
37.5°	1287	1321	1403	1534	1591
40°	1184	1229	1304	1457	1507
42.5°	1041	1109	1157	1319	1352
45°	873	969	988	1124	1124
47.5°	709	821	830	925	869
50°	577	685	709	748	652
52.5°	474	570	619	621	495
55°	378	468	530	519	380
57.5°	285	389	441	440	290
60°	210	328	359	377	215
62.5°	165	288	287	321	158
65°	139	260	230	277	120
67.5°	121	231	185	241	99
70°	109	199	144	211	88
72.5°	107	167	106	182	84
75°	103	143	74	153	82
77.5°	90	121	51	124	77
80°	78	97	40	96	68
82.5°	60	76	37	72	57
85°	38	58	38	50	43
87.5°	18	33	28	28	23
90°	0	0	0	0	0

(END OF REPORT)