

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: P230054

Luminaire Tested: **24CZ-LD5-60-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230054
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-60-S-UNV-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5489.0 lumens
Efficiency: N/A
Efficacy: 105.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

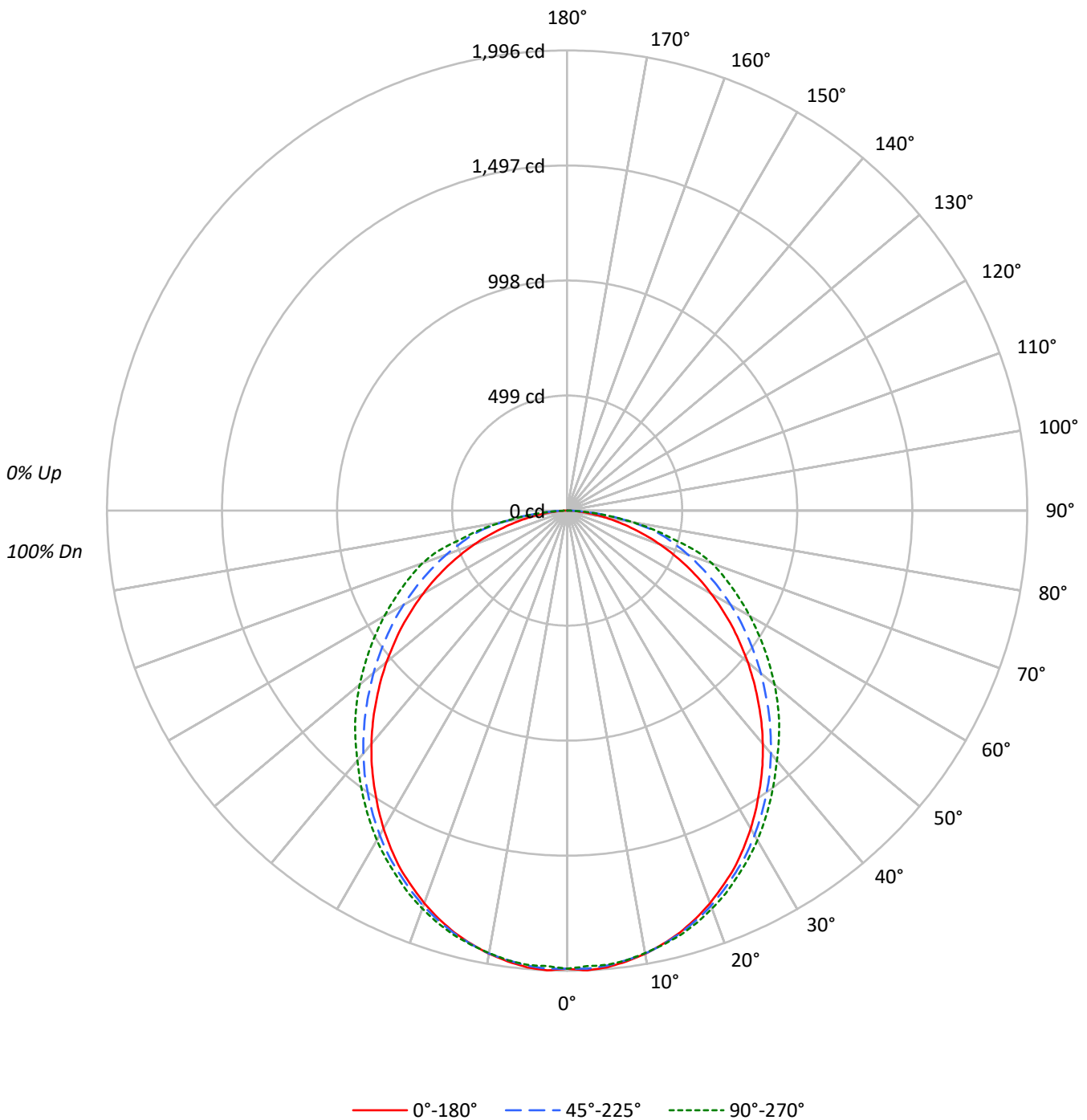
Input Watts (W): 52.17
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2674	2674	2674
5°	2686	2676	2672
10°	2667	2665	2663
15°	2638	2643	2653
20°	2594	2613	2631
25°	2543	2570	2598
30°	2474	2525	2565
35°	2397	2472	2523
40°	2319	2416	2486
45°	2231	2353	2474
50°	2141	2294	2458
55°	2048	2245	2451
60°	1941	2207	2462
65°	1826	2181	2512
70°	1681	2192	2630
75°	1490	2269	2450
80°	1245	2151	2208
85°	931	1720	1579



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.9	3.4
10°-20°	534.3	9.7
20°-30°	796.3	14.5
30°-40°	937.3	17.1
40°-50°	952.5	17.4
50°-60°	856.4	15.6
60°-70°	676.6	12.3
70°-80°	429.2	7.8
80°-90°	118.5	2.2
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°	1518.5	27.7
0°-40°	2455.8	44.7
0°-60°	4264.7	77.7
0°-90°	5489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5489.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1987	1987	1987	1987	1987	
5°	1989	1972	1982	1978	1978	189
15°	1894	1885	1898	1903	1905	534
25°	1713	1711	1731	1742	1750	788
35°	1459	1468	1505	1521	1536	913
45°	1172	1189	1236	1273	1300	905
55°	873	895	957	1019	1045	780
65°	574	603	685	760	789	568
75°	287	336	436	475	471	305
85°	60	104	111	102	102	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1987.1	1987.1	1987.1	1987.1	1987.1
2.5°	1996.3	1981.6	1988.9	1985.3	1978.0
5°	1988.9	1972.5	1981.6	1978.0	1978.0
7.5°	1972.5	1959.7	1967.0	1965.2	1967.0
10°	1952.4	1939.6	1950.6	1950.6	1948.8
12.5°	1925.0	1914.1	1926.8	1926.8	1928.7
15°	1894.0	1884.8	1897.6	1903.1	1904.9
17.5°	1855.6	1846.5	1862.9	1868.4	1873.9
20°	1811.8	1808.1	1824.6	1830.0	1837.4
22.5°	1762.5	1762.5	1778.9	1786.2	1797.2
25°	1713.2	1711.3	1731.4	1742.4	1749.7
27.5°	1654.7	1656.5	1682.1	1693.1	1702.2
30°	1592.6	1596.3	1625.5	1638.3	1651.1
32.5°	1526.9	1534.2	1567.0	1581.7	1594.4
35°	1459.3	1468.4	1505.0	1521.4	1536.0
37.5°	1391.7	1404.5	1442.9	1459.3	1475.7
40°	1320.5	1331.4	1375.3	1395.4	1415.5
42.5°	1247.4	1262.0	1305.9	1335.1	1358.8
45°	1172.5	1189.0	1236.5	1273.0	1300.4
47.5°	1097.7	1119.6	1165.2	1214.6	1238.3
50°	1022.8	1044.7	1095.8	1150.6	1174.4
52.5°	946.1	968.0	1026.4	1083.1	1108.6
55°	873.0	894.9	957.0	1019.1	1044.7
57.5°	796.3	820.1	889.5	953.4	978.9
60°	721.4	745.2	820.1	887.6	915.0
62.5°	648.4	673.9	752.5	823.7	851.1
65°	573.5	602.7	684.9	759.8	789.0
67.5°	500.4	533.3	619.1	697.7	728.7
70°	427.4	465.7	557.1	637.4	668.5
72.5°	356.1	398.2	495.0	575.3	591.8
75°	286.7	336.1	436.5	474.9	471.2
77.5°	221.0	275.8	370.8	378.1	389.0
80°	160.7	221.0	277.6	292.2	284.9
82.5°	105.9	166.2	199.1	191.8	189.9
85°	60.3	104.1	111.4	102.3	102.3
87.5°	25.6	42.0	36.5	27.4	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)