

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: P230010

Luminaire Tested: **24CZ-LD5-45SE-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230010
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-45SE-UNV-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH RIBBED LENS
Light Source: (84) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4034.0 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

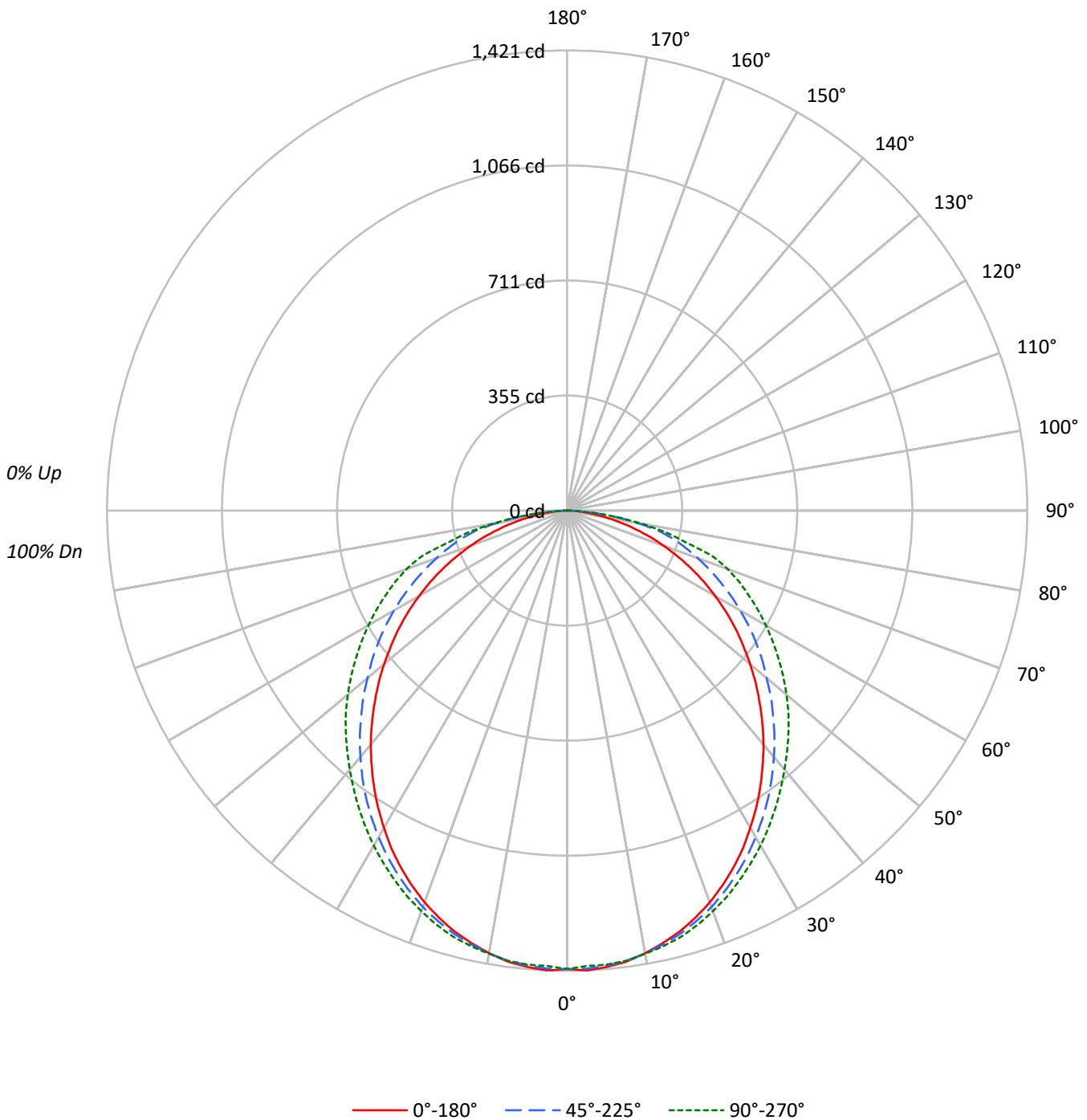
Input Watts (W): 39.91
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1905	1905	1905
5°	1910	1905	1901
10°	1896	1896	1898
15°	1874	1884	1897
20°	1843	1865	1885
25°	1805	1839	1870
30°	1757	1809	1856
35°	1708	1779	1842
40°	1657	1744	1834
45°	1600	1711	1840
50°	1544	1683	1850
55°	1487	1672	1869
60°	1420	1661	1907
65°	1345	1662	1970
70°	1244	1690	2076
75°	1113	1766	1974
80°	931	1691	1808
85°	704	1301	1237



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.8	3.3
10°-20°	380.8	9.4
20°-30°	569.2	14.1
30°-40°	675.3	16.7
40°-50°	695.0	17.2
50°-60°	637.6	15.8
60°-70°	515.5	12.8
70°-80°	334.6	8.3
80°-90°	92.3	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°	1083.8	26.9
0°-40°	1759.0	43.6
0°-60°	3091.6	76.6
0°-90°	4034.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4034.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1416	1416	1416	1416	1416	
5°	1414	1405	1410	1409	1407	134
15°	1345	1340	1352	1358	1362	379
25°	1216	1217	1239	1250	1260	559
35°	1040	1048	1083	1106	1122	650
45°	841	855	899	942	967	649
55°	634	653	713	771	797	566
65°	423	448	522	591	619	418
75°	214	254	340	380	380	228
85°	46	77	84	82	80	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1415.7	1415.7	1415.7	1415.7	1415.7
2.5°	1421.2	1410.2	1415.7	1414.3	1407.4
5°	1414.3	1404.7	1410.2	1408.8	1407.4
7.5°	1404.7	1395.0	1401.9	1400.5	1401.9
10°	1388.1	1379.8	1388.1	1389.5	1389.5
12.5°	1367.4	1360.5	1371.5	1374.3	1377.1
15°	1345.3	1339.8	1352.2	1357.7	1361.9
17.5°	1317.7	1313.5	1328.7	1335.6	1341.1
20°	1287.3	1285.9	1302.5	1309.4	1316.3
22.5°	1252.7	1252.7	1272.1	1280.4	1290.0
25°	1215.5	1216.8	1238.9	1250.0	1259.6
27.5°	1175.4	1176.8	1203.0	1216.8	1227.9
30°	1131.2	1136.7	1164.3	1182.3	1194.7
32.5°	1087.0	1093.9	1124.3	1145.0	1158.8
35°	1040.0	1048.3	1082.9	1106.3	1121.5
37.5°	991.7	1001.4	1038.7	1064.9	1082.9
40°	943.4	954.4	993.1	1023.5	1044.2
42.5°	892.3	904.7	947.5	983.4	1005.5
45°	841.1	855.0	899.2	942.0	966.8
47.5°	790.0	806.6	853.6	900.5	926.8
50°	737.6	754.1	803.9	857.7	884.0
52.5°	685.1	704.4	759.7	814.9	841.1
55°	634.0	653.3	712.7	770.7	796.9
57.5°	581.5	600.8	665.7	726.5	752.8
60°	527.6	549.7	617.4	679.5	708.6
62.5°	475.1	498.6	570.4	636.7	664.4
65°	422.6	447.5	522.1	591.2	618.8
67.5°	368.8	397.8	475.1	545.6	574.6
70°	316.3	348.1	429.6	500.0	527.6
72.5°	265.2	299.7	384.0	455.8	472.4
75°	214.1	254.1	339.8	379.8	379.8
77.5°	165.7	209.9	290.1	305.2	313.5
80°	120.2	168.5	218.2	236.2	233.4
82.5°	80.1	128.5	156.1	156.1	151.9
85°	45.6	77.3	84.3	81.5	80.1
87.5°	19.3	29.0	26.2	20.7	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)