

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: P388639

Luminaire Tested: **24CZ2-40HE-SQR-UNV-L940-CD1-SWPD1-U**

Issue Date: 2/28/2020

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: P388639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40HE-SQR-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3264.3 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

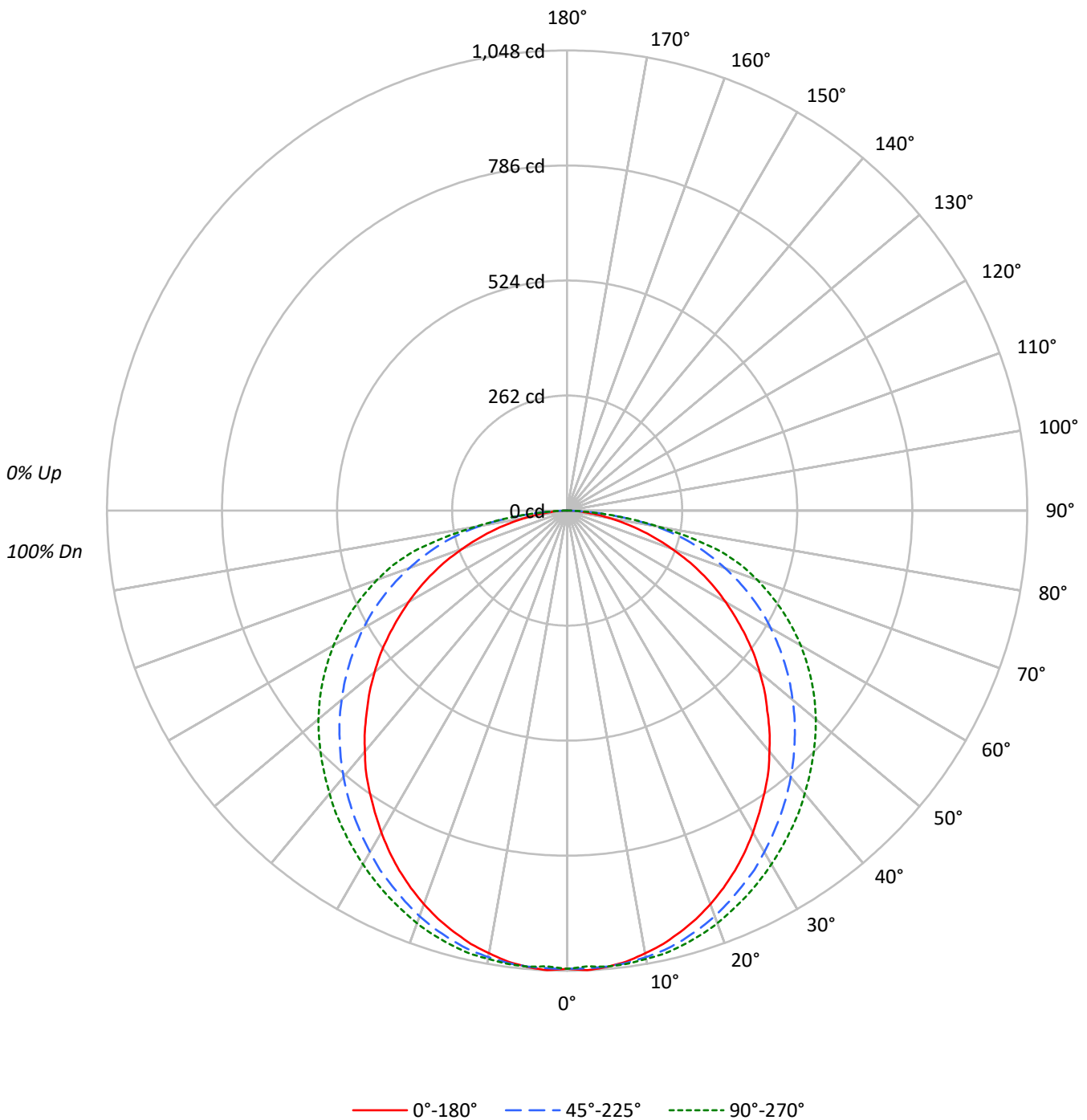
Input Watts (W): 30.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1404	1404	1404
5°	1409	1408	1408
10°	1399	1411	1417
15°	1384	1411	1426
20°	1366	1408	1432
25°	1343	1400	1437
30°	1315	1395	1445
35°	1287	1392	1459
40°	1259	1392	1479
45°	1227	1395	1508
50°	1198	1403	1548
55°	1163	1418	1596
60°	1123	1442	1653
65°	1074	1469	1723
70°	996	1506	1811
75°	902	1558	1894
80°	760	1562	1629
85°	582	1181	1181



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	3.0
10°-20°	285.0	8.7
20°-30°	432.8	13.3
30°-40°	526.5	16.1
40°-50°	560.5	17.2
50°-60°	533.9	16.4
60°-70°	446.5	13.7
70°-80°	297.7	9.1
80°-90°	82.4	2.5
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°	816.8	25.0
0°-40°	1343.3	41.2
0°-60°	2437.8	74.7
0°-90°	3264.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3264.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1043	1043	1043	1043	1043	
5°	1043	1037	1042	1042	1042	99
15°	994	996	1013	1021	1024	280
25°	904	916	943	959	968	416
35°	784	806	847	875	888	490
45°	645	679	733	774	792	498
55°	496	539	605	658	680	443
65°	337	387	461	518	541	333
75°	174	228	300	350	364	184
85°	38	70	76	76	76	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1043.4	1043.4	1043.4	1043.4	1043.4
2.5°	1047.7	1040.2	1043.4	1043.4	1039.1
5°	1043.4	1037.0	1042.4	1042.4	1042.4
7.5°	1035.9	1030.5	1039.1	1041.3	1041.3
10°	1024.0	1021.9	1032.6	1035.9	1037.0
12.5°	1011.1	1010.0	1025.1	1029.4	1032.6
15°	993.8	996.0	1013.2	1020.8	1024.0
17.5°	975.5	979.8	999.2	1010.0	1013.2
20°	954.0	960.4	983.1	993.8	1000.3
22.5°	930.2	939.9	963.7	976.6	984.1
25°	904.4	916.2	943.2	959.4	968.0
27.5°	876.4	891.4	922.7	941.0	949.6
30°	846.2	863.4	897.9	919.5	930.2
32.5°	814.9	835.4	873.1	896.8	909.8
35°	783.6	806.3	847.2	875.3	888.2
37.5°	752.4	775.0	820.3	850.5	866.6
40°	716.8	743.8	792.3	825.7	841.9
42.5°	682.3	711.4	763.2	799.8	817.1
45°	644.6	679.1	733.0	773.9	792.3
47.5°	610.1	644.6	702.8	745.9	766.4
50°	572.4	609.0	670.5	717.9	739.5
52.5°	535.7	573.5	638.1	688.8	710.4
55°	495.8	539.0	604.7	657.5	680.2
57.5°	456.0	502.3	570.2	625.2	647.8
60°	417.2	464.6	535.7	590.7	614.4
62.5°	378.4	425.8	500.2	556.2	578.8
65°	337.4	387.0	461.4	518.5	541.1
67.5°	296.4	348.2	422.5	479.7	501.2
70°	253.3	308.3	382.7	438.7	460.3
72.5°	213.4	268.4	341.7	396.7	417.2
75°	173.5	228.5	299.7	350.3	364.3
77.5°	134.7	189.7	253.3	286.7	290.0
80°	98.1	149.8	201.6	211.3	210.2
82.5°	65.8	112.1	139.1	140.1	143.4
85°	37.7	70.1	76.5	75.5	76.5
87.5°	15.1	24.8	21.6	16.2	16.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)