

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: P387584

Luminaire Tested: **14CZ2-60HE-SQR-UNV-L940-CD1-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: P387584
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1911-580-2)
Test Lab: INNOVATIONS CENTER(G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-60HE-SQR-UNV-L940-CD1-U
Description: 1x4 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: 4939.5 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.34 / 1.44
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

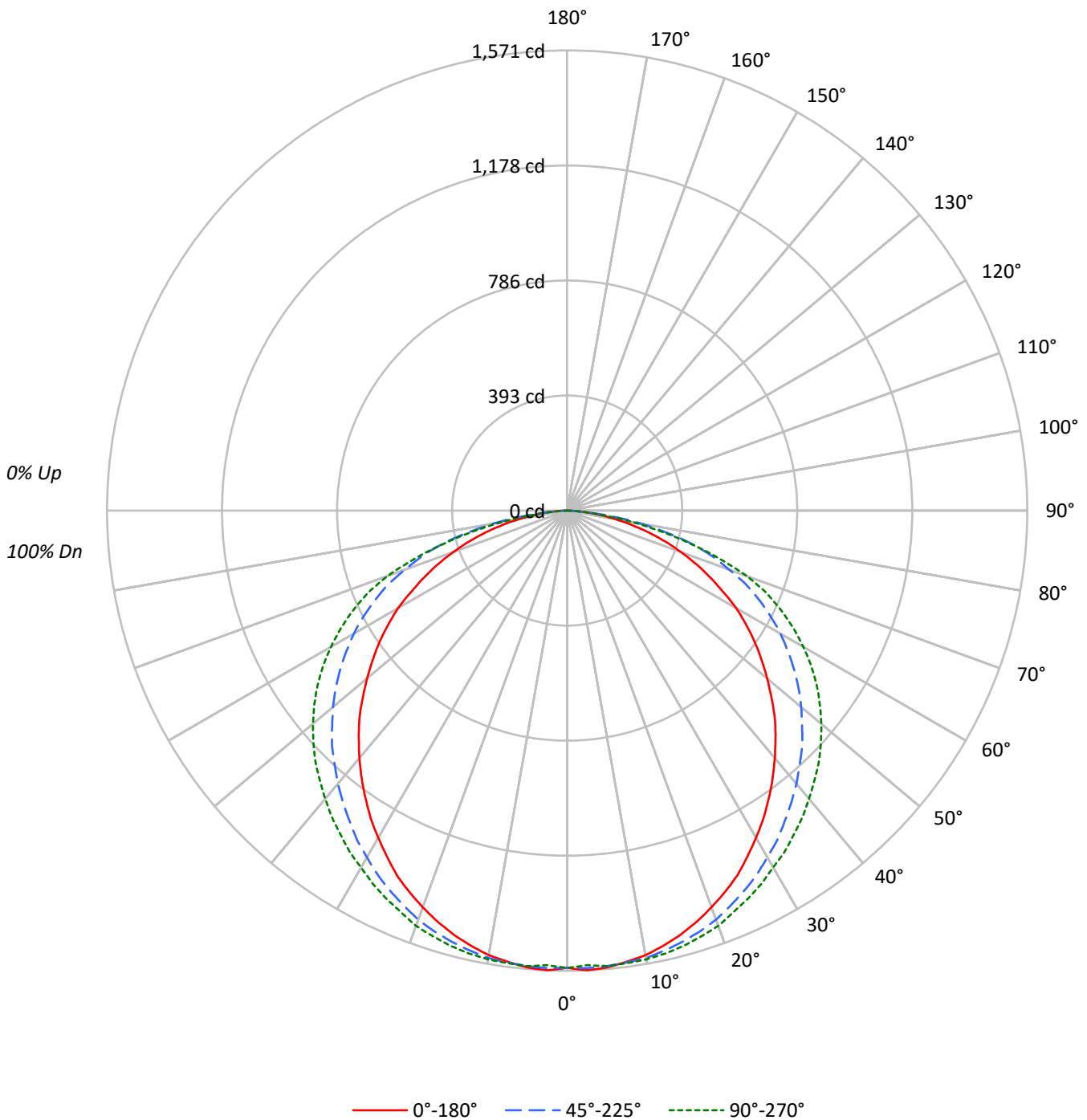
Input Watts (W): 48.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	105	101	97	93	97	93	90		93	90	87		89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	73		80	76	72		77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	59	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	51		60	54	50	48
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		54	48	43	41
6	68	55	45	39	67	54	45	39	52	44	38		50	43	38		49	42	38	35
7	63	49	40	34	62	49	40	34	47	39	34		46	39	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		42	35	30		41	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27		38	32	27		37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24		36	29	24		35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4200	4200	4200
5°	4230	4216	4216
10°	4211	4238	4251
15°	4175	4245	4286
20°	4128	4256	4320
25°	4080	4250	4339
30°	4007	4247	4371
35°	3942	4253	4433
40°	3874	4277	4513
45°	3818	4320	4623
50°	3731	4367	4742
55°	3667	4438	4882
60°	3591	4529	5011
65°	3424	4613	5136
70°	3252	4622	5132
75°	2977	4607	4530
80°	2546	3935	3510
85°	1998	2229	1306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	3.0
10°-20°	428.5	8.7
20°-30°	655.3	13.3
30°-40°	803.3	16.3
40°-50°	863.9	17.5
50°-60°	830.2	16.8
60°-70°	691.2	14.0
70°-80°	424.2	8.6
80°-90°	94.5	1.9
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°	1232.2	24.9
0°-40°	2035.4	41.2
0°-60°	3729.5	75.5
0°-90°	4939.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4939.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1561	1561	1561	1561	1561	
5°	1566	1551	1561	1561	1561	149
15°	1499	1494	1524	1534	1538	423
25°	1374	1387	1432	1449	1461	632
35°	1200	1230	1294	1329	1349	751
45°	1003	1048	1135	1188	1215	772
55°	782	849	946	1011	1041	698
65°	538	620	724	784	807	533
75°	286	373	443	441	436	303
85°	65	97	72	50	42	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1560.9	1560.9	1560.9	1560.9	1560.9
2.5°	1570.9	1555.9	1563.4	1560.9	1553.5
5°	1565.9	1551.0	1560.9	1560.9	1560.9
7.5°	1553.5	1541.0	1555.9	1558.4	1558.4
10°	1541.0	1531.1	1551.0	1553.5	1555.9
12.5°	1521.1	1513.6	1538.5	1543.5	1548.5
15°	1498.7	1493.7	1523.6	1533.5	1538.5
17.5°	1471.3	1473.8	1506.2	1518.6	1523.6
20°	1441.4	1448.9	1486.2	1498.7	1508.6
22.5°	1409.1	1419.0	1458.9	1473.8	1483.7
25°	1374.2	1386.7	1431.5	1448.9	1461.3
27.5°	1331.9	1351.8	1401.6	1424.0	1436.4
30°	1289.6	1312.0	1366.7	1394.1	1406.6
32.5°	1247.2	1272.1	1334.4	1361.8	1381.7
35°	1199.9	1229.8	1294.5	1329.4	1349.3
37.5°	1152.6	1187.5	1257.2	1297.0	1319.4
40°	1102.9	1140.2	1217.4	1262.2	1284.6
42.5°	1053.1	1095.4	1175.1	1224.8	1249.7
45°	1003.3	1048.1	1135.2	1187.5	1214.9
47.5°	946.0	1000.8	1087.9	1147.7	1175.1
50°	891.2	951.0	1043.1	1105.3	1132.7
52.5°	836.5	898.7	995.8	1060.5	1087.9
55°	781.7	848.9	946.0	1010.7	1040.6
57.5°	724.4	794.2	893.7	961.0	988.3
60°	667.2	739.4	841.5	903.7	931.1
62.5°	600.0	684.6	784.2	846.4	871.3
65°	537.7	619.9	724.4	784.2	806.6
67.5°	475.5	560.1	662.2	717.0	736.9
70°	413.3	497.9	587.5	639.8	652.3
72.5°	351.0	435.7	520.3	550.2	545.2
75°	286.3	373.4	443.1	440.6	435.7
77.5°	224.1	308.7	351.0	333.6	326.1
80°	164.3	246.5	253.9	236.5	226.5
82.5°	112.0	176.8	159.3	139.4	129.5
85°	64.7	97.1	72.2	49.8	42.3
87.5°	27.4	24.9	7.5	7.5	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)