

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: P274825

Luminaire Tested: **24CZ2-60HE-RDP-UNV-L940-CD1-U**

Issue Date: 3/3/2020

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: P274825
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60HE-RDP-UNV-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS WITH INSERT, 90CRI
Light Source: (392) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3453.0 lumens
Efficiency: N/A
Efficacy: 78.3 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

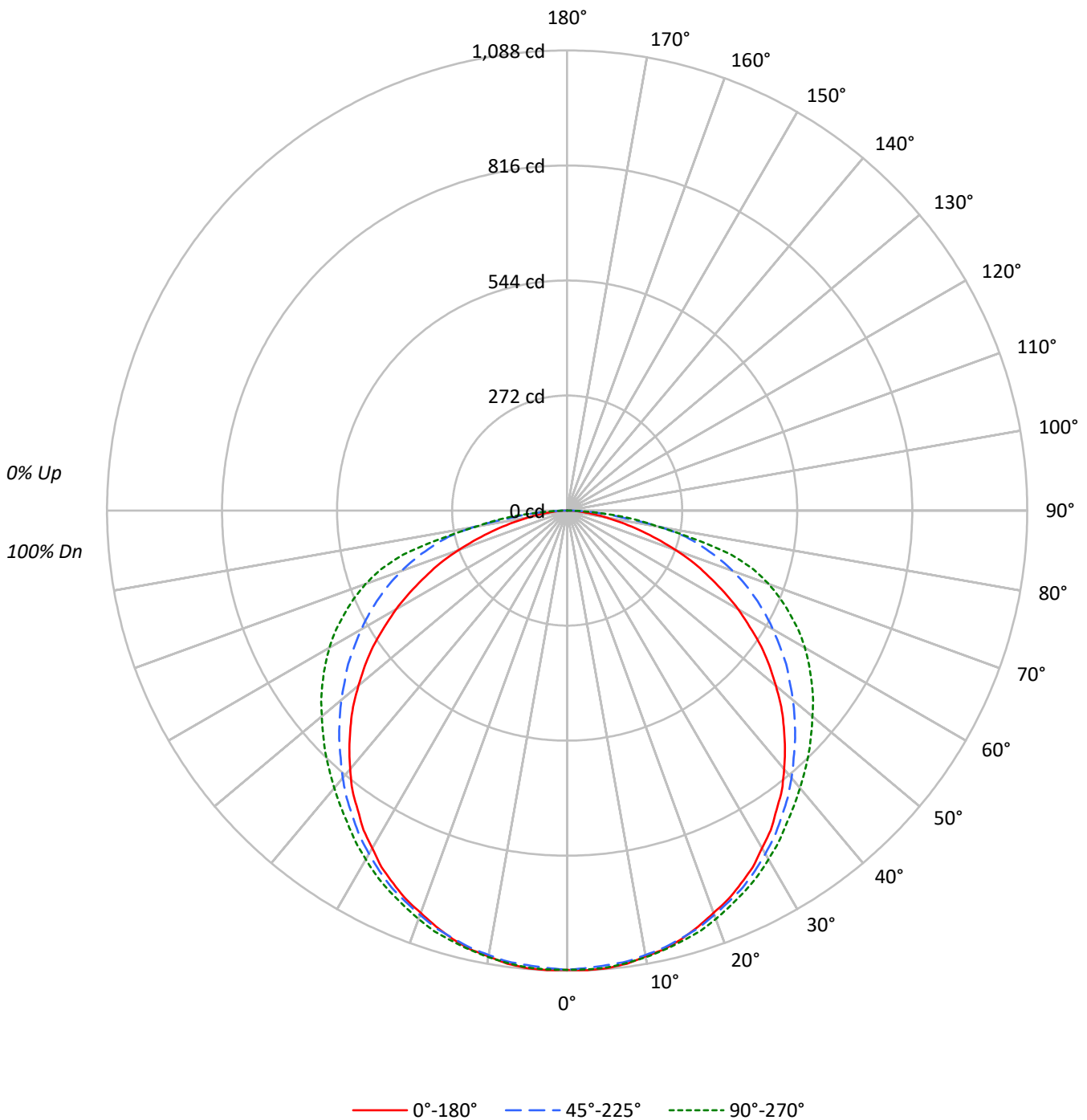
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1461	1461	1461
5°	1467	1457	1464
10°	1463	1458	1465
15°	1460	1458	1467
20°	1449	1457	1471
25°	1444	1459	1475
30°	1432	1456	1480
35°	1418	1452	1485
40°	1402	1450	1504
45°	1379	1450	1538
50°	1348	1459	1585
55°	1314	1483	1655
60°	1258	1512	1747
65°	1178	1565	1854
70°	1071	1637	1995
75°	908	1727	2084
80°	717	1739	1685
85°	530	1321	1480



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.0	3.0
10°-20°	296.4	8.6
20°-30°	453.3	13.1
30°-40°	554.2	16.0
40°-50°	590.7	17.1
50°-60°	564.7	16.4
60°-70°	478.4	13.9
70°-80°	321.5	9.3
80°-90°	90.7	2.6
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°	852.8	24.7
0°-40°	1407.0	40.7
0°-60°	2562.4	74.2
0°-90°	3453.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3453.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1086	1084	1079	1084	1084	103
15°	1048	1048	1046	1055	1053	296
25°	973	976	983	992	993	448
35°	863	870	884	901	904	541
45°	724	736	762	795	808	559
55°	560	581	632	682	706	499
65°	370	408	492	557	582	367
75°	175	238	332	389	401	187
85°	34	70	86	92	96	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1085.9	1085.9	1085.9	1085.9	1085.9
2.5°	1087.6	1087.6	1082.4	1085.9	1085.9
5°	1085.9	1084.2	1079.0	1084.2	1084.2
7.5°	1080.7	1079.0	1075.6	1080.7	1079.0
10°	1070.5	1070.5	1067.0	1072.2	1072.2
12.5°	1061.9	1060.2	1058.5	1065.3	1063.6
15°	1048.2	1048.2	1046.5	1055.0	1053.3
17.5°	1031.1	1032.8	1034.5	1041.3	1043.1
20°	1012.2	1015.6	1017.4	1027.6	1027.6
22.5°	995.1	996.8	1000.2	1010.5	1010.5
25°	972.8	976.3	983.1	991.7	993.4
27.5°	950.6	952.3	960.8	972.8	974.5
30°	921.4	926.6	936.9	950.6	952.3
32.5°	895.8	900.9	912.9	926.6	930.0
35°	863.2	870.1	883.8	900.9	904.3
37.5°	834.1	839.2	856.4	875.2	880.3
40°	798.1	808.4	825.5	847.8	856.4
42.5°	762.2	772.4	793.0	822.1	832.4
45°	724.5	736.5	762.2	794.7	808.4
47.5°	686.8	700.5	729.6	767.3	782.7
50°	644.0	661.1	697.1	739.9	757.0
52.5°	602.9	623.4	662.8	710.8	733.0
55°	560.1	580.6	632.0	681.7	705.6
57.5°	512.1	539.5	596.0	652.5	678.2
60°	467.6	493.3	561.8	623.4	649.1
62.5°	419.6	453.9	527.5	592.6	618.3
65°	369.9	407.6	491.6	556.6	582.3
67.5°	325.4	366.5	455.6	520.7	546.4
70°	272.3	323.7	416.2	481.3	507.0
72.5°	222.7	279.2	375.1	438.5	462.4
75°	174.7	238.1	332.3	388.8	400.8
77.5°	130.2	197.0	287.7	311.7	303.2
80°	92.5	157.6	224.4	212.4	217.5
82.5°	59.9	119.9	138.7	157.6	162.7
85°	34.3	70.2	85.6	92.5	95.9
87.5°	15.4	25.7	34.3	34.3	32.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)