

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: P295076

Luminaire Tested: **24CZ2-70HE-HRP-UNV-L935-CD1-U**

Issue Date: 12/2/2019

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: P295076
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70HE-HRP-UNV-L935-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (392) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4609.2 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

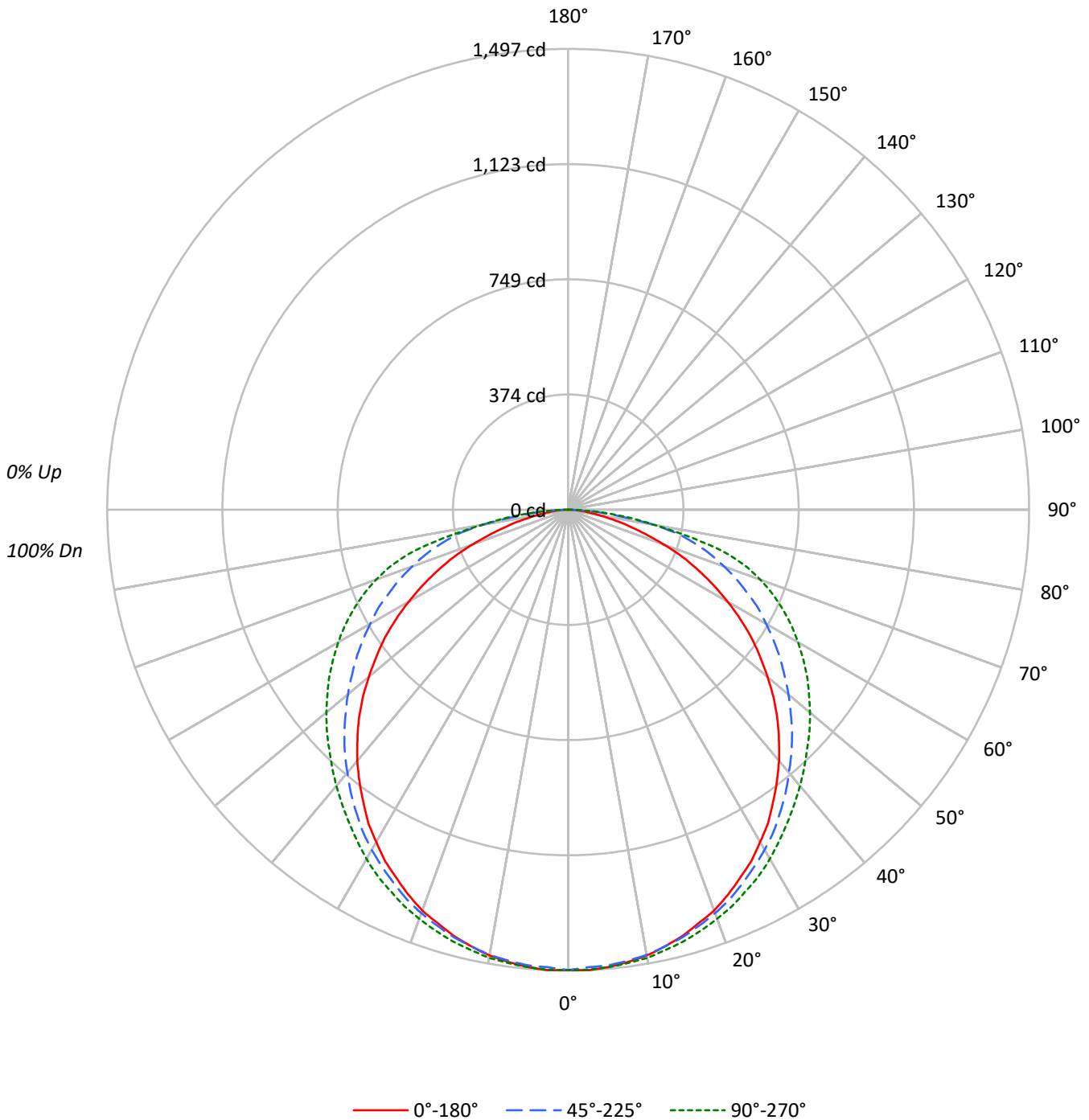
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90		92	90	87		89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2012	2012	2012
5°	2015	2007	2015
10°	2009	2006	2019
15°	1997	2003	2021
20°	1984	1998	2025
25°	1960	1988	2028
30°	1937	1982	2036
35°	1905	1971	2038
40°	1871	1959	2057
45°	1829	1957	2089
50°	1769	1955	2145
55°	1707	1969	2222
60°	1610	1999	2321
65°	1487	2046	2451
70°	1298	2118	2611
75°	1053	2227	2699
80°	777	2183	2183
85°	596	1609	1817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.7	3.1
10°-20°	406.8	8.8
20°-30°	619.3	13.4
30°-40°	752.0	16.3
40°-50°	794.5	17.2
50°-60°	749.7	16.3
60°-70°	623.3	13.5
70°-80°	410.1	8.9
80°-90°	111.8	2.4
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°	1167.8	25.3
0°-40°	1919.8	41.7
0°-60°	3464.0	75.2
0°-90°	4609.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4609.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1496	1496	1496	1496	1496	
5°	1492	1492	1486	1492	1492	142
15°	1434	1436	1438	1451	1451	404
25°	1320	1328	1339	1362	1366	609
35°	1160	1173	1200	1231	1241	726
45°	961	980	1028	1079	1098	740
55°	728	758	839	918	947	648
65°	467	521	643	737	770	462
75°	203	295	428	508	519	218
85°	39	85	104	116	118	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1495.5	1495.5	1495.5	1495.5	1495.5
2.5°	1497.4	1495.5	1487.7	1495.5	1495.5
5°	1491.6	1491.6	1485.8	1491.6	1491.6
7.5°	1482.0	1482.0	1478.1	1485.8	1485.8
10°	1470.4	1470.4	1468.5	1478.1	1478.1
12.5°	1453.0	1454.9	1453.0	1464.6	1464.6
15°	1433.7	1435.6	1437.6	1451.1	1451.1
17.5°	1408.6	1412.5	1416.4	1431.8	1433.7
20°	1385.5	1387.4	1395.1	1412.5	1414.4
22.5°	1354.6	1360.4	1370.0	1387.4	1393.2
25°	1319.9	1327.6	1339.2	1362.3	1366.2
27.5°	1287.1	1292.9	1308.3	1333.4	1341.1
30°	1246.5	1256.2	1275.5	1300.6	1310.2
32.5°	1208.0	1217.6	1240.8	1267.8	1275.5
35°	1159.7	1173.2	1200.2	1231.1	1240.8
37.5°	1113.4	1126.9	1159.7	1194.4	1206.0
40°	1065.2	1080.6	1115.3	1155.9	1171.3
42.5°	1013.1	1034.3	1072.9	1117.3	1134.6
45°	961.0	980.3	1028.5	1078.7	1098.0
47.5°	905.0	928.2	980.3	1040.1	1063.2
50°	845.2	874.1	933.9	999.5	1024.6
52.5°	785.4	818.2	885.7	959.0	986.0
55°	727.5	758.3	839.4	918.5	947.4
57.5°	663.8	702.4	791.1	876.1	905.0
60°	598.2	640.6	742.9	831.7	862.5
62.5°	532.6	580.8	696.6	785.4	818.2
65°	467.0	521.0	642.6	737.1	769.9
67.5°	403.3	463.1	592.4	686.9	719.8
70°	330.0	405.2	538.4	631.0	663.8
72.5°	262.4	349.3	486.3	573.1	602.0
75°	202.6	295.2	428.4	507.5	519.1
77.5°	148.6	241.2	368.6	395.6	397.5
80°	100.3	193.0	281.7	277.9	281.7
82.5°	65.6	144.7	177.5	198.8	200.7
85°	38.6	84.9	104.2	115.8	117.7
87.5°	19.3	28.9	36.7	38.6	42.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)