

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: P295077

Luminaire Tested: **24CZ2-70HE-HRP-UNV-L940-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: P295077
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-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
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: 4656.9 lumens
Efficiency: N/A
Efficacy: 91.3 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

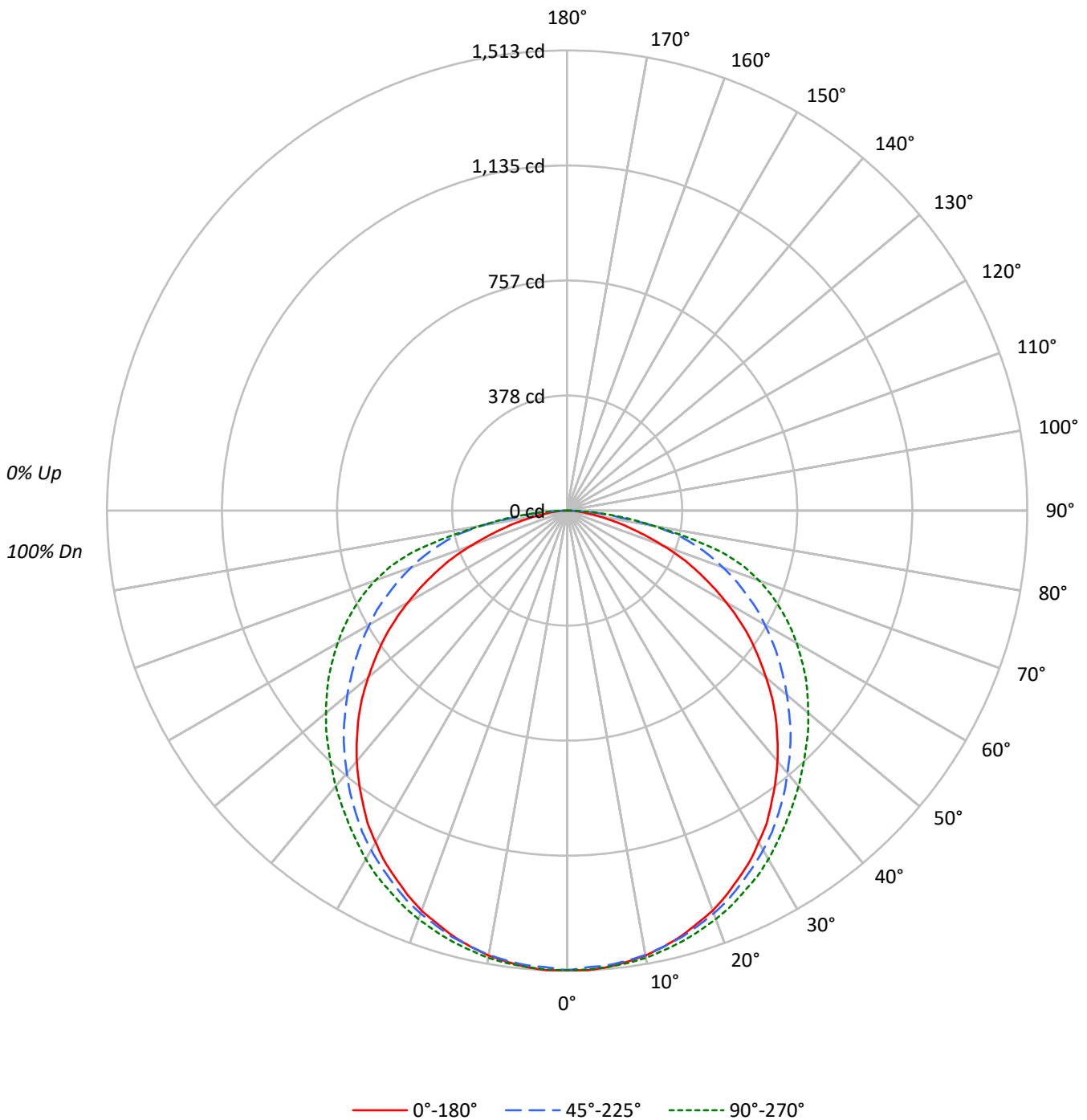
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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°	2033	2033	2033
5°	2035	2028	2035
10°	2030	2027	2040
15°	2018	2023	2042
20°	2004	2018	2046
25°	1980	2009	2049
30°	1957	2002	2057
35°	1925	1992	2059
40°	1890	1979	2079
45°	1847	1977	2111
50°	1787	1975	2167
55°	1724	1989	2246
60°	1626	2020	2345
65°	1502	2067	2477
70°	1312	2140	2638
75°	1064	2250	2726
80°	786	2205	2205
85°	602	1626	1836



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.1	3.1
10°-20°	411.0	8.8
20°-30°	625.7	13.4
30°-40°	759.8	16.3
40°-50°	802.7	17.2
50°-60°	757.5	16.3
60°-70°	629.8	13.5
70°-80°	414.3	8.9
80°-90°	112.9	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°	1179.9	25.3
0°-40°	1939.7	41.7
0°-60°	3499.8	75.2
0°-90°	4656.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4656.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1511	1511	1511	1511	1511	
5°	1507	1507	1501	1507	1507	143
15°	1448	1450	1452	1466	1466	409
25°	1334	1341	1353	1376	1380	615
35°	1172	1185	1213	1244	1254	733
45°	971	990	1039	1090	1109	748
55°	735	766	848	928	957	655
65°	472	526	649	745	778	466
75°	205	298	433	513	524	221
85°	39	86	105	117	119	48
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1510.9	1510.9	1510.9	1510.9	1510.9
2.5°	1512.9	1510.9	1503.1	1510.9	1510.9
5°	1507.0	1507.0	1501.2	1507.0	1507.0
7.5°	1497.3	1497.3	1493.4	1501.2	1501.2
10°	1485.6	1485.6	1483.6	1493.4	1493.4
12.5°	1468.0	1470.0	1468.0	1479.7	1479.7
15°	1448.5	1450.5	1452.4	1466.1	1466.1
17.5°	1423.2	1427.1	1431.0	1446.6	1448.5
20°	1399.8	1401.8	1409.6	1427.1	1429.1
22.5°	1368.6	1374.5	1384.2	1401.8	1407.6
25°	1333.5	1341.3	1353.0	1376.4	1380.3
27.5°	1300.4	1306.2	1321.8	1347.2	1355.0
30°	1259.4	1269.2	1288.7	1314.0	1323.8
32.5°	1220.4	1230.2	1253.6	1280.9	1288.7
35°	1171.7	1185.4	1212.6	1243.8	1253.6
37.5°	1124.9	1138.6	1171.7	1206.8	1218.5
40°	1076.2	1091.8	1126.9	1167.8	1183.4
42.5°	1023.5	1045.0	1084.0	1128.8	1146.4
45°	970.9	990.4	1039.1	1089.8	1109.3
47.5°	914.4	937.8	990.4	1050.8	1074.2
50°	853.9	883.2	943.6	1009.9	1035.2
52.5°	793.5	826.6	894.9	968.9	996.2
55°	735.0	766.2	848.1	928.0	957.3
57.5°	670.7	709.7	799.3	885.1	914.4
60°	604.4	647.3	750.6	840.3	871.5
62.5°	538.1	586.8	703.8	793.5	826.6
65°	471.8	526.4	649.2	744.7	777.9
67.5°	407.5	467.9	598.5	694.1	727.2
70°	333.4	409.4	543.9	637.5	670.7
72.5°	265.1	352.9	491.3	579.0	608.3
75°	204.7	298.3	432.8	512.7	524.4
77.5°	150.1	243.7	372.4	399.7	401.6
80°	101.4	195.0	284.6	280.7	284.6
82.5°	66.3	146.2	179.4	200.8	202.8
85°	39.0	85.8	105.3	117.0	118.9
87.5°	19.5	29.2	37.0	39.0	42.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)