

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: P295078

Luminaire Tested: **24CZ2-70HE-HRP-UNV-L950-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: P295078
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-L950-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (392) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4943.0 lumens
Efficiency: N/A
Efficacy: 96.9 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

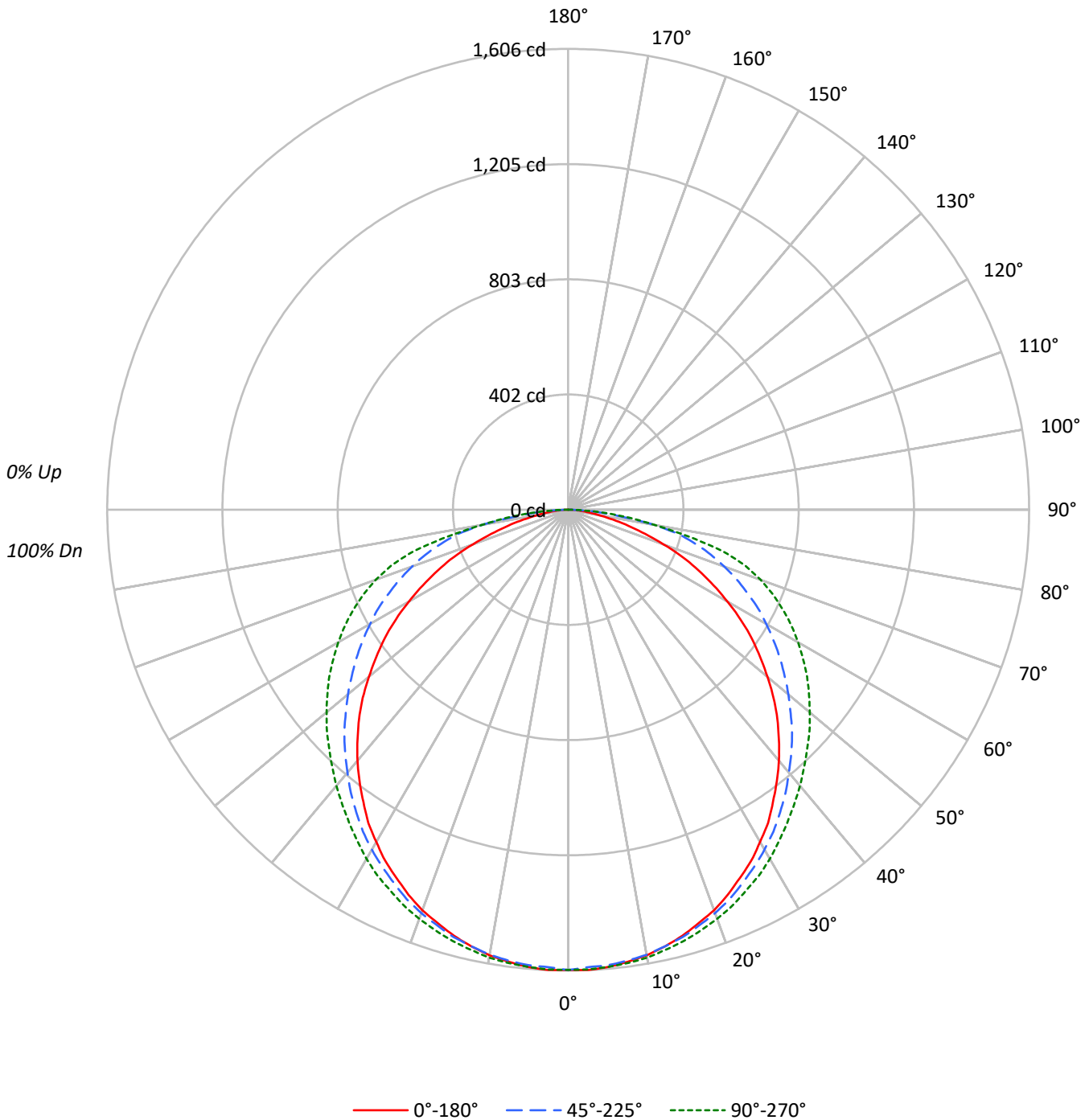
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2158	2158	2158
5°	2160	2152	2160
10°	2154	2152	2166
15°	2142	2148	2168
20°	2127	2142	2172
25°	2101	2132	2175
30°	2077	2125	2183
35°	2043	2114	2186
40°	2006	2101	2206
45°	1961	2099	2241
50°	1897	2097	2300
55°	1830	2112	2384
60°	1726	2144	2489
65°	1594	2194	2629
70°	1392	2271	2801
75°	1130	2388	2894
80°	834	2341	2341
85°	639	1724	1948



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.9	3.1
10°-20°	436.3	8.8
20°-30°	664.2	13.4
30°-40°	806.5	16.3
40°-50°	852.0	17.2
50°-60°	804.0	16.3
60°-70°	668.5	13.5
70°-80°	439.8	8.9
80°-90°	119.9	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°	1252.4	25.3
0°-40°	2058.8	41.7
0°-60°	3714.8	75.2
0°-90°	4943.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4943.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1604	1604	1604	1604	1604	
5°	1600	1600	1593	1600	1600	152
15°	1538	1540	1542	1556	1556	434
25°	1415	1424	1436	1461	1465	653
35°	1244	1258	1287	1320	1331	779
45°	1030	1051	1103	1157	1178	794
55°	780	813	900	985	1016	695
65°	501	559	689	790	826	495
75°	217	317	459	544	557	234
85°	41	91	112	124	126	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1603.8	1603.8	1603.8	1603.8	1603.8
2.5°	1605.8	1603.8	1595.5	1603.8	1603.8
5°	1599.6	1599.6	1593.4	1599.6	1599.6
7.5°	1589.3	1589.3	1585.1	1593.4	1593.4
10°	1576.9	1576.9	1574.8	1585.1	1585.1
12.5°	1558.2	1560.3	1558.2	1570.6	1570.6
15°	1537.5	1539.6	1541.7	1556.2	1556.2
17.5°	1510.6	1514.8	1518.9	1535.5	1537.5
20°	1485.8	1487.9	1496.2	1514.8	1516.8
22.5°	1452.7	1458.9	1469.2	1487.9	1494.1
25°	1415.4	1423.7	1436.1	1461.0	1465.1
27.5°	1380.3	1386.5	1403.0	1429.9	1438.2
30°	1336.8	1347.2	1367.9	1394.8	1405.1
32.5°	1295.4	1305.8	1330.6	1359.6	1367.9
35°	1243.7	1258.2	1287.1	1320.3	1330.6
37.5°	1194.0	1208.5	1243.7	1280.9	1293.4
40°	1142.3	1158.8	1196.1	1239.5	1256.1
42.5°	1086.4	1109.2	1150.6	1198.2	1216.8
45°	1030.5	1051.2	1103.0	1156.8	1177.5
47.5°	970.5	995.4	1051.2	1115.4	1140.2
50°	906.4	937.4	1001.6	1071.9	1098.8
52.5°	842.2	877.4	949.8	1028.5	1057.4
55°	780.2	813.3	900.2	985.0	1016.1
57.5°	711.9	753.2	848.4	939.5	970.5
60°	641.5	687.0	796.7	891.9	925.0
62.5°	571.1	622.9	747.0	842.2	877.4
65°	500.8	558.7	689.1	790.5	825.7
67.5°	432.5	496.6	635.3	736.7	771.9
70°	353.9	434.6	577.4	676.7	711.9
72.5°	281.4	374.6	521.5	614.6	645.6
75°	217.3	316.6	459.4	544.2	556.7
77.5°	159.3	258.7	395.2	424.2	426.3
80°	107.6	206.9	302.1	298.0	302.1
82.5°	70.4	155.2	190.4	213.1	215.2
85°	41.4	91.1	111.7	124.2	126.2
87.5°	20.7	31.0	39.3	41.4	45.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)