

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: P295069

Luminaire Tested: **24CZ2-65HE-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: P295069
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: 24CZ2-65HE-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: 4373.3 lumens
Efficiency: N/A
Efficacy: 89.4 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

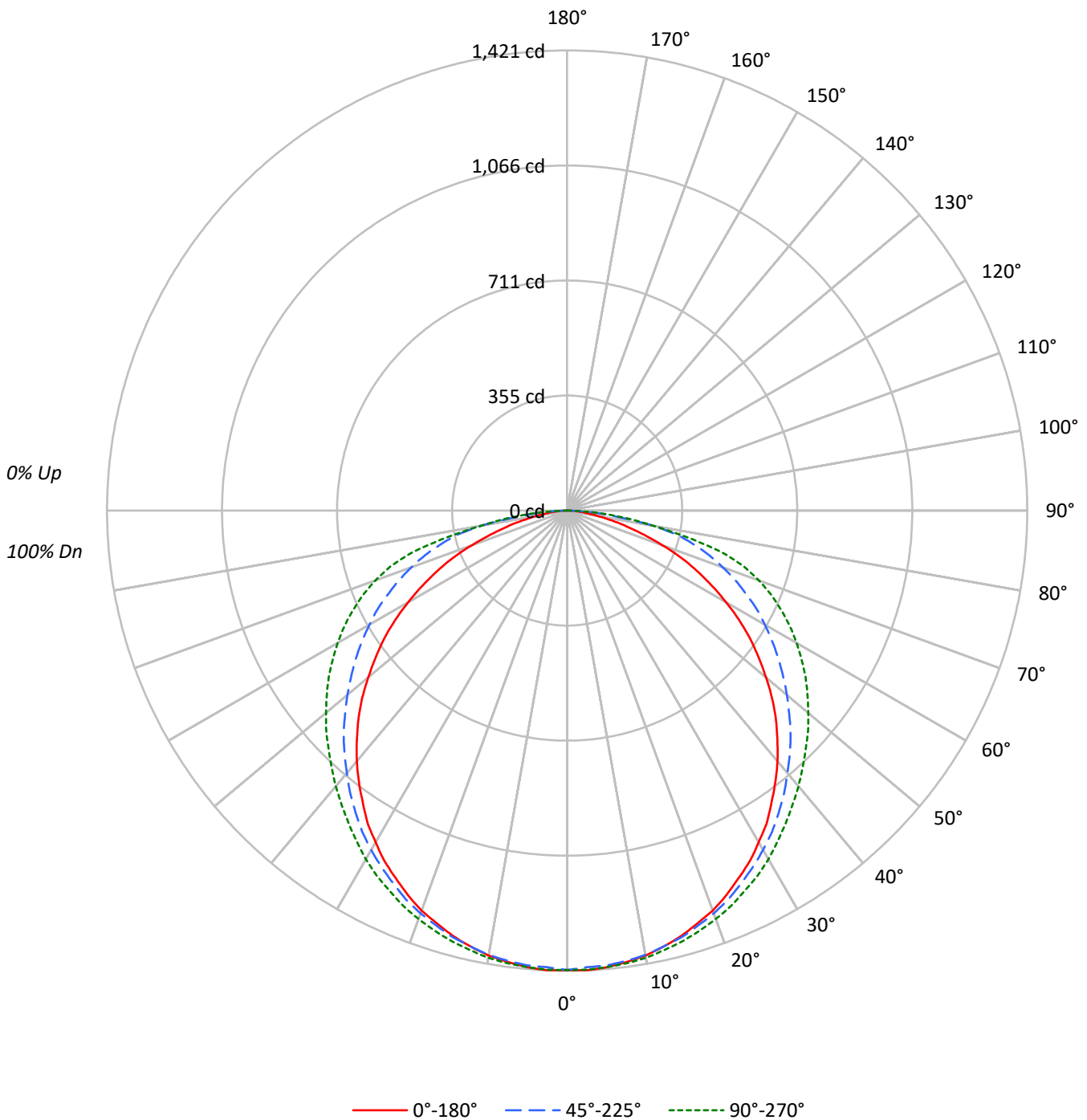
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1909	1909	1909
5°	1911	1904	1911
10°	1906	1904	1916
15°	1895	1900	1918
20°	1882	1895	1922
25°	1859	1886	1924
30°	1837	1880	1931
35°	1807	1871	1934
40°	1775	1859	1952
45°	1735	1857	1982
50°	1679	1855	2035
55°	1619	1868	2109
60°	1527	1897	2202
65°	1411	1941	2326
70°	1232	2009	2478
75°	999	2113	2560
80°	738	2071	2071
85°	565	1527	1724



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.4	3.1
10°-20°	386.0	8.8
20°-30°	587.6	13.4
30°-40°	713.5	16.3
40°-50°	753.8	17.2
50°-60°	711.3	16.3
60°-70°	591.4	13.5
70°-80°	389.1	8.9
80°-90°	106.1	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°	1108.0	25.3
0°-40°	1821.5	41.7
0°-60°	3286.6	75.2
0°-90°	4373.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4373.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1419	1419	1419	1419	1419	
5°	1415	1415	1410	1415	1415	134
15°	1360	1362	1364	1377	1377	384
25°	1252	1260	1271	1293	1296	578
35°	1100	1113	1139	1168	1177	689
45°	912	930	976	1023	1042	702
55°	690	720	796	872	899	615
65°	443	494	610	699	730	438
75°	192	280	406	482	492	207
85°	37	81	99	110	112	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1418.9	1418.9	1418.9	1418.9	1418.9
2.5°	1420.7	1418.9	1411.6	1418.9	1418.9
5°	1415.2	1415.2	1409.7	1415.2	1415.2
7.5°	1406.1	1406.1	1402.4	1409.7	1409.7
10°	1395.1	1395.1	1393.3	1402.4	1402.4
12.5°	1378.6	1380.5	1378.6	1389.6	1389.6
15°	1360.3	1362.1	1364.0	1376.8	1376.8
17.5°	1336.5	1340.2	1343.8	1358.5	1360.3
20°	1314.5	1316.4	1323.7	1340.2	1342.0
22.5°	1285.2	1290.7	1299.9	1316.4	1321.9
25°	1252.3	1259.6	1270.6	1292.6	1296.2
27.5°	1221.2	1226.7	1241.3	1265.1	1272.4
30°	1182.7	1191.9	1210.2	1234.0	1243.1
32.5°	1146.1	1155.3	1177.2	1202.9	1210.2
35°	1100.3	1113.1	1138.8	1168.1	1177.2
37.5°	1056.4	1069.2	1100.3	1133.3	1144.3
40°	1010.6	1025.3	1058.2	1096.7	1111.3
42.5°	961.2	981.3	1017.9	1060.1	1076.5
45°	911.8	930.1	975.8	1023.4	1041.7
47.5°	858.7	880.6	930.1	986.8	1008.8
50°	801.9	829.4	886.1	948.4	972.2
52.5°	745.2	776.3	840.4	909.9	935.6
55°	690.2	719.5	796.4	871.5	898.9
57.5°	629.8	666.4	750.6	831.2	858.7
60°	567.6	607.8	704.9	789.1	818.4
62.5°	505.3	551.1	660.9	745.2	776.3
65°	443.1	494.3	609.7	699.4	730.5
67.5°	382.6	439.4	562.1	651.8	682.9
70°	313.1	384.5	510.8	598.7	629.8
72.5°	249.0	331.4	461.4	543.8	571.2
75°	192.2	280.1	406.4	481.5	492.5
77.5°	141.0	228.9	349.7	375.3	377.2
80°	95.2	183.1	267.3	263.6	267.3
82.5°	62.2	137.3	168.4	188.6	190.4
85°	36.6	80.6	98.9	109.9	111.7
87.5°	18.3	27.5	34.8	36.6	40.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)