

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: P295073

Luminaire Tested: **24CZ2-65-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: P295073
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: 24CZ2-65-HRP-UNV-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (112) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

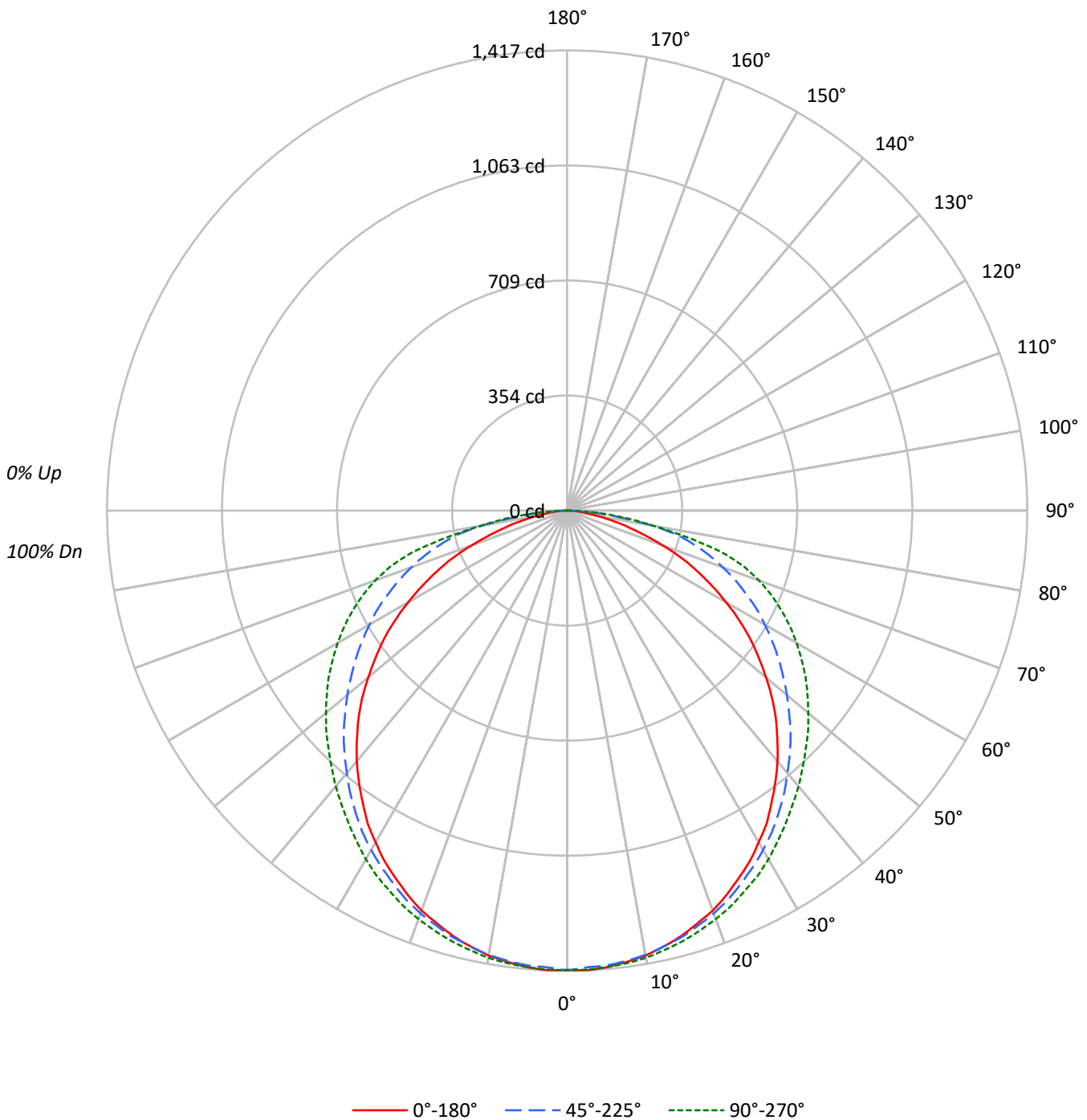
Lumens per Lamp: N/A
Luminaire Lumens: 4361.2 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 62.8
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°	1904	1904	1904
5°	1906	1899	1906
10°	1901	1898	1911
15°	1890	1895	1913
20°	1877	1890	1916
25°	1854	1881	1919
30°	1833	1875	1926
35°	1802	1865	1928
40°	1770	1854	1947
45°	1730	1852	1977
50°	1674	1850	2029
55°	1615	1863	2103
60°	1523	1891	2196
65°	1407	1936	2319
70°	1228	2004	2471
75°	997	2107	2553
80°	735	2066	2066
85°	563	1522	1720



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.0	3.1
10°-20°	384.9	8.8
20°-30°	586.0	13.4
30°-40°	711.6	16.3
40°-50°	751.7	17.2
50°-60°	709.3	16.3
60°-70°	589.8	13.5
70°-80°	388.0	8.9
80°-90°	105.8	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°	1105.0	25.3
0°-40°	1816.5	41.7
0°-60°	3277.6	75.2
0°-90°	4361.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4361.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1415	1415	1415	1415	1415	
5°	1411	1411	1406	1411	1411	134
15°	1357	1358	1360	1373	1373	383
25°	1249	1256	1267	1289	1293	576
35°	1097	1110	1136	1165	1174	687
45°	909	928	973	1021	1039	700
55°	688	718	794	869	896	613
65°	442	493	608	698	728	437
75°	192	279	405	480	491	207
85°	36	80	99	110	111	45
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1415.0	1415.0	1415.0	1415.0	1415.0
2.5°	1416.8	1415.0	1407.7	1415.0	1415.0
5°	1411.3	1411.3	1405.9	1411.3	1411.3
7.5°	1402.2	1402.2	1398.6	1405.9	1405.9
10°	1391.3	1391.3	1389.4	1398.6	1398.6
12.5°	1374.8	1376.7	1374.8	1385.8	1385.8
15°	1356.6	1358.4	1360.2	1373.0	1373.0
17.5°	1332.8	1336.5	1340.1	1354.7	1356.6
20°	1310.9	1312.8	1320.1	1336.5	1338.3
22.5°	1281.7	1287.2	1296.3	1312.8	1318.2
25°	1248.9	1256.2	1267.1	1289.0	1292.7
27.5°	1217.8	1223.3	1237.9	1261.6	1268.9
30°	1179.5	1188.6	1206.9	1230.6	1239.7
32.5°	1143.0	1152.1	1174.0	1199.6	1206.9
35°	1097.3	1110.1	1135.7	1164.9	1174.0
37.5°	1053.5	1066.3	1097.3	1130.2	1141.1
40°	1007.8	1022.5	1055.3	1093.7	1108.3
42.5°	958.5	978.6	1015.1	1057.1	1073.6
45°	909.3	927.5	973.2	1020.6	1038.9
47.5°	856.3	878.2	927.5	984.1	1006.0
50°	799.7	827.1	883.7	945.8	969.5
52.5°	743.1	774.1	838.0	907.4	933.0
55°	688.3	717.5	794.2	869.1	896.5
57.5°	628.1	664.6	748.6	828.9	856.3
60°	566.0	606.2	702.9	786.9	816.1
62.5°	503.9	549.6	659.1	743.1	774.1
65°	441.8	493.0	608.0	697.5	728.5
67.5°	381.6	438.2	560.5	650.0	681.0
70°	312.2	383.4	509.4	597.0	628.1
72.5°	248.3	330.5	460.1	542.3	569.7
75°	191.7	279.3	405.3	480.2	491.1
77.5°	140.6	228.2	348.7	374.3	376.1
80°	94.9	182.6	266.6	262.9	266.6
82.5°	62.1	136.9	168.0	188.1	189.9
85°	36.5	80.3	98.6	109.5	111.4
87.5°	18.3	27.4	34.7	36.5	40.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)