

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: P184161

Luminaire Tested: **24FR-30-HP-UNV-L840-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P184161
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27148)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24FR-30-HP-UNV-L840-CD1-U
Description: METALUX 2X4 FR TROFFER LED HIGH EFFICIENCY FIXTURE

Light Source: EATON LED 4000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

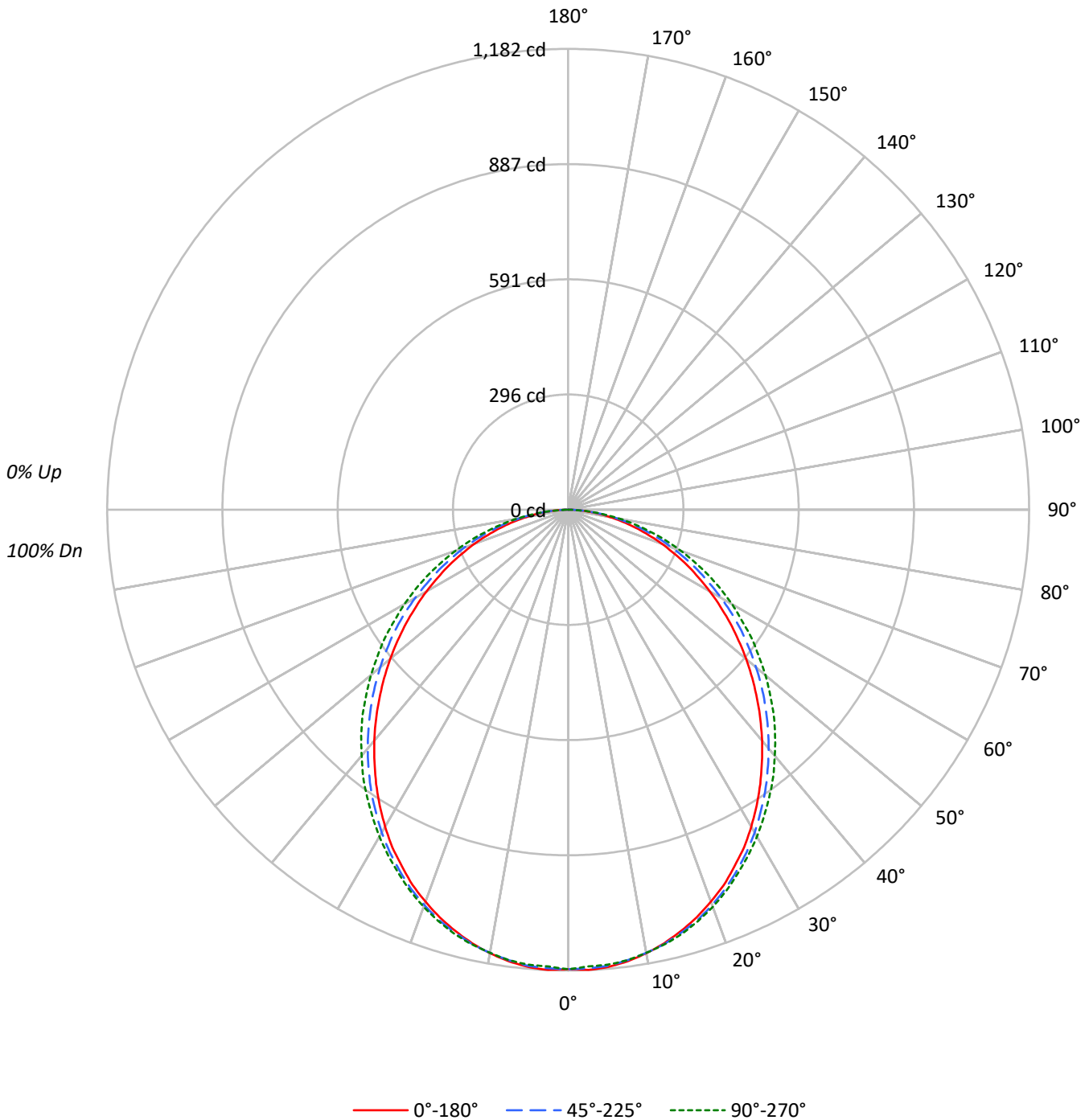
Lumens per Lamp: N/A
Luminaire Lumens: 3116.1 lumens
Efficiency: N/A
Efficacy: 136.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.22 / 1.32
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (A_{in}): 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	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	65	61	59
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1586	1586	1586
5°	1590	1586	1582
10°	1578	1577	1577
15°	1558	1564	1569
20°	1532	1545	1552
25°	1498	1517	1528
30°	1459	1485	1504
35°	1410	1447	1477
40°	1358	1404	1447
45°	1303	1361	1419
50°	1246	1316	1382
55°	1189	1273	1346
60°	1129	1219	1307
65°	1071	1165	1261
70°	1003	1111	1207
75°	930	1051	1135
80°	850	976	1039
85°	769	831	831



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.3	3.6
10°-20°	316.1	10.1
20°-30°	469.3	15.1
30°-40°	549.2	17.6
40°-50°	551.2	17.7
50°-60°	482.8	15.5
60°-70°	362.4	11.6
70°-80°	213.0	6.8
80°-90°	60.7	1.9
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°	896.7	28.8
0°-40°	1446.0	46.4
0°-60°	2480.0	79.6
0°-90°	3116.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3116.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1179	1179	1179	1179	1179	
5°	1178	1169	1174	1172	1171	112
15°	1119	1114	1123	1126	1127	315
25°	1009	1009	1022	1025	1029	465
35°	858	862	881	892	899	537
45°	685	693	715	735	746	528
55°	507	516	542	562	574	453
65°	336	345	366	385	396	333
75°	179	189	202	212	218	190
85°	50	53	54	54	54	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1178.6	1178.6	1178.6	1178.6	1178.6
2.5°	1181.6	1174.5	1177.5	1176.5	1172.5
5°	1177.5	1169.4	1174.5	1172.5	1171.4
7.5°	1168.4	1160.3	1165.3	1165.3	1165.3
10°	1155.2	1149.1	1154.2	1154.2	1154.2
12.5°	1138.9	1133.9	1141.0	1142.0	1142.0
15°	1118.6	1114.5	1122.7	1125.7	1126.7
17.5°	1096.3	1093.2	1103.4	1106.4	1106.4
20°	1069.8	1067.8	1079.0	1082.0	1084.1
22.5°	1042.4	1039.4	1052.6	1054.6	1058.7
25°	1008.9	1008.9	1022.1	1025.1	1029.2
27.5°	976.4	975.4	990.6	995.7	999.7
30°	938.8	938.8	956.1	963.2	968.2
32.5°	899.2	902.2	918.5	927.6	933.7
35°	858.5	861.6	880.9	892.0	899.2
37.5°	815.8	820.9	840.2	854.5	863.6
40°	773.2	780.3	799.6	815.8	824.0
42.5°	729.5	735.6	757.9	776.2	785.4
45°	684.8	692.9	715.3	734.6	745.7
47.5°	640.1	650.2	672.6	693.9	702.1
50°	595.4	604.5	628.9	650.2	660.4
52.5°	550.7	559.8	585.2	605.5	615.7
55°	507.0	516.1	542.5	561.8	574.0
57.5°	462.3	472.4	497.8	518.2	527.3
60°	419.6	428.8	453.1	473.5	485.6
62.5°	376.9	387.1	408.4	429.8	440.9
65°	336.3	345.4	365.8	385.1	396.2
67.5°	294.6	305.8	323.1	342.4	350.5
70°	255.0	267.2	282.4	298.7	306.8
72.5°	216.4	227.6	241.8	255.0	262.1
75°	178.8	189.0	202.2	212.3	218.4
77.5°	143.3	154.4	163.6	172.7	175.8
80°	109.7	118.9	126.0	132.1	134.1
82.5°	79.2	85.3	88.4	93.5	94.5
85°	49.8	52.8	53.8	53.8	53.8
87.5°	21.3	22.4	20.3	16.3	15.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)