

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: FAIL-SAFE

Report Number: P309347

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-HRP-CP187-W2A-U-2700K**

Issue Date: 3/3/2020

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: P309347
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-40HE-UNV-L82765-HRP-CP187-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 2700K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2425.0 lumens
Efficiency: N/A
Efficacy: 79.8 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

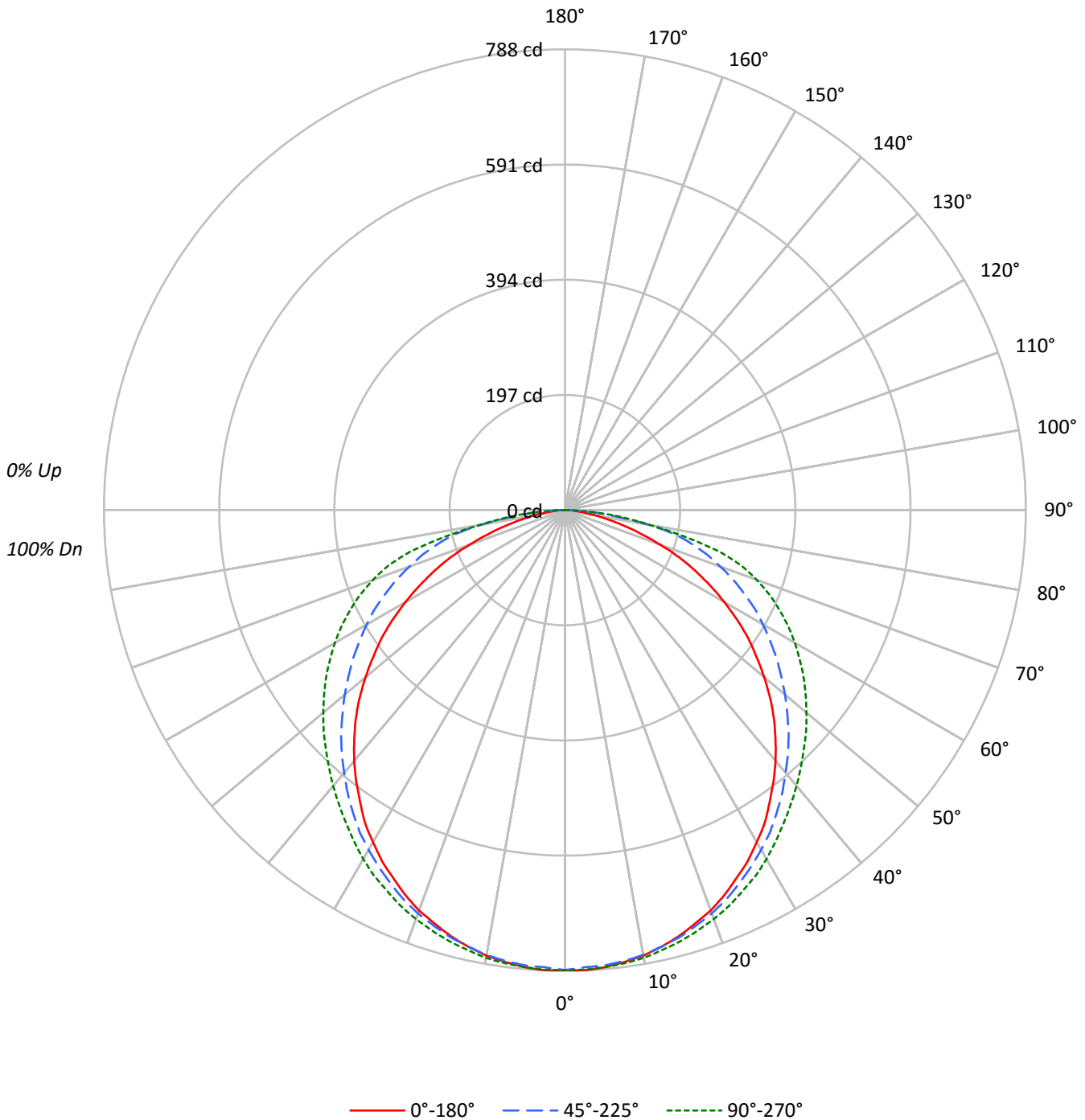
Input Watts (W): 30.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1059	1059	1059
5°	1060	1056	1060
10°	1057	1056	1063
15°	1051	1053	1063
20°	1044	1051	1066
25°	1031	1046	1067
30°	1019	1043	1071
35°	1002	1037	1072
40°	984	1031	1082
45°	962	1030	1099
50°	931	1029	1128
55°	898	1036	1169
60°	847	1052	1221
65°	782	1076	1290
70°	683	1114	1374
75°	554	1172	1420
80°	409	1148	1148
85°	313	846	956



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.5	3.1
10°-20°	214.0	8.8
20°-30°	325.8	13.4
30°-40°	395.6	16.3
40°-50°	418.0	17.2
50°-60°	394.4	16.3
60°-70°	328.0	13.5
70°-80°	215.8	8.9
80°-90°	58.8	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°	614.4	25.3
0°-40°	1010.1	41.7
0°-60°	1822.5	75.2
0°-90°	2425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2425.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	787	787	787	787	787	
5°	785	785	782	785	785	75
15°	754	755	756	763	763	213
25°	694	698	705	717	719	320
35°	610	617	632	648	653	382
45°	506	516	541	568	578	389
55°	383	399	442	483	498	341
65°	246	274	338	388	405	243
75°	107	155	225	267	273	115
85°	20	45	55	61	62	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	786.8	786.8	786.8	786.8	786.8
2.5°	787.8	786.8	782.7	786.8	786.8
5°	784.8	784.8	781.7	784.8	784.8
7.5°	779.7	779.7	777.7	781.7	781.7
10°	773.6	773.6	772.6	777.7	777.7
12.5°	764.5	765.5	764.5	770.5	770.5
15°	754.3	755.3	756.3	763.4	763.4
17.5°	741.1	743.1	745.2	753.3	754.3
20°	728.9	729.9	734.0	743.1	744.2
22.5°	712.7	715.7	720.8	729.9	733.0
25°	694.4	698.5	704.6	716.7	718.8
27.5°	677.1	680.2	688.3	701.5	705.6
30°	655.8	660.9	671.1	684.3	689.3
32.5°	635.5	640.6	652.8	667.0	671.1
35°	610.1	617.3	631.5	647.7	652.8
37.5°	585.8	592.9	610.1	628.4	634.5
40°	560.4	568.5	586.8	608.1	616.2
42.5°	533.0	544.2	564.5	587.8	596.9
45°	505.6	515.7	541.1	567.5	577.7
47.5°	476.1	488.3	515.7	547.2	559.4
50°	444.7	459.9	491.4	525.9	539.1
52.5°	413.2	430.5	466.0	504.6	518.8
55°	382.7	399.0	441.6	483.2	498.5
57.5°	349.2	369.5	416.2	460.9	476.1
60°	314.7	337.1	390.9	437.6	453.8
62.5°	280.2	305.6	366.5	413.2	430.5
65°	245.7	274.1	338.1	387.8	405.1
67.5°	212.2	243.7	311.7	361.4	378.7
70°	173.6	213.2	283.2	332.0	349.2
72.5°	138.1	183.8	255.8	301.5	316.7
75°	106.6	155.3	225.4	267.0	273.1
77.5°	78.2	126.9	193.9	208.1	209.1
80°	52.8	101.5	148.2	146.2	148.2
82.5°	34.5	76.1	93.4	104.6	105.6
85°	20.3	44.7	54.8	60.9	61.9
87.5°	10.2	15.2	19.3	20.3	22.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)