

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: P313175

Luminaire Tested: **24FCZ2-40-UNV-L83050-HRP-CP125-W2A-U-3000K**

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: P313175
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: 24FCZ2-40-UNV-L83050-HRP-CP125-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125"
POLYCARB SHEET
Light Source: (168) 3000K 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: 2654.0 lumens
Efficiency: N/A
Efficacy: 81.4 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

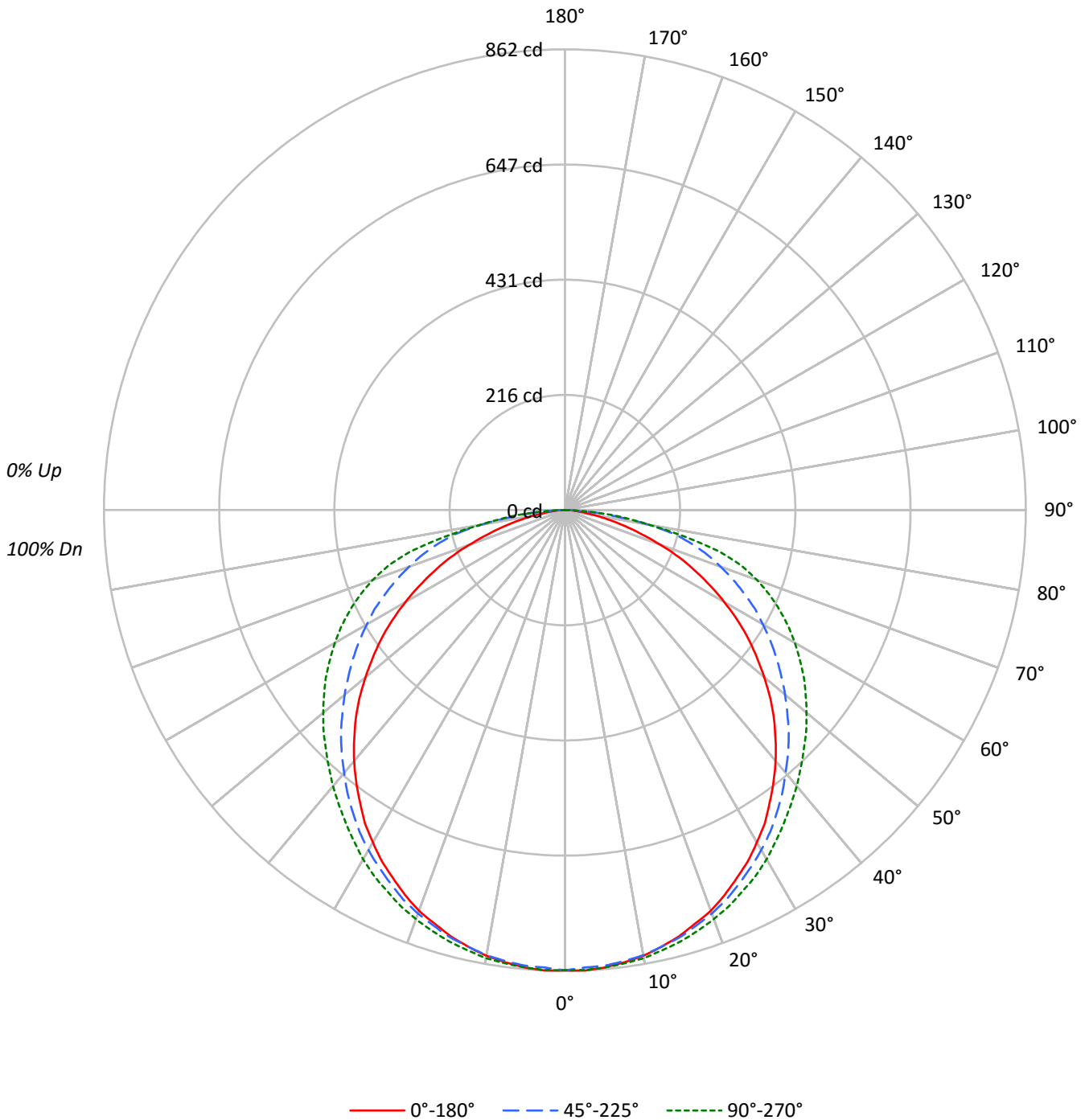
Input Watts (W): 32.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1159	1159	1159
5°	1160	1155	1160
10°	1157	1155	1163
15°	1150	1153	1164
20°	1142	1150	1166
25°	1128	1145	1168
30°	1115	1141	1172
35°	1097	1135	1173
40°	1077	1128	1185
45°	1053	1127	1203
50°	1019	1126	1235
55°	983	1134	1280
60°	927	1151	1337
65°	856	1178	1411
70°	747	1220	1504
75°	607	1282	1554
80°	448	1257	1257
85°	343	926	1047



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.6	3.1
10°-20°	234.2	8.8
20°-30°	356.6	13.4
30°-40°	433.0	16.3
40°-50°	457.5	17.2
50°-60°	431.7	16.3
60°-70°	358.9	13.5
70°-80°	236.1	8.9
80°-90°	64.4	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°	672.4	25.3
0°-40°	1105.4	41.7
0°-60°	1994.6	75.2
0°-90°	2654.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2654.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	859	859	856	859	859	82
15°	826	827	828	836	836	233
25°	760	764	771	784	787	351
35°	668	676	691	709	714	418
45°	553	564	592	621	632	426
55°	419	437	483	529	546	373
65°	269	300	370	424	443	266
75°	117	170	247	292	299	126
85°	22	49	60	67	68	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	861.1	861.1	861.1	861.1	861.1
2.5°	862.2	861.1	856.6	861.1	861.1
5°	858.9	858.9	855.5	858.9	858.9
7.5°	853.3	853.3	851.1	855.5	855.5
10°	846.6	846.6	845.5	851.1	851.1
12.5°	836.6	837.8	836.6	843.3	843.3
15°	825.5	826.6	827.8	835.5	835.5
17.5°	811.1	813.3	815.5	824.4	825.5
20°	797.8	798.9	803.3	813.3	814.4
22.5°	780.0	783.3	788.9	798.9	802.2
25°	760.0	764.4	771.1	784.4	786.6
27.5°	741.1	744.4	753.3	767.8	772.2
30°	717.8	723.3	734.4	748.9	754.4
32.5°	695.5	701.1	714.4	730.0	734.4
35°	667.8	675.5	691.1	708.9	714.4
37.5°	641.1	648.9	667.8	687.8	694.4
40°	613.3	622.2	642.2	665.5	674.4
42.5°	583.3	595.5	617.8	643.3	653.3
45°	553.3	564.4	592.2	621.1	632.2
47.5°	521.1	534.4	564.4	598.9	612.2
50°	486.7	503.3	537.8	575.5	590.0
52.5°	452.2	471.1	510.0	552.2	567.8
55°	418.9	436.7	483.3	528.9	545.5
57.5°	382.2	404.4	455.5	504.4	521.1
60°	344.4	368.9	427.8	478.9	496.7
62.5°	306.7	334.4	401.1	452.2	471.1
65°	268.9	300.0	370.0	424.4	443.3
67.5°	232.2	266.7	341.1	395.5	414.4
70°	190.0	233.3	310.0	363.3	382.2
72.5°	151.1	201.1	280.0	330.0	346.7
75°	116.7	170.0	246.7	292.2	298.9
77.5°	85.6	138.9	212.2	227.8	228.9
80°	57.8	111.1	162.2	160.0	162.2
82.5°	37.8	83.3	102.2	114.4	115.6
85°	22.2	48.9	60.0	66.7	67.8
87.5°	11.1	16.7	21.1	22.2	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)