

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: P313639

Luminaire Tested: **24FCZ2-50HE-UNV-L83050-RDP-CP250-W2A-U-5000K**

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: P313639
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-50HE-UNV-L83050-RDP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 5000K 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: 3040.0 lumens
Efficiency: N/A
Efficacy: 75.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

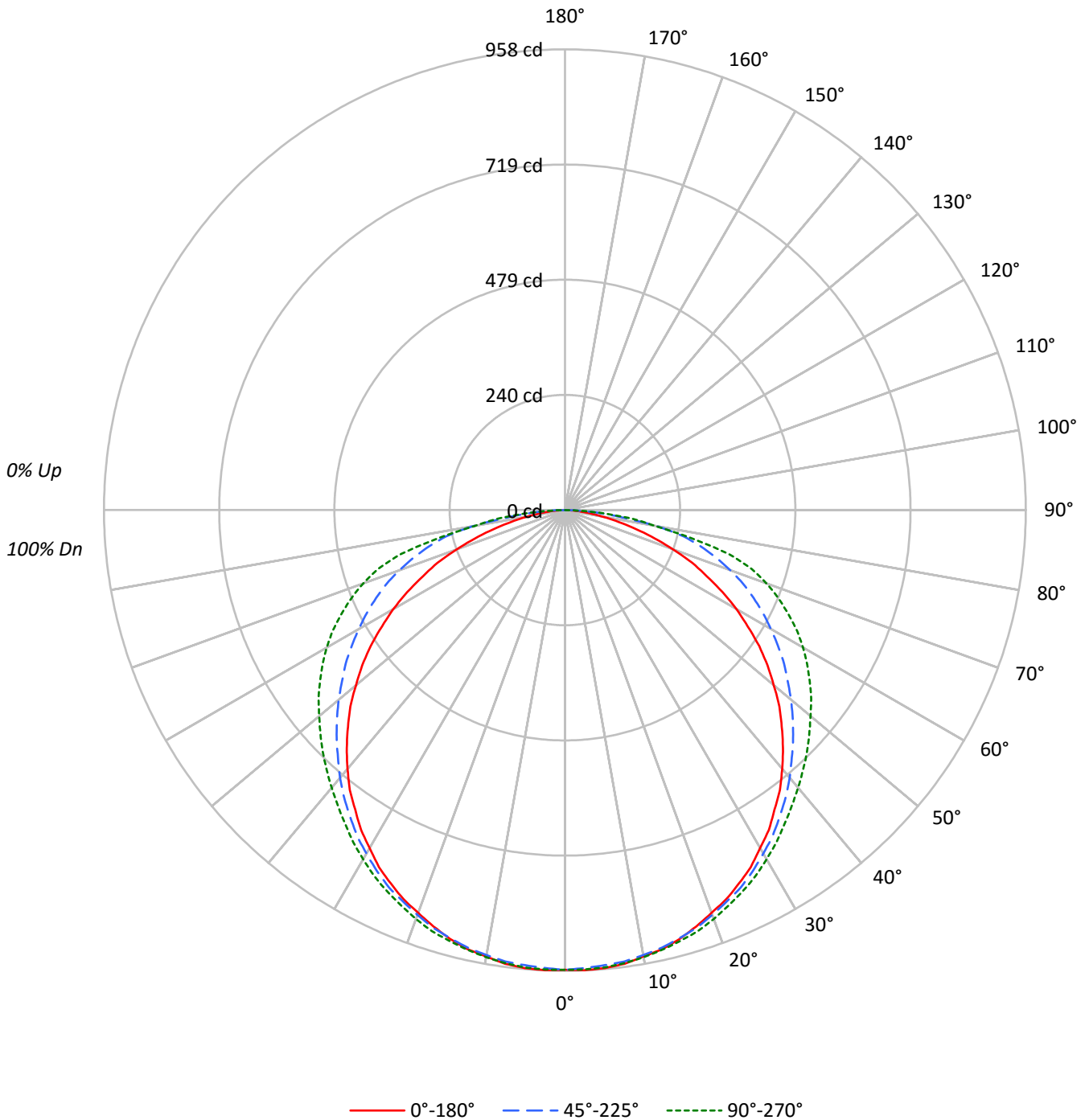
Input Watts (W): 40.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1286	1286	1286
5°	1291	1283	1289
10°	1288	1283	1290
15°	1285	1283	1292
20°	1276	1282	1295
25°	1272	1285	1298
30°	1260	1281	1303
35°	1248	1278	1308
40°	1234	1277	1324
45°	1214	1277	1354
50°	1187	1285	1395
55°	1157	1305	1457
60°	1108	1331	1538
65°	1037	1378	1632
70°	943	1441	1756
75°	800	1521	1834
80°	631	1530	1484
85°	466	1164	1303



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	3.0
10°-20°	261.0	8.6
20°-30°	399.1	13.1
30°-40°	487.9	16.0
40°-50°	520.0	17.1
50°-60°	497.2	16.4
60°-70°	421.2	13.9
70°-80°	283.1	9.3
80°-90°	79.8	2.6
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°	750.8	24.7
0°-40°	1238.7	40.7
0°-60°	2255.9	74.2
0°-90°	3040.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3040.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	956	956	956	956	956	
5°	956	954	950	954	954	91
15°	923	923	921	929	927	260
25°	856	860	866	873	875	395
35°	760	766	778	793	796	476
45°	638	648	671	700	712	492
55°	493	511	556	600	621	439
65°	326	359	433	490	513	323
75°	154	210	292	342	353	165
85°	30	62	75	81	84	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	956.0	956.0	956.0	956.0	956.0
2.5°	957.5	957.5	953.0	956.0	956.0
5°	956.0	954.5	950.0	954.5	954.5
7.5°	951.5	950.0	946.9	951.5	950.0
10°	942.4	942.4	939.4	943.9	943.9
12.5°	934.9	933.4	931.9	937.9	936.4
15°	922.8	922.8	921.3	928.9	927.3
17.5°	907.7	909.2	910.8	916.8	918.3
20°	891.2	894.2	895.7	904.7	904.7
22.5°	876.1	877.6	880.6	889.6	889.6
25°	856.5	859.5	865.5	873.1	874.6
27.5°	836.9	838.4	845.9	856.5	858.0
30°	811.2	815.8	824.8	836.9	838.4
32.5°	788.6	793.1	803.7	815.8	818.8
35°	760.0	766.0	778.1	793.1	796.2
37.5°	734.3	738.9	753.9	770.5	775.0
40°	702.7	711.7	726.8	746.4	753.9
42.5°	671.0	680.1	698.1	723.8	732.8
45°	637.8	648.4	671.0	699.7	711.7
47.5°	604.7	616.7	642.4	675.5	689.1
50°	567.0	582.0	613.7	651.4	666.5
52.5°	530.8	548.9	583.5	625.8	645.4
55°	493.1	511.2	556.4	600.1	621.2
57.5°	450.9	475.0	524.7	574.5	597.1
60°	411.7	434.3	494.6	548.9	571.5
62.5°	369.4	399.6	464.4	521.7	544.3
65°	325.7	358.9	432.8	490.1	512.7
67.5°	286.5	322.7	401.1	458.4	481.0
70°	239.8	285.0	366.4	423.7	446.3
72.5°	196.0	245.8	330.2	386.0	407.1
75°	153.8	209.6	292.5	342.3	352.8
77.5°	114.6	173.4	253.3	274.4	266.9
80°	81.4	138.7	197.5	187.0	191.5
82.5°	52.8	105.6	122.1	138.7	143.2
85°	30.2	61.8	75.4	81.4	84.4
87.5°	13.6	22.6	30.2	30.2	28.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)