

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: P313740

Luminaire Tested: **24FCZ2-70HE-UNV-L83050-RDP-CA08-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: P313740
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: 24FCZ2-70HE-UNV-L83050-RDP-CA08-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC SHEET
Light Source: (336) 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: 4097.0 lumens
Efficiency: N/A
Efficacy: 71.1 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

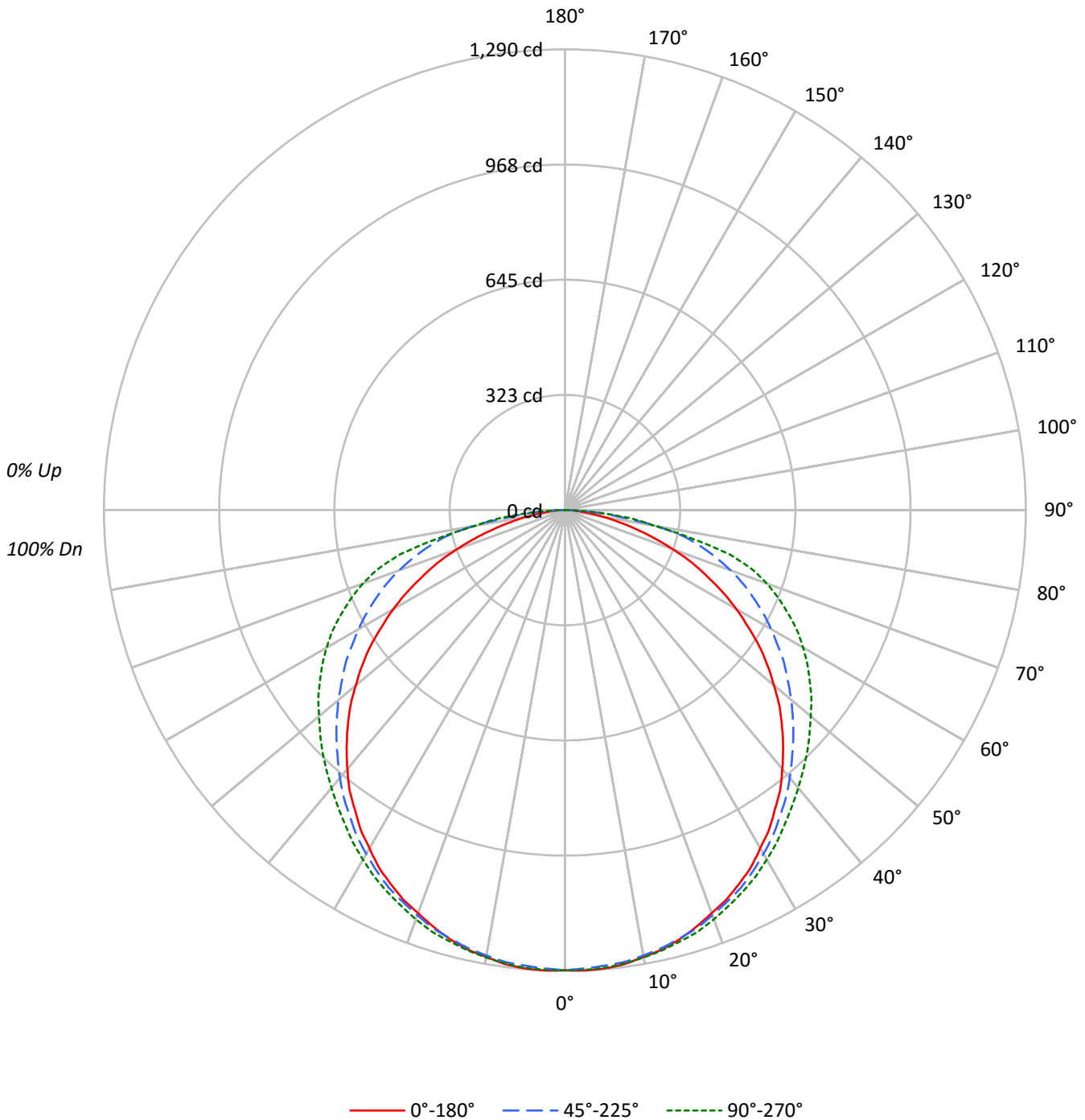
Input Watts (W): 57.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1734	1734	1734
5°	1740	1729	1737
10°	1735	1730	1738
15°	1732	1729	1741
20°	1720	1728	1746
25°	1714	1732	1750
30°	1699	1727	1755
35°	1682	1722	1762
40°	1663	1720	1785
45°	1636	1721	1825
50°	1599	1731	1880
55°	1559	1759	1964
60°	1493	1794	2073
65°	1397	1857	2200
70°	1271	1943	2366
75°	1078	2049	2472
80°	850	2063	2000
85°	627	1568	1757



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	3.0
10°-20°	351.7	8.6
20°-30°	537.9	13.1
30°-40°	657.5	16.0
40°-50°	700.8	17.1
50°-60°	670.1	16.4
60°-70°	567.6	13.9
70°-80°	381.5	9.3
80°-90°	107.6	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°	1011.8	24.7
0°-40°	1669.4	40.7
0°-60°	3040.3	74.2
0°-90°	4097.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4097.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1288	1288	1288	1288	1288	
5°	1288	1286	1280	1286	1286	122
15°	1244	1244	1242	1252	1250	351
25°	1154	1158	1166	1177	1179	532
35°	1024	1032	1049	1069	1073	642
45°	860	874	904	943	959	663
55°	664	689	750	809	837	592
65°	439	484	583	660	691	436
75°	207	282	394	461	476	222
85°	41	83	102	110	114	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1288.4	1288.4	1288.4	1288.4	1288.4
2.5°	1290.4	1290.4	1284.3	1288.4	1288.4
5°	1288.4	1286.4	1280.3	1286.4	1286.4
7.5°	1282.3	1280.3	1276.2	1282.3	1280.3
10°	1270.1	1270.1	1266.0	1272.1	1272.1
12.5°	1259.9	1257.9	1255.9	1264.0	1262.0
15°	1243.7	1243.7	1241.6	1251.8	1249.8
17.5°	1223.4	1225.4	1227.4	1235.6	1237.6
20°	1201.0	1205.1	1207.1	1219.3	1219.3
22.5°	1180.7	1182.7	1186.8	1199.0	1199.0
25°	1154.3	1158.3	1166.5	1176.6	1178.7
27.5°	1127.8	1129.9	1140.0	1154.3	1156.3
30°	1093.3	1099.4	1111.6	1127.8	1129.9
32.5°	1062.8	1068.9	1083.1	1099.4	1103.5
35°	1024.2	1032.3	1048.6	1068.9	1073.0
37.5°	989.7	995.8	1016.1	1038.4	1044.5
40°	947.0	959.2	979.5	1005.9	1016.1
42.5°	904.3	916.5	940.9	975.4	987.6
45°	859.6	873.8	904.3	942.9	959.2
47.5°	814.9	831.2	865.7	910.4	928.7
50°	764.1	784.4	827.1	877.9	898.2
52.5°	715.3	739.7	786.4	843.3	869.8
55°	664.5	688.9	749.9	808.8	837.2
57.5°	607.6	640.1	707.2	774.3	804.7
60°	554.8	585.3	666.5	739.7	770.2
62.5°	497.9	538.5	625.9	703.1	733.6
65°	438.9	483.7	583.2	660.5	690.9
67.5°	386.1	434.9	540.6	617.8	648.3
70°	323.1	384.1	493.8	571.0	601.5
72.5°	264.2	331.2	445.0	520.2	548.7
75°	207.3	282.5	394.2	461.3	475.5
77.5°	154.4	233.7	341.4	369.9	359.7
80°	109.7	187.0	266.2	252.0	258.1
82.5°	71.1	142.3	164.6	187.0	193.1
85°	40.6	83.3	101.6	109.7	113.8
87.5°	18.3	30.5	40.6	40.6	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)