

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: P310415

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CA125-W2A-U-5500K**

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: P310415
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-L82765-RDP-CA125-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" ACRYLIC SHEET
Light Source: (336) 5500K 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: 4492.0 lumens
Efficiency: N/A
Efficacy: 75.8 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

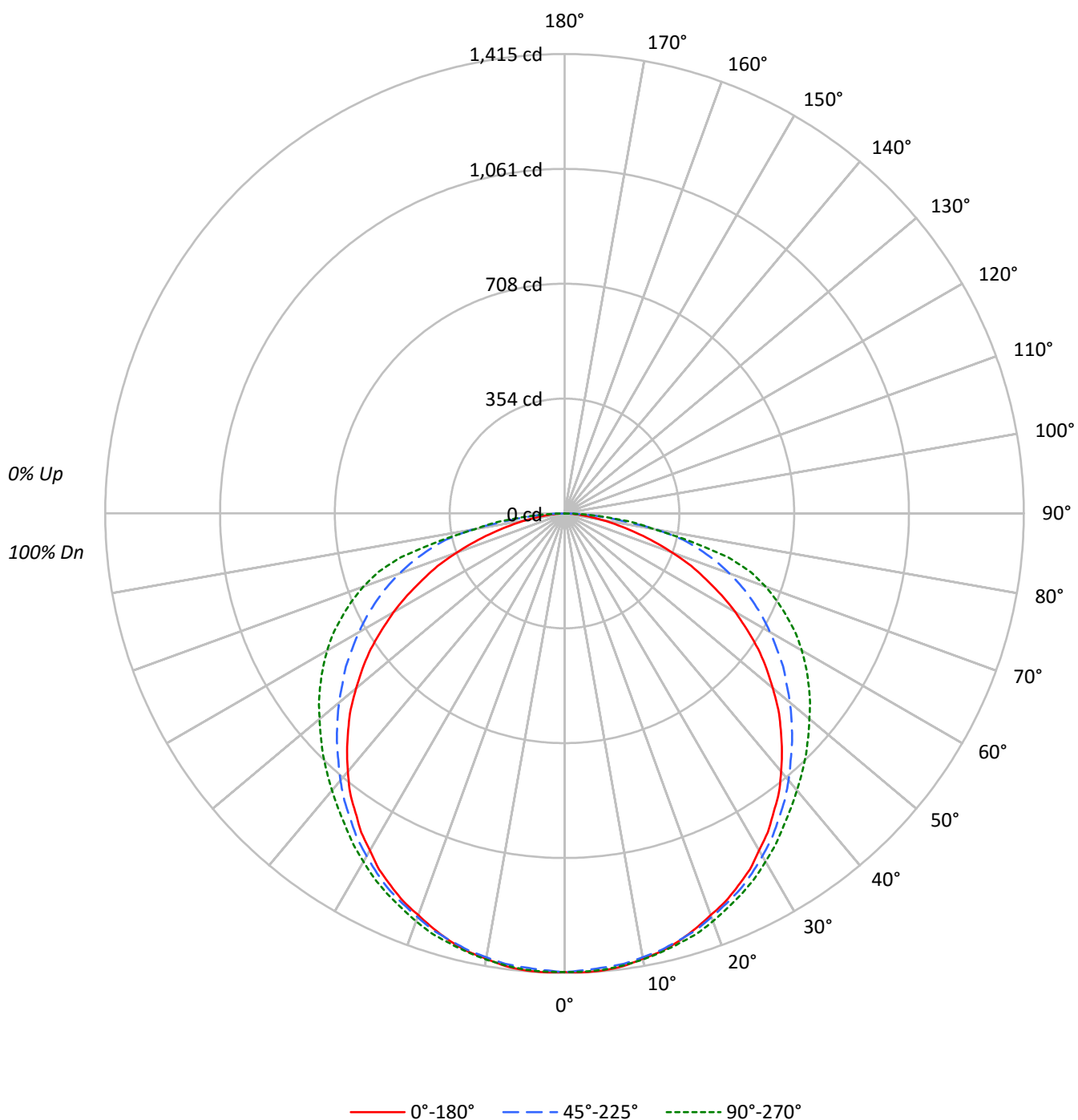
Input Watts (W): 59.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	1901	1901	1901
5°	1908	1896	1905
10°	1903	1896	1906
15°	1899	1896	1909
20°	1885	1895	1914
25°	1879	1899	1919
30°	1862	1894	1925
35°	1845	1888	1932
40°	1824	1886	1957
45°	1793	1887	2001
50°	1754	1898	2061
55°	1709	1929	2153
60°	1637	1967	2272
65°	1532	2036	2412
70°	1394	2130	2594
75°	1182	2247	2711
80°	932	2262	2193
85°	689	1720	1927



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.0	3.0
10°-20°	385.7	8.6
20°-30°	589.7	13.1
30°-40°	721.0	16.0
40°-50°	768.4	17.1
50°-60°	734.7	16.4
60°-70°	622.4	13.9
70°-80°	418.3	9.3
80°-90°	118.0	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°	1109.4	24.7
0°-40°	1830.3	40.7
0°-60°	3333.4	74.2
0°-90°	4492.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4492.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1413	1413	1413	1413	1413	
5°	1413	1410	1404	1410	1410	134
15°	1364	1364	1361	1372	1370	384
25°	1266	1270	1279	1290	1292	583
35°	1123	1132	1150	1172	1176	703
45°	942	958	992	1034	1052	727
55°	729	755	822	887	918	649
65°	481	530	640	724	758	478
75°	227	310	432	506	521	243
85°	45	91	111	120	125	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1412.6	1412.6	1412.6	1412.6	1412.6
2.5°	1414.8	1414.8	1408.1	1412.6	1412.6
5°	1412.6	1410.4	1403.7	1410.4	1410.4
7.5°	1405.9	1403.7	1399.2	1405.9	1403.7
10°	1392.6	1392.6	1388.1	1394.8	1394.8
12.5°	1381.4	1379.2	1377.0	1385.9	1383.6
15°	1363.6	1363.6	1361.4	1372.5	1370.3
17.5°	1341.3	1343.5	1345.8	1354.7	1356.9
20°	1316.8	1321.3	1323.5	1336.9	1336.9
22.5°	1294.5	1296.7	1301.2	1314.6	1314.6
25°	1265.6	1270.0	1278.9	1290.1	1292.3
27.5°	1236.6	1238.8	1250.0	1265.6	1267.8
30°	1198.7	1205.4	1218.8	1236.6	1238.8
32.5°	1165.3	1172.0	1187.6	1205.4	1209.9
35°	1123.0	1131.9	1149.7	1172.0	1176.4
37.5°	1085.1	1091.8	1114.0	1138.6	1145.2
40°	1038.3	1051.7	1073.9	1102.9	1114.0
42.5°	991.5	1004.9	1031.6	1069.5	1082.8
45°	942.5	958.1	991.5	1033.8	1051.7
47.5°	893.5	911.3	949.2	998.2	1018.2
50°	837.8	860.0	906.8	962.5	984.8
52.5°	784.3	811.0	862.3	924.7	953.6
55°	728.6	755.3	822.2	886.8	918.0
57.5°	666.2	701.8	775.4	848.9	882.3
60°	608.3	641.7	730.8	811.0	844.4
62.5°	545.9	590.4	686.3	770.9	804.3
65°	481.3	530.3	639.5	724.1	757.5
67.5°	423.3	476.8	592.7	677.3	710.8
70°	354.3	421.1	541.4	626.1	659.5
72.5°	289.7	363.2	488.0	570.4	601.6
75°	227.3	309.7	432.2	505.8	521.4
77.5°	169.3	256.2	374.3	405.5	394.4
80°	120.3	205.0	291.9	276.3	283.0
82.5°	78.0	156.0	180.5	205.0	211.7
85°	44.6	91.4	111.4	120.3	124.8
87.5°	20.1	33.4	44.6	44.6	42.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)