

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: P310476

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CP187-W2A-U-4500K**

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: P310476
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: 24FCZ2-75HE-UNV-L82765-RDP-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (336) 4500K 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: 4406.0 lumens
Efficiency: N/A
Efficacy: 68.8 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

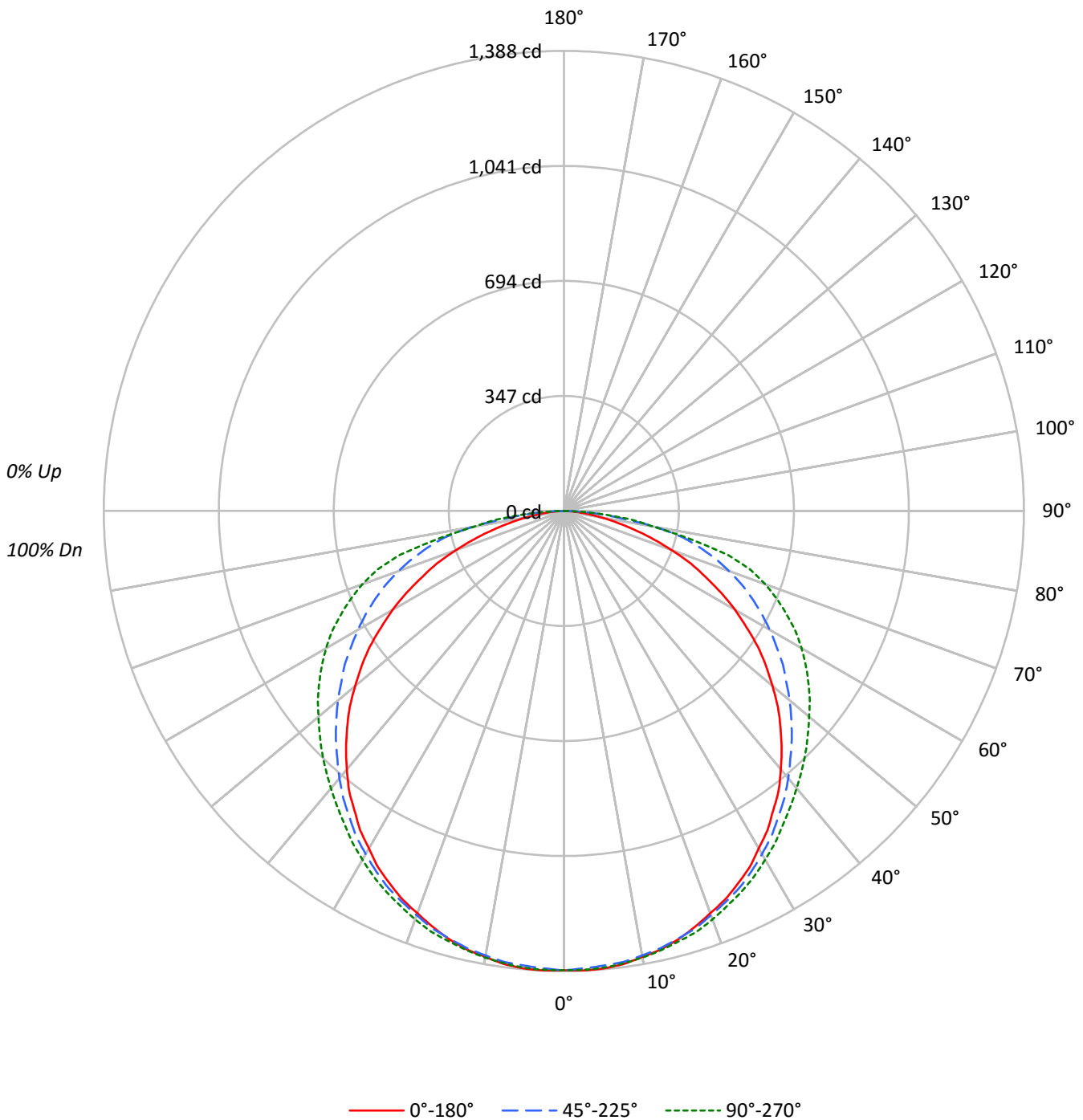
Input Watts (W): 64
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1864	1864	1864
5°	1871	1860	1868
10°	1866	1860	1869
15°	1863	1860	1872
20°	1849	1859	1878
25°	1843	1862	1882
30°	1827	1857	1888
35°	1809	1852	1895
40°	1789	1850	1919
45°	1759	1850	1963
50°	1720	1862	2022
55°	1676	1892	2112
60°	1605	1929	2229
65°	1503	1997	2365
70°	1367	2089	2545
75°	1159	2204	2659
80°	914	2218	2150
85°	675	1687	1890



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.4	3.0
10°-20°	378.3	8.6
20°-30°	578.4	13.1
30°-40°	707.1	16.0
40°-50°	753.7	17.1
50°-60°	720.6	16.4
60°-70°	610.4	13.9
70°-80°	410.3	9.3
80°-90°	115.7	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°	1088.1	24.7
0°-40°	1795.3	40.7
0°-60°	3269.6	74.2
0°-90°	4406.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4406.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1386	1386	1386	1386	1386	
5°	1386	1383	1377	1383	1383	132
15°	1338	1338	1335	1346	1344	377
25°	1241	1246	1254	1265	1268	572
35°	1102	1110	1128	1150	1154	690
45°	924	940	972	1014	1032	713
55°	715	741	806	870	900	636
65°	472	520	627	710	743	469
75°	223	304	424	496	511	239
85°	44	90	109	118	122	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1385.6	1385.6	1385.6	1385.6	1385.6
2.5°	1387.7	1387.7	1381.2	1385.6	1385.6
5°	1385.6	1383.4	1376.8	1383.4	1383.4
7.5°	1379.0	1376.8	1372.4	1379.0	1376.8
10°	1365.9	1365.9	1361.5	1368.1	1368.1
12.5°	1355.0	1352.8	1350.6	1359.3	1357.2
15°	1337.5	1337.5	1335.3	1346.2	1344.0
17.5°	1315.6	1317.8	1320.0	1328.7	1330.9
20°	1291.6	1296.0	1298.1	1311.3	1311.3
22.5°	1269.7	1271.9	1276.3	1289.4	1289.4
25°	1241.3	1245.7	1254.4	1265.4	1267.5
27.5°	1212.9	1215.1	1226.0	1241.3	1243.5
30°	1175.8	1182.3	1195.4	1212.9	1215.1
32.5°	1143.0	1149.5	1164.8	1182.3	1186.7
35°	1101.5	1110.2	1127.7	1149.5	1153.9
37.5°	1064.3	1070.9	1092.7	1116.8	1123.3
40°	1018.4	1031.5	1053.4	1081.8	1092.7
42.5°	972.5	985.6	1011.9	1049.0	1062.1
45°	924.4	939.7	972.5	1014.0	1031.5
47.5°	876.4	893.8	931.0	979.1	998.7
50°	821.7	843.6	889.5	944.1	966.0
52.5°	769.3	795.5	845.8	907.0	935.4
55°	714.6	740.9	806.4	869.8	900.4
57.5°	653.4	688.4	760.5	832.6	865.4
60°	596.6	629.4	716.8	795.5	828.3
62.5°	535.4	579.1	673.1	756.2	788.9
65°	472.1	520.1	627.2	710.3	743.0
67.5°	415.2	467.7	581.3	664.4	697.2
70°	347.5	413.0	531.1	614.1	646.9
72.5°	284.1	356.2	478.6	559.5	590.1
75°	222.9	303.8	424.0	496.1	511.4
77.5°	166.1	251.3	367.2	397.7	386.8
80°	118.0	201.1	286.3	271.0	277.5
82.5°	76.5	153.0	177.0	201.1	207.6
85°	43.7	89.6	109.3	118.0	122.4
87.5°	19.7	32.8	43.7	43.7	41.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)