

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: P310477

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CP187-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: P310477
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" 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: 4466.0 lumens
Efficiency: N/A
Efficacy: 69.5 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

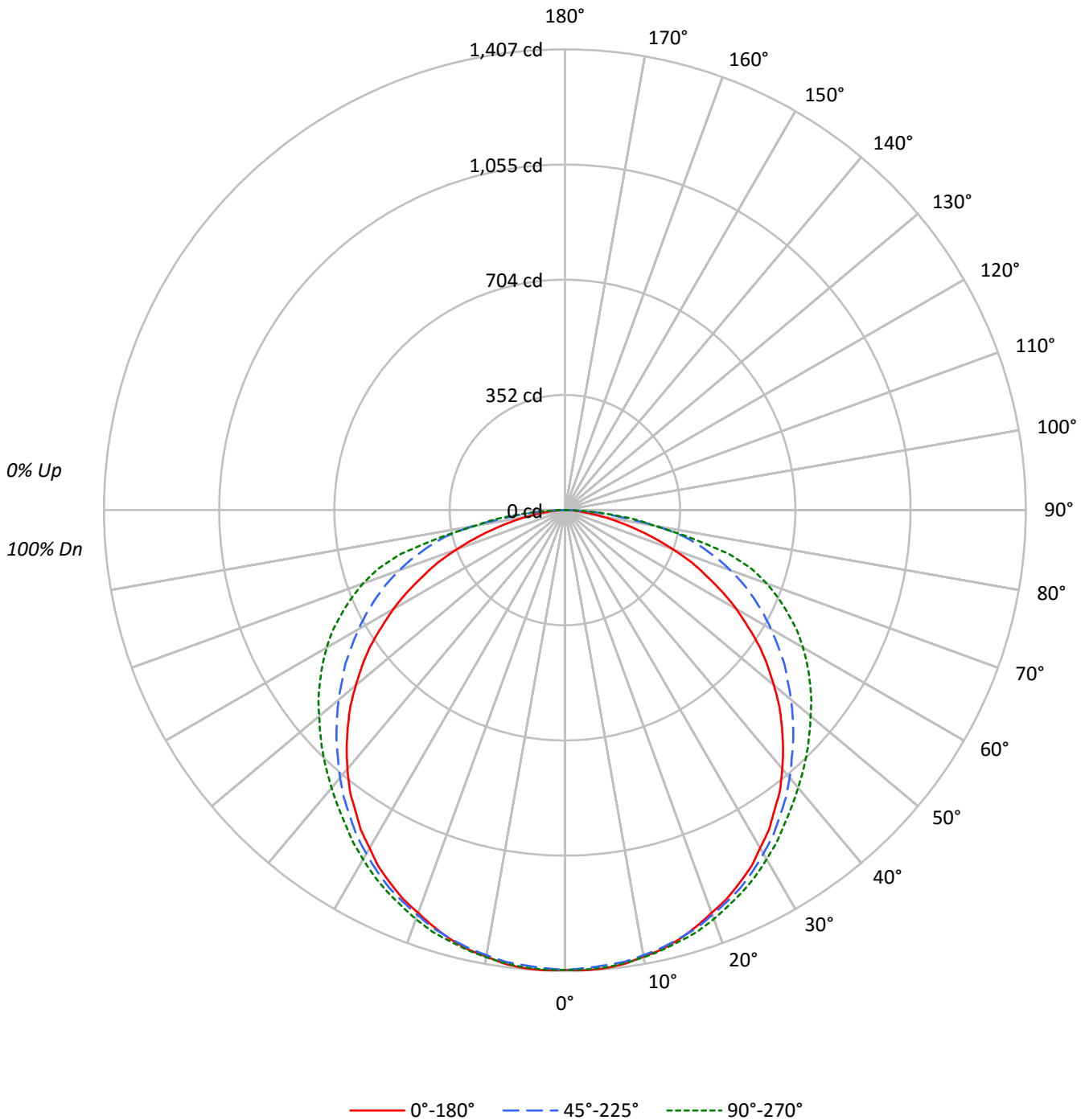
Input Watts (W): 64.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1890	1890	1890
5°	1897	1885	1894
10°	1892	1886	1895
15°	1888	1885	1898
20°	1875	1884	1903
25°	1868	1888	1907
30°	1852	1883	1913
35°	1834	1877	1921
40°	1813	1875	1945
45°	1783	1876	1990
50°	1743	1887	2049
55°	1699	1917	2141
60°	1627	1955	2259
65°	1523	2024	2398
70°	1386	2118	2579
75°	1174	2234	2695
80°	927	2249	2180
85°	684	1711	1916



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.2	3.0
10°-20°	383.4	8.6
20°-30°	586.3	13.1
30°-40°	716.8	16.0
40°-50°	763.9	17.1
50°-60°	730.4	16.4
60°-70°	618.8	13.9
70°-80°	415.9	9.3
80°-90°	117.3	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°	1103.0	24.7
0°-40°	1819.7	40.7
0°-60°	3314.1	74.2
0°-90°	4466.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4466.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1404	1404	1404	1404	1404	
5°	1404	1402	1396	1402	1402	133
15°	1356	1356	1354	1365	1362	382
25°	1258	1263	1272	1283	1285	580
35°	1116	1125	1143	1165	1170	699
45°	937	952	986	1028	1046	723
55°	724	751	817	882	913	645
65°	478	527	636	720	753	475
75°	226	308	430	503	518	242
85°	44	91	111	120	124	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1404.4	1404.4	1404.4	1404.4	1404.4
2.5°	1406.6	1406.6	1400.0	1404.4	1404.4
5°	1404.4	1402.2	1395.6	1402.2	1402.2
7.5°	1397.8	1395.6	1391.1	1397.8	1395.6
10°	1384.5	1384.5	1380.1	1386.7	1386.7
12.5°	1373.4	1371.2	1369.0	1377.8	1375.6
15°	1355.7	1355.7	1353.5	1364.6	1362.3
17.5°	1333.5	1335.8	1338.0	1346.8	1349.0
20°	1309.2	1313.6	1315.8	1329.1	1329.1
22.5°	1287.0	1289.2	1293.7	1307.0	1307.0
25°	1258.2	1262.7	1271.5	1282.6	1284.8
27.5°	1229.4	1231.6	1242.7	1258.2	1260.4
30°	1191.8	1198.4	1211.7	1229.4	1231.6
32.5°	1158.5	1165.2	1180.7	1198.4	1202.8
35°	1116.5	1125.3	1143.0	1165.2	1169.6
37.5°	1078.8	1085.4	1107.6	1132.0	1138.6
40°	1032.3	1045.6	1067.7	1096.5	1107.6
42.5°	985.8	999.0	1025.6	1063.3	1076.6
45°	937.0	952.5	985.8	1027.8	1045.6
47.5°	888.3	906.0	943.7	992.4	1012.3
50°	832.9	855.1	901.6	957.0	979.1
52.5°	779.7	806.3	857.3	919.3	948.1
55°	724.4	750.9	817.4	881.6	912.7
57.5°	662.3	697.8	770.9	844.0	877.2
60°	604.7	638.0	726.6	806.3	839.6
62.5°	542.7	587.0	682.3	766.5	799.7
65°	478.5	527.2	635.8	719.9	753.2
67.5°	420.9	474.1	589.2	673.4	706.6
70°	352.2	418.7	538.3	622.5	655.7
72.5°	288.0	361.1	485.1	567.1	598.1
75°	225.9	307.9	429.7	502.8	518.4
77.5°	168.4	254.7	372.2	403.2	392.1
80°	119.6	203.8	290.2	274.7	281.3
82.5°	77.5	155.1	179.4	203.8	210.4
85°	44.3	90.8	110.8	119.6	124.1
87.5°	19.9	33.2	44.3	44.3	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)