

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: P310473

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-RDP-CP187-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: P310473
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-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB 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: 4095.0 lumens
Efficiency: N/A
Efficacy: 65.6 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

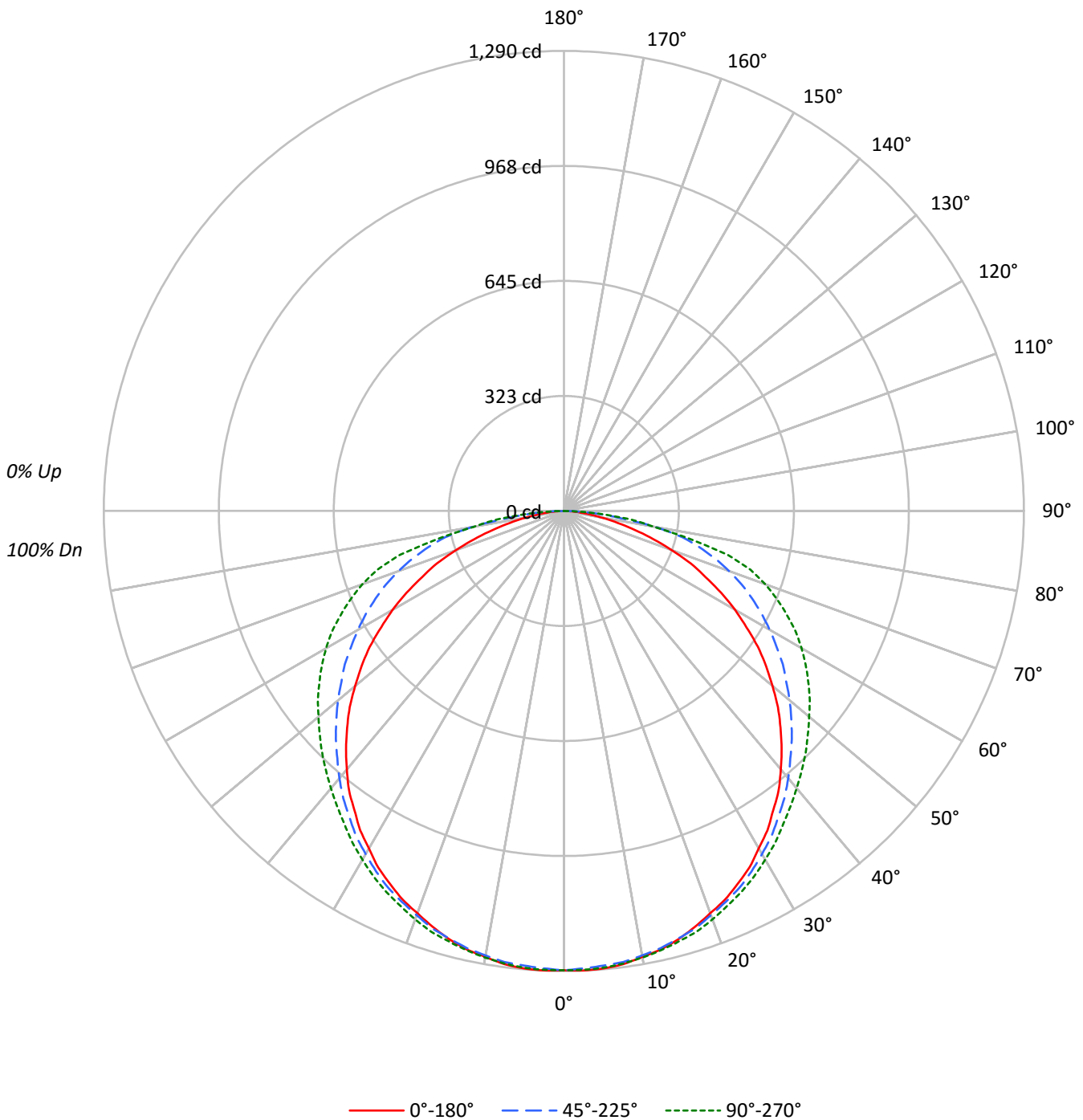
Input Watts (W): 62.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1733	1733	1733
5°	1739	1728	1737
10°	1734	1729	1737
15°	1732	1729	1740
20°	1719	1728	1745
25°	1713	1731	1749
30°	1698	1726	1755
35°	1681	1722	1762
40°	1662	1720	1784
45°	1635	1720	1824
50°	1599	1730	1879
55°	1558	1758	1963
60°	1492	1793	2072
65°	1397	1856	2199
70°	1271	1942	2365
75°	1077	2048	2471
80°	850	2062	1999
85°	627	1568	1755



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	122.2	3.0
10°-20°	351.6	8.6
20°-30°	537.6	13.1
30°-40°	657.2	16.0
40°-50°	700.5	17.1
50°-60°	669.7	16.4
60°-70°	567.4	13.9
70°-80°	381.3	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°	1011.3	24.7
0°-40°	1668.6	40.7
0°-60°	3038.8	74.2
0°-90°	4095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4095.0	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°	1243	1243	1241	1251	1249	350
25°	1154	1158	1166	1176	1178	532
35°	1024	1032	1048	1068	1072	641
45°	859	873	904	942	959	663
55°	664	689	750	808	837	592
65°	439	483	583	660	691	436
75°	207	282	394	461	475	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°	1287.8	1287.8	1287.8	1287.8	1287.8
2.5°	1289.8	1289.8	1283.7	1287.8	1287.8
5°	1287.8	1285.7	1279.6	1285.7	1285.7
7.5°	1281.7	1279.6	1275.6	1281.7	1279.6
10°	1269.5	1269.5	1265.4	1271.5	1271.5
12.5°	1259.3	1257.3	1255.3	1263.4	1261.4
15°	1243.1	1243.1	1241.0	1251.2	1249.2
17.5°	1222.8	1224.8	1226.8	1235.0	1237.0
20°	1200.4	1204.5	1206.5	1218.7	1218.7
22.5°	1180.1	1182.1	1186.2	1198.4	1198.4
25°	1153.7	1157.8	1165.9	1176.0	1178.1
27.5°	1127.3	1129.3	1139.5	1153.7	1155.7
30°	1092.8	1098.9	1111.0	1127.3	1129.3
32.5°	1062.3	1068.4	1082.6	1098.9	1102.9
35°	1023.7	1031.8	1048.1	1068.4	1072.5
37.5°	989.2	995.3	1015.6	1037.9	1044.0
40°	946.5	958.7	979.0	1005.4	1015.6
42.5°	903.9	916.1	940.4	975.0	987.1
45°	859.2	873.4	903.9	942.5	958.7
47.5°	814.5	830.7	865.3	910.0	928.2
50°	763.7	784.0	826.7	877.5	897.8
52.5°	715.0	739.3	786.1	842.9	869.3
55°	664.2	688.6	749.5	808.4	836.8
57.5°	607.3	639.8	706.8	773.9	804.3
60°	554.5	585.0	666.2	739.3	769.8
62.5°	497.6	538.3	625.6	702.8	733.3
65°	438.7	483.4	582.9	660.1	690.6
67.5°	385.9	434.7	540.3	617.5	647.9
70°	323.0	383.9	493.6	570.8	601.2
72.5°	264.1	331.1	444.8	520.0	548.4
75°	207.2	282.3	394.0	461.1	475.3
77.5°	154.4	233.6	341.2	369.7	359.5
80°	109.7	186.9	266.1	251.9	258.0
82.5°	71.1	142.2	164.5	186.9	193.0
85°	40.6	83.3	101.6	109.7	113.7
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)