

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: P311645

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CP187-W2A-U-4000K**

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: P311645
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-55HE-UNV-L82765-S-CP187-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 4980.0 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

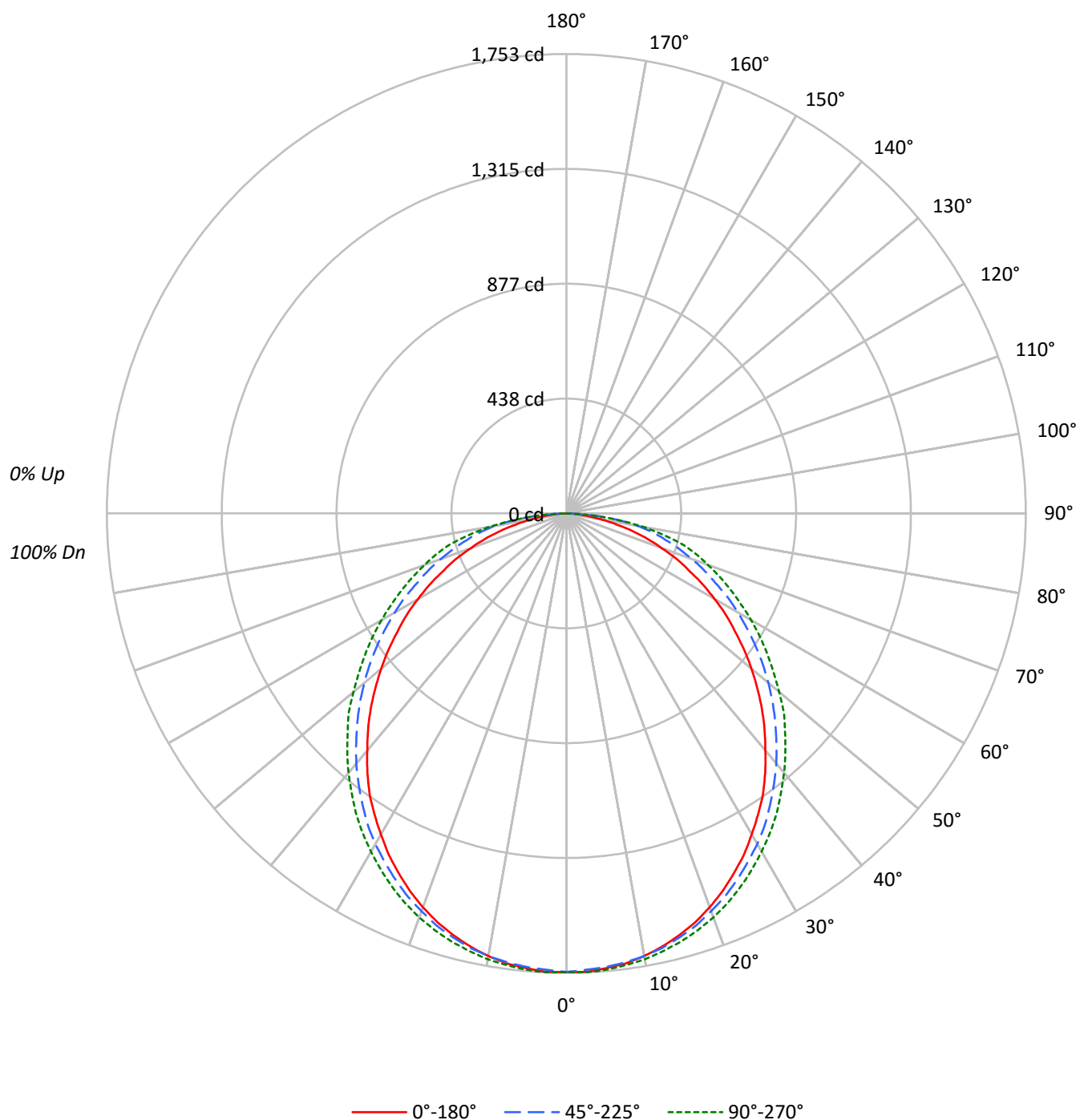
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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		0
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		100
1	108	103	99	95	106	101	97	93	97	93	90		93	90	88		83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2354	2354	2354
5°	2352	2346	2361
10°	2343	2343	2360
15°	2320	2331	2355
20°	2290	2313	2349
25°	2247	2290	2334
30°	2197	2263	2315
35°	2149	2227	2297
40°	2075	2189	2270
45°	2008	2146	2245
50°	1930	2106	2218
55°	1844	2067	2197
60°	1758	2035	2192
65°	1647	1999	2206
70°	1524	2010	2265
75°	1365	2048	2393
80°	1103	2170	2341
85°	831	1905	1856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.6	3.3
10°-20°	473.3	9.5
20°-30°	711.4	14.3
30°-40°	847.4	17.0
40°-50°	867.3	17.4
50°-60°	780.8	15.7
60°-70°	613.2	12.3
70°-80°	398.0	8.0
80°-90°	123.1	2.5
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°	1350.3	27.1
0°-40°	2197.7	44.1
0°-60°	3845.8	77.2
0°-90°	4980.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4980.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1750	1750	1750	1750	1750	
5°	1742	1745	1737	1746	1748	165
15°	1666	1670	1674	1688	1691	470
25°	1514	1526	1542	1568	1572	697
35°	1308	1324	1356	1389	1398	816
45°	1055	1080	1128	1171	1180	813
55°	786	821	881	927	936	705
65°	517	557	628	680	693	515
75°	263	313	394	448	460	278
85°	54	100	123	120	120	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1749.5	1749.5	1749.5	1749.5	1749.5
2.5°	1751.1	1751.1	1743.2	1751.1	1752.7
5°	1741.6	1744.8	1736.9	1746.3	1747.9
7.5°	1732.1	1732.1	1727.4	1736.9	1738.4
10°	1714.7	1716.3	1714.7	1725.8	1727.4
12.5°	1692.6	1695.7	1697.3	1708.4	1710.0
15°	1665.7	1670.4	1673.6	1687.8	1691.0
17.5°	1635.6	1640.4	1648.3	1664.1	1667.3
20°	1599.2	1605.6	1615.1	1635.6	1640.4
22.5°	1559.7	1566.0	1581.8	1600.8	1608.7
25°	1513.8	1526.5	1542.3	1567.6	1572.3
27.5°	1467.9	1479.0	1499.6	1526.5	1532.8
30°	1414.2	1431.6	1456.9	1483.8	1490.1
32.5°	1362.0	1379.4	1409.4	1437.9	1445.8
35°	1308.2	1324.0	1355.6	1388.8	1398.3
37.5°	1246.5	1267.0	1301.8	1335.1	1344.6
40°	1181.6	1206.9	1246.5	1281.3	1292.4
42.5°	1119.9	1146.8	1186.4	1224.3	1237.0
45°	1055.1	1080.4	1127.8	1170.6	1180.0
47.5°	988.6	1017.1	1067.7	1110.4	1126.3
50°	922.2	952.3	1006.0	1050.3	1059.8
52.5°	855.8	887.4	944.4	991.8	996.6
55°	786.2	821.0	881.1	927.0	936.4
57.5°	722.9	753.0	817.8	865.3	876.3
60°	653.3	686.5	756.1	800.4	814.6
62.5°	586.9	621.7	694.4	738.7	751.4
65°	517.3	556.8	628.0	680.2	692.8
67.5°	457.1	495.1	571.0	621.7	634.3
70°	387.5	430.3	510.9	563.1	575.8
72.5°	327.4	371.7	452.4	503.0	522.0
75°	262.6	313.2	393.9	447.7	460.3
77.5°	199.3	257.8	340.1	381.2	381.2
80°	142.4	204.1	280.0	299.0	302.1
82.5°	93.3	153.4	207.2	205.6	205.6
85°	53.8	99.7	123.4	120.2	120.2
87.5°	20.6	41.1	44.3	44.3	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)