

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: P311647

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-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: P311647
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-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 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: 5137.0 lumens
Efficiency: N/A
Efficacy: 116.5 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

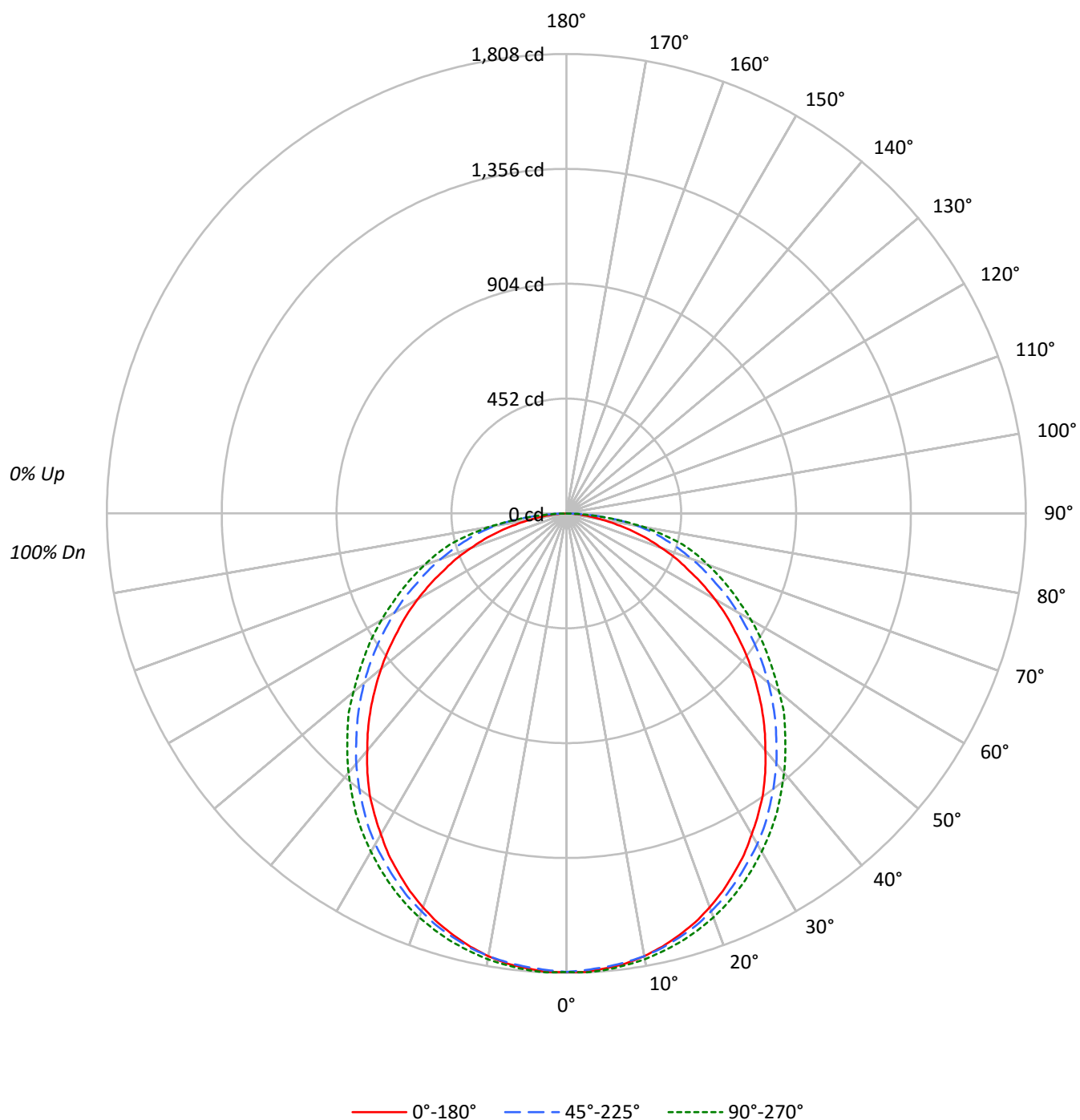
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2428	2428	2428
5°	2426	2420	2435
10°	2417	2417	2434
15°	2393	2405	2430
20°	2362	2385	2423
25°	2318	2362	2408
30°	2266	2335	2388
35°	2216	2297	2369
40°	2141	2258	2341
45°	2071	2214	2316
50°	1991	2172	2288
55°	1902	2132	2266
60°	1813	2099	2261
65°	1699	2062	2275
70°	1573	2073	2336
75°	1408	2112	2468
80°	1138	2238	2415
85°	857	1965	1914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.8	3.3
10°-20°	488.2	9.5
20°-30°	733.8	14.3
30°-40°	874.1	17.0
40°-50°	894.6	17.4
50°-60°	805.4	15.7
60°-70°	632.5	12.3
70°-80°	410.5	8.0
80°-90°	127.0	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°	1392.9	27.1
0°-40°	2267.0	44.1
0°-60°	3967.0	77.2
0°-90°	5137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5137.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1805	1805	1805	1805	1805	
5°	1796	1800	1792	1801	1803	171
15°	1718	1723	1726	1741	1744	484
25°	1562	1575	1591	1617	1622	719
35°	1349	1366	1398	1433	1442	842
45°	1088	1114	1163	1208	1217	839
55°	811	847	909	956	966	727
65°	534	574	648	702	715	531
75°	271	323	406	462	475	287
85°	56	103	127	124	124	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1804.7	1804.7	1804.7	1804.7	1804.7
2.5°	1806.3	1806.3	1798.1	1806.3	1807.9
5°	1796.5	1799.8	1791.6	1801.4	1803.0
7.5°	1786.7	1786.7	1781.8	1791.6	1793.2
10°	1768.8	1770.4	1768.8	1780.2	1781.8
12.5°	1745.9	1749.2	1750.8	1762.2	1763.9
15°	1718.2	1723.1	1726.3	1741.0	1744.3
17.5°	1687.2	1692.1	1700.2	1716.5	1719.8
20°	1649.7	1656.2	1666.0	1687.2	1692.1
22.5°	1608.9	1615.4	1631.7	1651.3	1659.4
25°	1561.5	1574.6	1590.9	1617.0	1621.9
27.5°	1514.2	1525.6	1546.9	1574.6	1581.1
30°	1458.7	1476.7	1502.8	1530.5	1537.1
32.5°	1404.9	1422.8	1453.8	1483.2	1491.4
35°	1349.4	1365.7	1398.4	1432.6	1442.4
37.5°	1285.8	1307.0	1342.9	1377.2	1386.9
40°	1218.9	1245.0	1285.8	1321.7	1333.1
42.5°	1155.2	1183.0	1223.8	1262.9	1276.0
45°	1088.3	1114.5	1163.4	1207.5	1217.2
47.5°	1019.8	1049.2	1101.4	1145.5	1161.8
50°	951.3	982.3	1037.8	1083.4	1093.2
52.5°	882.8	915.4	974.1	1023.1	1028.0
55°	811.0	846.9	908.9	956.2	966.0
57.5°	745.7	776.7	843.6	892.5	904.0
60°	673.9	708.2	780.0	825.6	840.3
62.5°	605.4	641.3	716.3	762.0	775.1
65°	533.6	574.4	647.8	701.6	714.7
67.5°	471.6	510.7	589.0	641.3	654.3
70°	399.8	443.8	527.0	580.9	593.9
72.5°	337.8	383.4	466.7	518.9	538.5
75°	270.9	323.1	406.3	461.8	474.8
77.5°	205.6	266.0	350.8	393.2	393.2
80°	146.9	210.5	288.8	308.4	311.7
82.5°	96.3	158.3	213.8	212.1	212.1
85°	55.5	102.8	127.3	124.0	124.0
87.5°	21.2	42.4	45.7	45.7	44.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)