

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: P314430

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-S-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: P314430
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-L83050-S-CP187-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 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: 4715.0 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

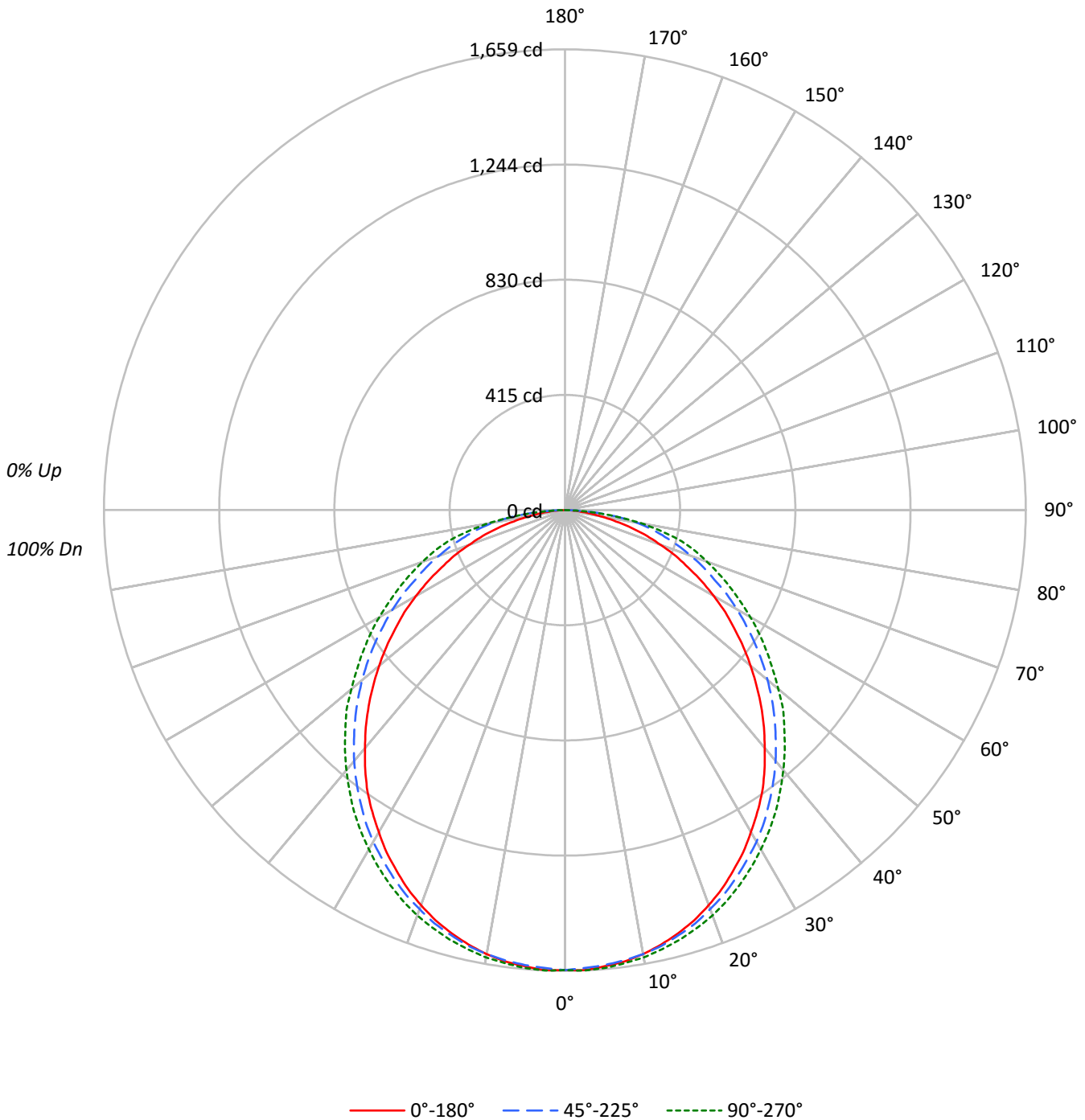
Input Watts (W): 43
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2229	2229	2229
5°	2227	2221	2235
10°	2218	2218	2234
15°	2197	2207	2230
20°	2168	2189	2224
25°	2128	2168	2210
30°	2080	2143	2192
35°	2034	2108	2175
40°	1965	2073	2149
45°	1901	2032	2126
50°	1828	1994	2100
55°	1746	1957	2080
60°	1664	1926	2076
65°	1559	1893	2089
70°	1443	1903	2144
75°	1292	1939	2266
80°	1044	2054	2217
85°	786	1803	1757



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.8	3.3
10°-20°	448.1	9.5
20°-30°	673.6	14.3
30°-40°	802.3	17.0
40°-50°	821.1	17.4
50°-60°	739.2	15.7
60°-70°	580.6	12.3
70°-80°	376.8	8.0
80°-90°	116.5	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°	1278.4	27.1
0°-40°	2080.7	44.1
0°-60°	3641.1	77.2
0°-90°	4715.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4715.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1656	1656	1656	1656	1656	
5°	1649	1652	1644	1653	1655	157
15°	1577	1582	1584	1598	1601	445
25°	1433	1445	1460	1484	1489	660
35°	1239	1254	1284	1315	1324	773
45°	999	1023	1068	1108	1117	770
55°	744	777	834	878	887	667
65°	490	527	595	644	656	487
75°	249	296	373	424	436	263
85°	51	94	117	114	114	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1656.4	1656.4	1656.4	1656.4	1656.4
2.5°	1657.9	1657.9	1650.4	1657.9	1659.4
5°	1648.9	1651.9	1644.4	1653.4	1654.9
7.5°	1639.9	1639.9	1635.4	1644.4	1645.9
10°	1623.5	1625.0	1623.5	1633.9	1635.4
12.5°	1602.5	1605.5	1607.0	1617.5	1619.0
15°	1577.0	1581.5	1584.5	1598.0	1601.0
17.5°	1548.6	1553.1	1560.6	1575.5	1578.5
20°	1514.1	1520.1	1529.1	1548.6	1553.1
22.5°	1476.7	1482.7	1497.7	1515.6	1523.1
25°	1433.3	1445.2	1460.2	1484.2	1488.7
27.5°	1389.8	1400.3	1419.8	1445.2	1451.2
30°	1338.9	1355.4	1379.3	1404.8	1410.8
32.5°	1289.5	1306.0	1334.4	1361.4	1368.9
35°	1238.6	1253.5	1283.5	1314.9	1323.9
37.5°	1180.2	1199.6	1232.6	1264.0	1273.0
40°	1118.8	1142.7	1180.2	1213.1	1223.6
42.5°	1060.3	1085.8	1123.2	1159.2	1171.2
45°	998.9	1022.9	1067.8	1108.3	1117.3
47.5°	936.0	963.0	1010.9	1051.4	1066.3
50°	873.1	901.6	952.5	994.4	1003.4
52.5°	810.2	840.2	894.1	939.0	943.5
55°	744.3	777.3	834.2	877.6	886.6
57.5°	684.4	712.9	774.3	819.2	829.7
60°	618.5	650.0	715.9	757.8	771.3
62.5°	555.6	588.6	657.5	699.4	711.4
65°	489.7	527.2	594.6	644.0	656.0
67.5°	432.8	468.8	540.7	588.6	600.6
70°	366.9	407.4	483.7	533.2	545.1
72.5°	310.0	351.9	428.3	476.3	494.2
75°	248.6	296.5	372.9	423.8	435.8
77.5°	188.7	244.1	322.0	360.9	360.9
80°	134.8	193.2	265.1	283.1	286.1
82.5°	88.4	145.3	196.2	194.7	194.7
85°	50.9	94.4	116.8	113.8	113.8
87.5°	19.5	38.9	41.9	41.9	40.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)