

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: P314059

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-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: P314059
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)
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-CP187-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, RIBBED 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: 5033.0 lumens
Efficiency: N/A
Efficacy: 111.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

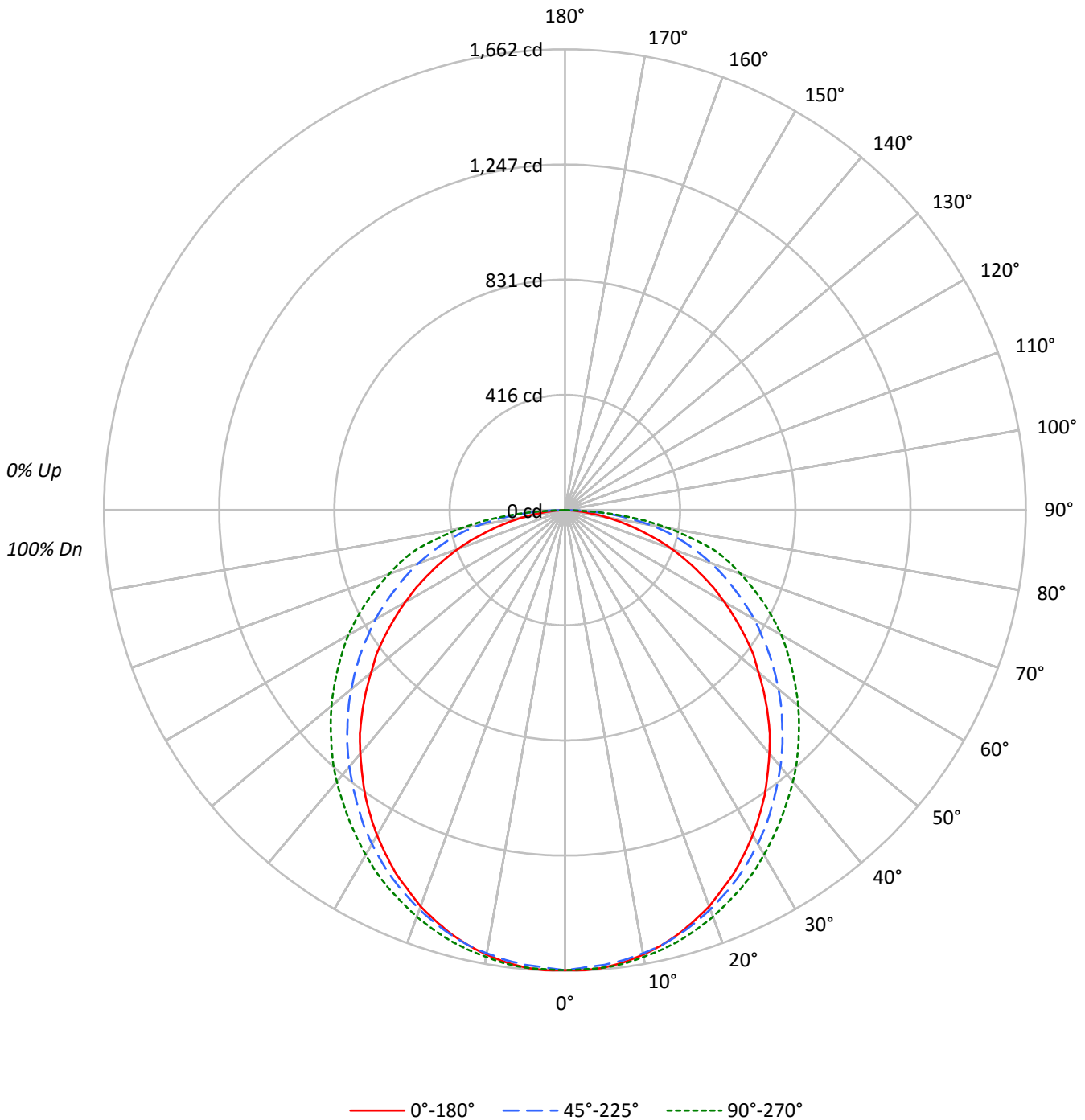
Input Watts (W): 45.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2233	2233	2233
5°	2237	2224	2237
10°	2224	2218	2236
15°	2205	2210	2238
20°	2178	2195	2236
25°	2144	2179	2234
30°	2104	2161	2231
35°	2063	2139	2233
40°	2015	2124	2247
45°	1967	2110	2265
50°	1908	2104	2300
55°	1861	2107	2346
60°	1788	2125	2426
65°	1706	2148	2514
70°	1616	2214	2654
75°	1441	2309	2899
80°	1229	2445	2963
85°	877	2424	2836



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	157.1	3.1
10°-20°	449.2	8.9
20°-30°	678.4	13.5
30°-40°	817.7	16.2
40°-50°	858.4	17.1
50°-60°	803.1	16.0
60°-70°	663.2	13.2
70°-80°	451.9	9.0
80°-90°	154.1	3.1
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°	1284.7	25.5
0°-40°	2102.3	41.8
0°-60°	3763.8	74.8
0°-90°	5033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1660	1660	1660	1660	1660	
5°	1656	1655	1646	1656	1656	157
15°	1583	1585	1586	1603	1606	446
25°	1444	1451	1468	1496	1504	665
35°	1256	1269	1302	1346	1359	785
45°	1034	1055	1109	1169	1191	797
55°	793	825	898	972	1000	708
65°	536	581	675	760	790	532
75°	277	341	444	528	558	296
85°	57	112	157	177	184	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1659.8	1659.8	1659.8	1659.8	1659.8
2.5°	1661.5	1659.8	1651.5	1659.8	1658.2
5°	1656.5	1654.8	1646.5	1656.5	1656.5
7.5°	1644.8	1644.8	1636.5	1648.2	1649.8
10°	1628.1	1628.1	1623.1	1636.5	1636.5
12.5°	1608.1	1608.1	1608.1	1621.4	1623.1
15°	1583.0	1584.7	1586.4	1603.1	1606.4
17.5°	1553.0	1556.3	1561.3	1581.4	1584.7
20°	1521.2	1524.6	1532.9	1556.3	1561.3
22.5°	1481.2	1489.5	1501.2	1527.9	1532.9
25°	1444.4	1451.1	1467.8	1496.2	1504.5
27.5°	1399.3	1409.4	1431.1	1461.1	1472.8
30°	1354.3	1364.3	1391.0	1426.1	1436.1
32.5°	1305.8	1320.9	1349.2	1386.0	1397.7
35°	1255.7	1269.1	1302.5	1345.9	1359.3
37.5°	1200.6	1219.0	1255.7	1302.5	1319.2
40°	1147.2	1167.2	1209.0	1259.1	1279.1
42.5°	1093.8	1113.8	1160.6	1217.3	1237.4
45°	1033.6	1055.4	1108.8	1168.9	1190.6
47.5°	973.5	1000.2	1058.7	1122.1	1145.5
50°	911.7	941.8	1005.3	1072.0	1098.8
52.5°	856.6	885.0	951.8	1023.6	1048.7
55°	793.2	824.9	898.4	971.9	1000.2
57.5°	728.1	763.1	841.6	921.8	950.1
60°	664.6	703.0	789.8	870.0	901.7
62.5°	602.8	641.2	731.4	814.9	846.6
65°	536.0	581.1	674.6	759.8	789.8
67.5°	472.6	521.0	619.5	703.0	733.1
70°	410.8	457.5	562.7	644.6	674.6
72.5°	344.0	397.4	502.6	587.8	619.5
75°	277.2	340.7	444.2	527.7	557.7
77.5°	215.4	280.5	384.1	452.5	467.6
80°	158.6	225.4	315.6	364.0	382.4
82.5°	101.9	168.7	240.5	275.5	290.6
85°	56.8	111.9	157.0	177.0	183.7
87.5°	23.4	48.4	63.5	71.8	71.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)