

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: P310971

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP187-W2A-U-4500K**

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: P310971
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-L82765-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 4500K 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: 4823.0 lumens
Efficiency: N/A
Efficacy: 109.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

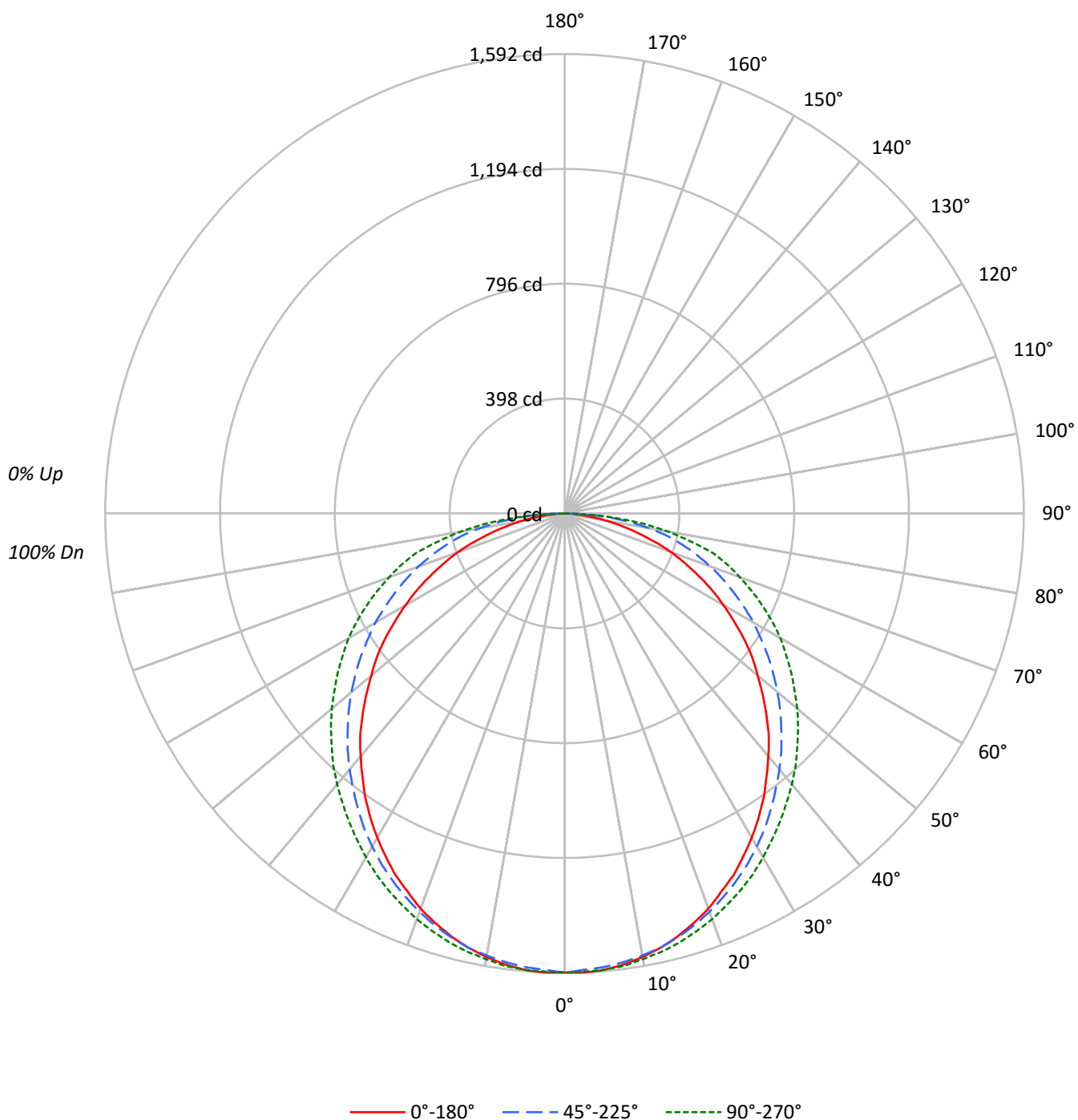
Input Watts (W): 43.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2140	2140	2140
5°	2144	2131	2144
10°	2132	2125	2143
15°	2113	2118	2144
20°	2087	2103	2142
25°	2055	2088	2140
30°	2016	2071	2138
35°	1976	2050	2140
40°	1931	2035	2153
45°	1885	2022	2171
50°	1829	2016	2204
55°	1783	2019	2248
60°	1714	2037	2325
65°	1635	2058	2410
70°	1548	2122	2543
75°	1381	2213	2779
80°	1178	2343	2839
85°	840	2322	2717



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.5	3.1
10°-20°	430.4	8.9
20°-30°	650.1	13.5
30°-40°	783.5	16.2
40°-50°	822.6	17.1
50°-60°	769.6	16.0
60°-70°	635.5	13.2
70°-80°	433.1	9.0
80°-90°	147.7	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°	1231.1	25.5
0°-40°	2014.6	41.8
0°-60°	3606.7	74.8
0°-90°	4823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4823.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1591	1591	1591	1591	1591	
5°	1587	1586	1578	1587	1587	151
15°	1517	1519	1520	1536	1539	428
25°	1384	1391	1407	1434	1442	637
35°	1203	1216	1248	1290	1303	752
45°	990	1011	1062	1120	1141	764
55°	760	790	861	931	958	678
65°	514	557	646	728	757	510
75°	266	326	426	506	534	283
85°	54	107	150	170	176	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1590.6	1590.6	1590.6	1590.6	1590.6
2.5°	1592.2	1590.6	1582.6	1590.6	1589.0
5°	1587.4	1585.8	1577.8	1587.4	1587.4
7.5°	1576.2	1576.2	1568.2	1579.4	1581.0
10°	1560.2	1560.2	1555.4	1568.2	1568.2
12.5°	1541.0	1541.0	1541.0	1553.8	1555.4
15°	1517.0	1518.6	1520.2	1536.2	1539.4
17.5°	1488.2	1491.4	1496.2	1515.4	1518.6
20°	1457.8	1461.0	1469.0	1491.4	1496.2
22.5°	1419.4	1427.4	1438.6	1464.2	1469.0
25°	1384.2	1390.6	1406.6	1433.8	1441.8
27.5°	1341.0	1350.6	1371.4	1400.2	1411.4
30°	1297.7	1307.4	1333.0	1366.6	1376.2
32.5°	1251.3	1265.7	1292.9	1328.2	1339.4
35°	1203.3	1216.1	1248.1	1289.7	1302.6
37.5°	1150.5	1168.1	1203.3	1248.1	1264.1
40°	1099.3	1118.5	1158.5	1206.5	1225.7
42.5°	1048.1	1067.3	1112.1	1166.5	1185.7
45°	990.5	1011.3	1062.5	1120.1	1140.9
47.5°	932.9	958.5	1014.5	1075.3	1097.7
50°	873.7	902.5	963.3	1027.3	1052.9
52.5°	820.9	848.1	912.1	980.9	1004.9
55°	760.1	790.5	860.9	931.3	958.5
57.5°	697.7	731.3	806.5	883.3	910.5
60°	636.9	673.7	756.9	833.7	864.1
62.5°	577.7	614.5	700.9	780.9	811.3
65°	513.7	556.9	646.5	728.1	756.9
67.5°	452.9	499.3	593.7	673.7	702.5
70°	393.6	438.5	539.3	617.7	646.5
72.5°	329.6	380.8	481.7	563.3	593.7
75°	265.6	326.4	425.6	505.7	534.5
77.5°	206.4	268.8	368.0	433.7	448.1
80°	152.0	216.0	302.4	348.8	366.4
82.5°	97.6	161.6	230.4	264.0	278.4
85°	54.4	107.2	150.4	169.6	176.0
87.5°	22.4	46.4	60.8	68.8	68.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)