

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: P310969

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-CP187-W2A-U-3500K**

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: P310969
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-3500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 3500K 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: 4638.0 lumens
Efficiency: N/A
Efficacy: 107.1 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

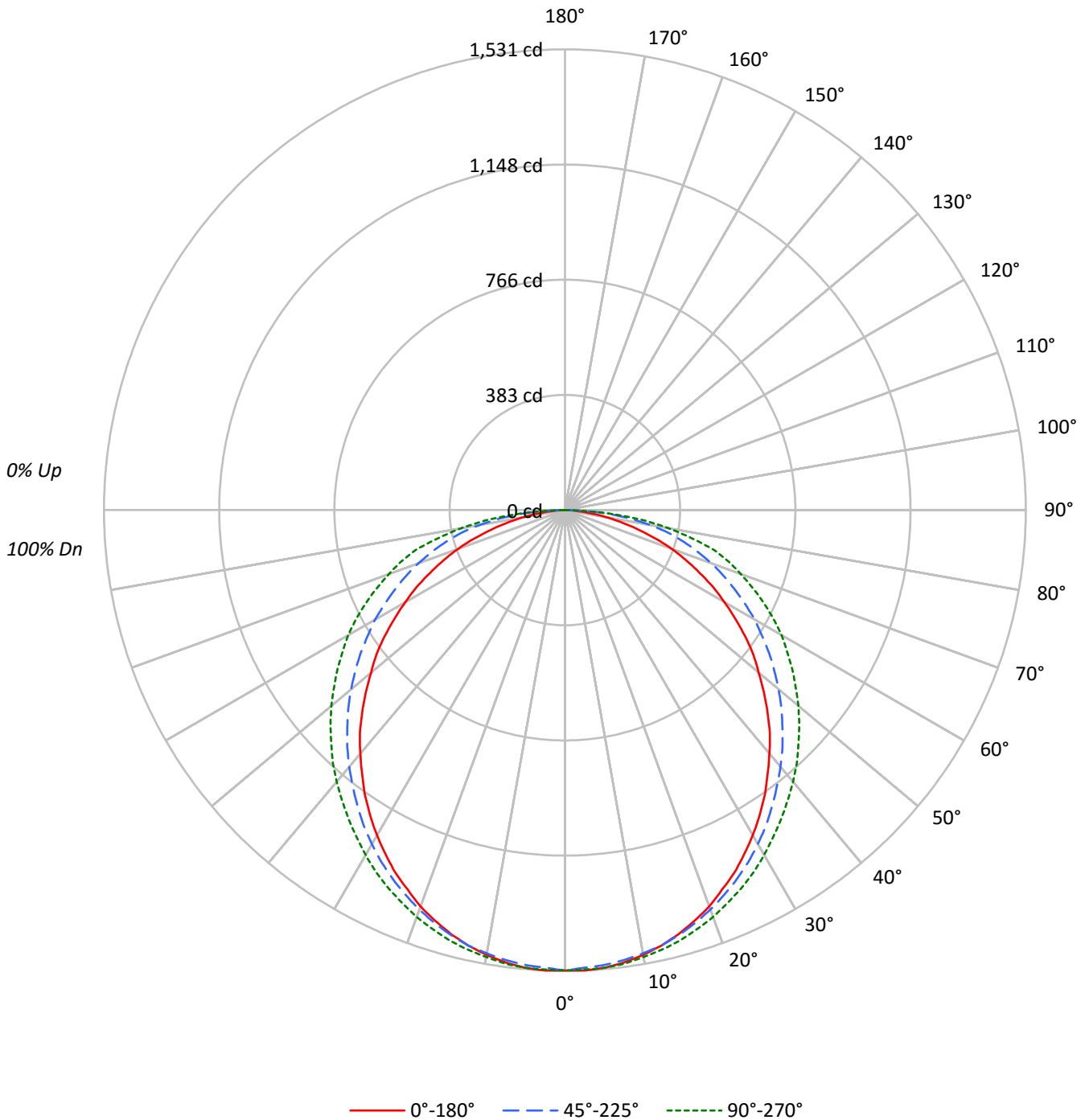
Input Watts (W): 43.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2058	2058	2058
5°	2062	2049	2062
10°	2050	2043	2060
15°	2032	2036	2062
20°	2007	2023	2060
25°	1976	2008	2058
30°	1939	1991	2056
35°	1901	1972	2057
40°	1857	1957	2070
45°	1812	1944	2088
50°	1759	1939	2119
55°	1715	1942	2162
60°	1648	1959	2236
65°	1573	1979	2317
70°	1489	2040	2446
75°	1328	2128	2672
80°	1133	2253	2731
85°	807	2232	2614



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.8	3.1
10°-20°	413.9	8.9
20°-30°	625.2	13.5
30°-40°	753.5	16.2
40°-50°	791.0	17.1
50°-60°	740.0	16.0
60°-70°	611.1	13.2
70°-80°	416.4	9.0
80°-90°	142.0	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°	1183.8	25.5
0°-40°	1937.3	41.8
0°-60°	3468.4	74.8
0°-90°	4638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4638.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1530	1530	1530	1530	1530	
5°	1526	1525	1517	1526	1526	145
15°	1459	1460	1462	1477	1480	411
25°	1331	1337	1353	1379	1386	612
35°	1157	1170	1200	1240	1253	723
45°	952	972	1022	1077	1097	735
55°	731	760	828	896	922	652
65°	494	536	622	700	728	490
75°	255	314	409	486	514	272
85°	52	103	145	163	169	65
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1529.6	1529.6	1529.6	1529.6	1529.6
2.5°	1531.1	1529.6	1521.9	1529.6	1528.0
5°	1526.5	1525.0	1517.3	1526.5	1526.5
7.5°	1515.7	1515.7	1508.0	1518.8	1520.3
10°	1500.3	1500.3	1495.7	1508.0	1508.0
12.5°	1481.9	1481.9	1481.9	1494.2	1495.7
15°	1458.8	1460.3	1461.9	1477.3	1480.3
17.5°	1431.1	1434.2	1438.8	1457.2	1460.3
20°	1401.9	1404.9	1412.6	1434.2	1438.8
22.5°	1364.9	1372.6	1383.4	1408.0	1412.6
25°	1331.1	1337.2	1352.6	1378.8	1386.5
27.5°	1289.5	1298.8	1318.8	1346.5	1357.2
30°	1248.0	1257.2	1281.8	1314.1	1323.4
32.5°	1203.3	1217.2	1243.4	1277.2	1288.0
35°	1157.2	1169.5	1200.3	1240.3	1252.6
37.5°	1106.4	1123.3	1157.2	1200.3	1215.7
40°	1057.2	1075.6	1114.1	1160.3	1178.7
42.5°	1007.9	1026.4	1069.5	1121.8	1140.3
45°	952.5	972.5	1021.8	1077.2	1097.2
47.5°	897.1	921.7	975.6	1034.1	1055.6
50°	840.2	867.9	926.4	987.9	1012.5
52.5°	789.4	815.6	877.1	943.3	966.4
55°	730.9	760.2	827.9	895.6	921.7
57.5°	670.9	703.2	775.6	849.4	875.6
60°	612.4	647.8	727.9	801.7	831.0
62.5°	555.5	590.9	674.0	750.9	780.2
65°	494.0	535.5	621.7	700.2	727.9
67.5°	435.5	480.1	570.9	647.8	675.5
70°	378.5	421.6	518.6	594.0	621.7
72.5°	317.0	366.2	463.2	541.7	570.9
75°	255.4	313.9	409.3	486.3	514.0
77.5°	198.5	258.5	353.9	417.0	430.9
80°	146.2	207.7	290.8	335.5	352.4
82.5°	93.9	155.4	221.6	253.9	267.8
85°	52.3	103.1	144.6	163.1	169.3
87.5°	21.5	44.6	58.5	66.2	66.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)