

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: P314057

Luminaire Tested: **24FCZ2-55HE-UNV-L83050-CP187-W2A-U-4000K**

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: P314057
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-4000K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (336) 4000K 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: 4985.0 lumens
Efficiency: N/A
Efficacy: 113.0 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

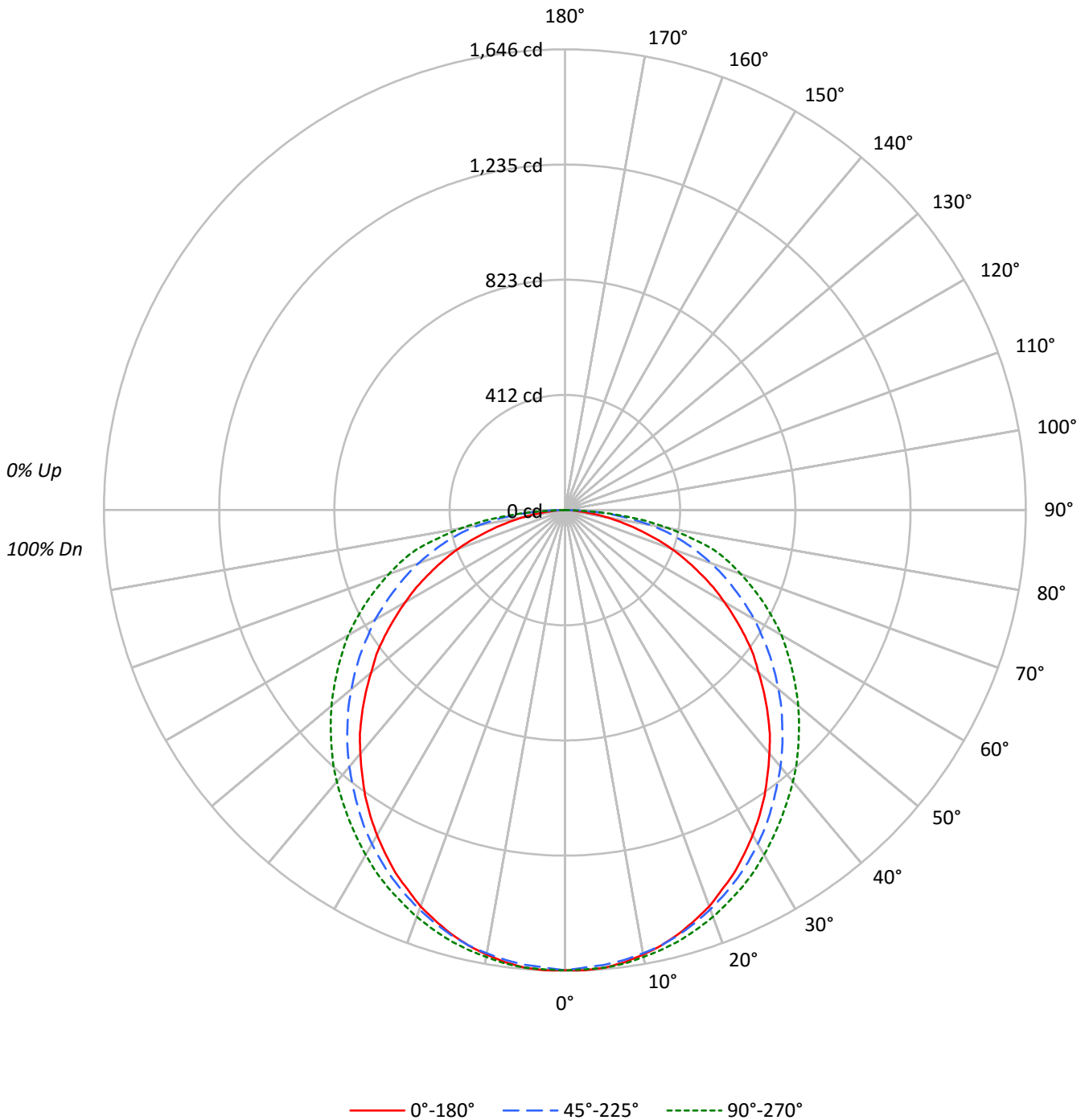
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2212	2212	2212
5°	2216	2203	2216
10°	2203	2196	2215
15°	2184	2189	2216
20°	2157	2174	2214
25°	2124	2158	2212
30°	2084	2140	2210
35°	2043	2119	2211
40°	1996	2103	2225
45°	1948	2090	2244
50°	1890	2084	2278
55°	1843	2087	2324
60°	1771	2105	2403
65°	1690	2127	2491
70°	1601	2193	2629
75°	1428	2287	2872
80°	1217	2422	2935
85°	868	2401	2808



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.6	3.1
10°-20°	444.9	8.9
20°-30°	671.9	13.5
30°-40°	809.9	16.2
40°-50°	850.2	17.1
50°-60°	795.4	16.0
60°-70°	656.9	13.2
70°-80°	447.6	9.0
80°-90°	152.7	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°	1272.4	25.5
0°-40°	2082.3	41.8
0°-60°	3727.9	74.8
0°-90°	4985.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4985.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1644	1644	1644	1644	1644	
5°	1641	1639	1631	1641	1641	156
15°	1568	1570	1571	1588	1591	442
25°	1431	1437	1454	1482	1490	658
35°	1244	1257	1290	1333	1346	777
45°	1024	1045	1098	1158	1179	790
55°	786	817	890	963	991	701
65°	531	576	668	752	782	527
75°	275	337	440	523	552	293
85°	56	111	156	175	182	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1644.0	1644.0	1644.0	1644.0	1644.0
2.5°	1645.7	1644.0	1635.7	1644.0	1642.4
5°	1640.7	1639.0	1630.8	1640.7	1640.7
7.5°	1629.1	1629.1	1620.9	1632.4	1634.1
10°	1612.6	1612.6	1607.6	1620.9	1620.9
12.5°	1592.7	1592.7	1592.7	1606.0	1607.6
15°	1567.9	1569.6	1571.2	1587.8	1591.1
17.5°	1538.2	1541.5	1546.4	1566.3	1569.6
20°	1506.7	1510.0	1518.3	1541.5	1546.4
22.5°	1467.0	1475.3	1486.9	1513.3	1518.3
25°	1430.7	1437.3	1453.8	1481.9	1490.2
27.5°	1386.0	1395.9	1417.4	1447.2	1458.8
30°	1341.3	1351.3	1377.7	1412.5	1422.4
32.5°	1293.4	1308.3	1336.4	1372.8	1384.3
35°	1243.8	1257.0	1290.1	1333.1	1346.3
37.5°	1189.2	1207.4	1243.8	1290.1	1306.6
40°	1136.3	1156.1	1197.4	1247.1	1266.9
42.5°	1083.3	1103.2	1149.5	1205.7	1225.6
45°	1023.8	1045.3	1098.2	1157.8	1179.3
47.5°	964.2	990.7	1048.6	1111.4	1134.6
50°	903.0	932.8	995.7	1061.8	1088.3
52.5°	848.5	876.6	942.7	1013.9	1038.7
55°	785.6	817.0	889.8	962.6	990.7
57.5°	721.1	755.8	833.6	913.0	941.1
60°	658.3	696.3	782.3	861.7	893.1
62.5°	597.1	635.1	724.4	807.1	838.5
65°	530.9	575.6	668.2	752.5	782.3
67.5°	468.1	516.0	613.6	696.3	726.1
70°	406.9	453.2	557.4	638.4	668.2
72.5°	340.7	393.6	497.8	582.2	613.6
75°	274.6	337.4	439.9	522.6	552.4
77.5°	213.4	277.9	380.4	448.2	463.1
80°	157.1	223.3	312.6	360.6	378.8
82.5°	100.9	167.0	238.2	272.9	287.8
85°	56.2	110.8	155.5	175.3	181.9
87.5°	23.2	48.0	62.8	71.1	71.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)