

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: P312433

Luminaire Tested: **14FCZ2-44-UNV-L83050-S-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: P312433
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-40)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 14FCZ2-44-UNV-L83050-S-CP187-W2A-U-4500K
Description: 1'X4' TROFFER LED MODULE,SMOOTH LENS, 0.187" POLYCARB SHEET
Light Source: (168) 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: 4165.0 lumens
Efficiency: N/A
Efficacy: 103.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

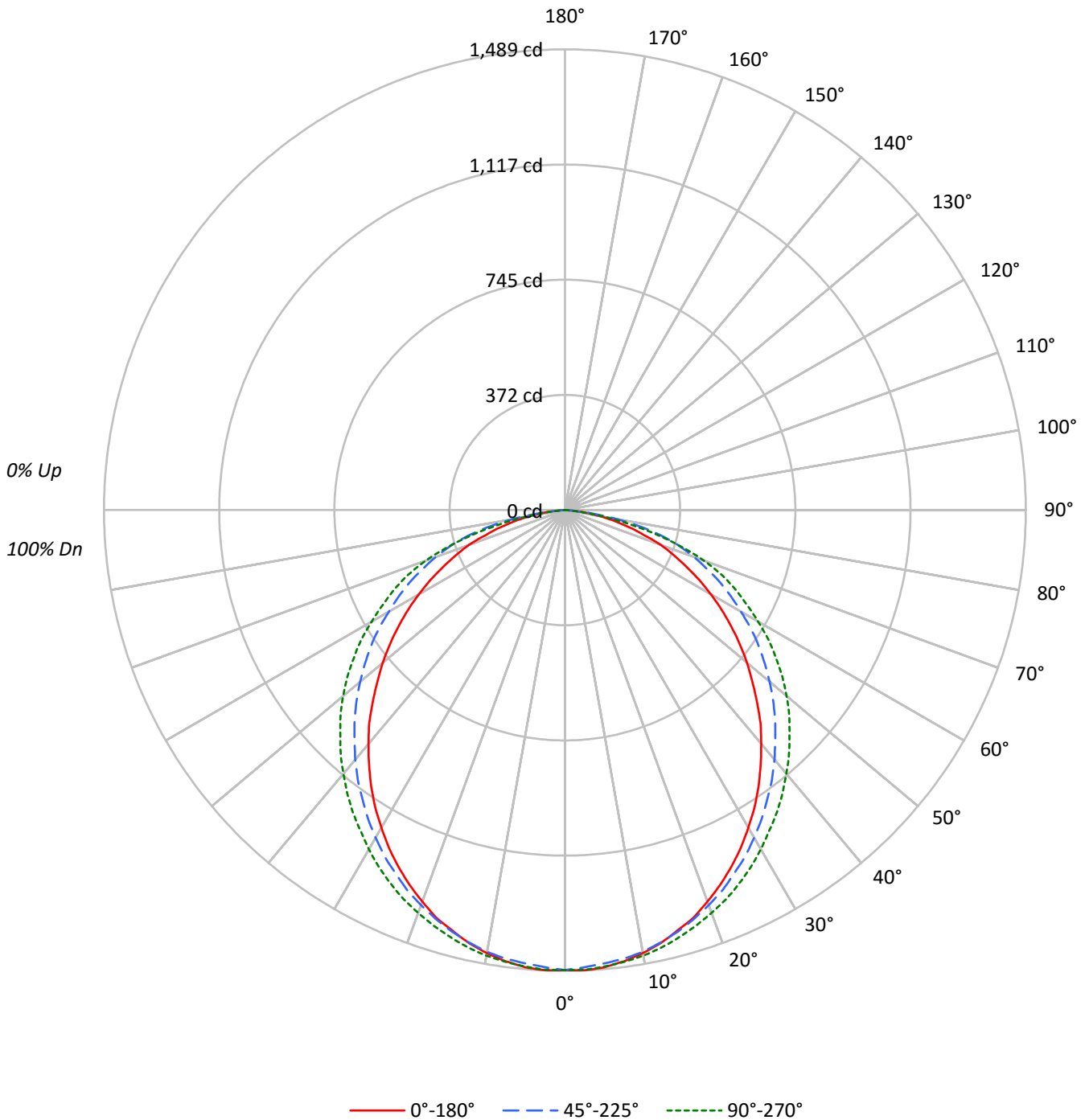
Input Watts (W): 40.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4001	4001	4001
5°	4005	3972	3999
10°	3972	3961	3995
15°	3918	3929	3981
20°	3856	3891	3968
25°	3777	3844	3955
30°	3683	3799	3933
35°	3582	3745	3921
40°	3468	3700	3910
45°	3340	3654	3906
50°	3216	3614	3916
55°	3081	3585	3904
60°	2934	3534	3879
65°	2762	3524	3879
70°	2600	3493	3770
75°	2254	3413	3221
80°	1824	2752	2145
85°	1210	957	639



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.4	3.4
10°-20°	399.5	9.6
20°-30°	599.3	14.4
30°-40°	714.9	17.2
40°-50°	739.1	17.7
50°-60°	674.8	16.2
60°-70°	531.0	12.7
70°-80°	309.1	7.4
80°-90°	57.0	1.4
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°	1139.2	27.4
0°-40°	1854.1	44.5
0°-60°	3267.9	78.5
0°-90°	4165.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4165.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1487	1487	1487	1487	1487	
5°	1483	1479	1470	1483	1481	141
15°	1406	1408	1410	1429	1429	397
25°	1272	1278	1295	1326	1332	586
35°	1090	1105	1140	1183	1194	682
45°	878	907	960	1014	1026	678
55°	657	692	764	820	832	587
65°	434	479	553	597	609	431
75°	217	268	328	322	310	230
85°	39	56	31	25	21	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1486.8	1486.8	1486.8	1486.8	1486.8
2.5°	1488.9	1484.8	1478.6	1488.9	1486.8
5°	1482.7	1478.6	1470.3	1482.7	1480.6
7.5°	1470.3	1466.2	1462.1	1474.4	1472.4
10°	1453.8	1451.7	1449.7	1464.1	1462.1
12.5°	1433.1	1433.1	1431.1	1447.6	1447.6
15°	1406.3	1408.4	1410.4	1429.0	1429.0
17.5°	1381.5	1379.5	1385.6	1406.3	1408.4
20°	1346.4	1350.5	1358.8	1383.6	1385.6
22.5°	1311.3	1315.4	1329.9	1354.7	1360.9
25°	1272.1	1278.3	1294.8	1325.8	1332.0
27.5°	1230.8	1239.0	1261.7	1294.8	1301.0
30°	1185.3	1197.7	1222.5	1259.7	1265.9
32.5°	1139.9	1152.3	1183.3	1220.4	1228.7
35°	1090.3	1104.8	1139.9	1183.3	1193.6
37.5°	1038.7	1057.3	1098.6	1142.0	1154.4
40°	987.1	1007.7	1053.2	1098.6	1113.1
42.5°	935.5	956.1	1005.7	1057.3	1071.8
45°	877.6	906.6	960.2	1013.9	1026.3
47.5°	821.9	852.9	912.8	966.4	983.0
50°	768.2	799.2	863.2	918.9	935.5
52.5°	712.4	745.5	813.6	871.5	885.9
55°	656.7	691.8	764.1	819.8	832.2
57.5°	600.9	638.1	712.4	766.1	780.6
60°	545.2	584.4	656.7	710.4	720.7
62.5°	489.4	530.7	605.1	652.6	662.9
65°	433.7	479.1	553.4	596.8	609.2
67.5°	380.0	425.4	497.7	539.0	549.3
70°	330.4	371.7	444.0	475.0	479.1
72.5°	268.5	320.1	390.3	406.8	396.5
75°	216.8	268.5	328.3	322.1	309.8
77.5°	165.2	216.8	256.1	235.4	218.9
80°	117.7	169.3	177.6	146.6	138.4
82.5°	76.4	117.7	99.1	76.4	62.0
85°	39.2	55.8	31.0	24.8	20.7
87.5°	12.4	8.3	4.1	4.1	2.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)