

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: P311517

Luminaire Tested: **24FCZ2-45-UNV-L82765-S-CP250-W2A-U-3000K**

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: P311517
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-45-UNV-L82765-S-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.250" POLYCARB SHEET
Light Source: (168) 3000K 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: 3815.0 lumens
Efficiency: N/A
Efficacy: 102.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.27 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

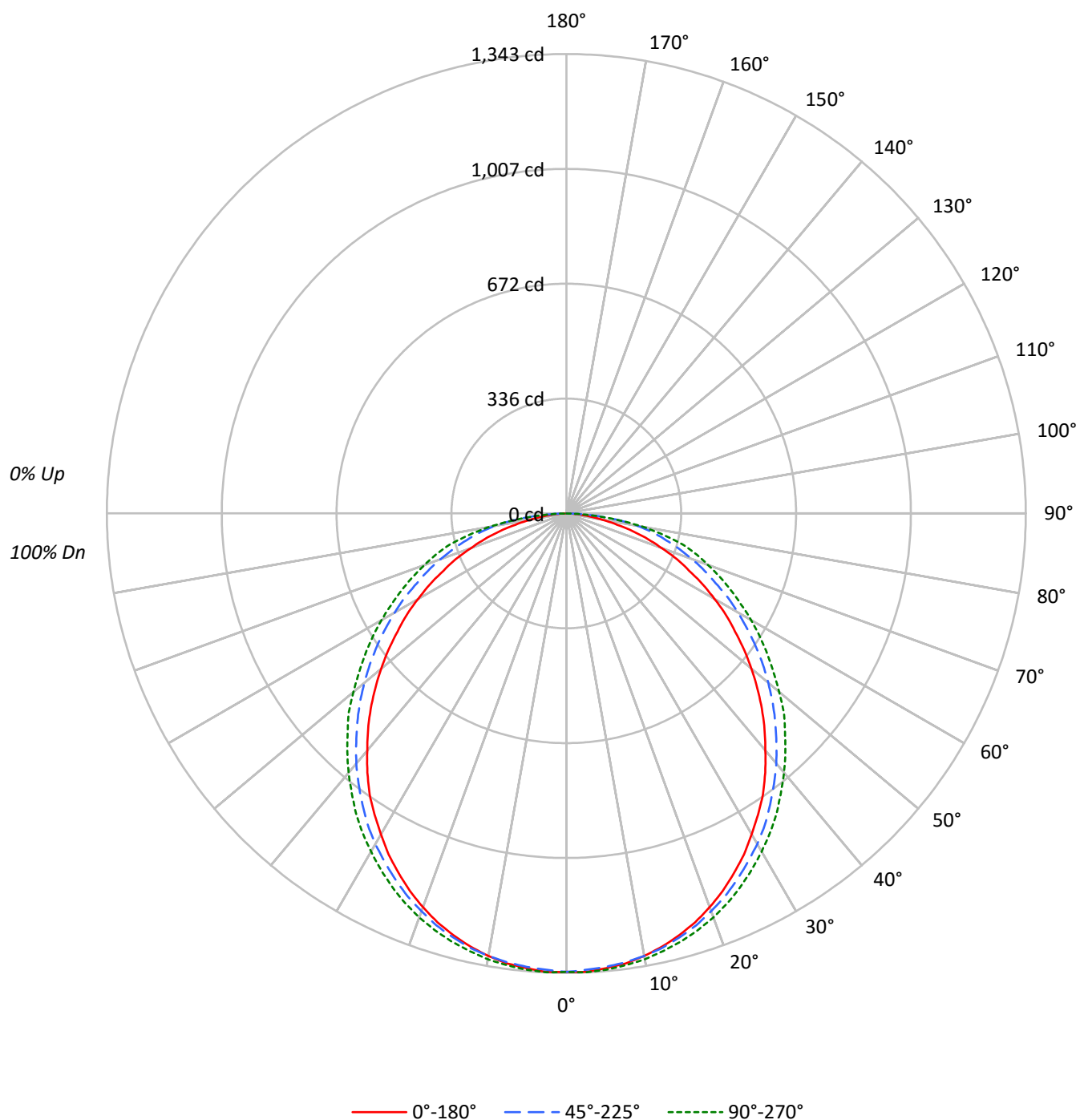
Input Watts (W): 37.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83		
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69		
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58		
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49		
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42		
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37		
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33		
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1803	1803	1803
5°	1802	1797	1808
10°	1795	1795	1808
15°	1777	1786	1804
20°	1754	1771	1799
25°	1722	1754	1788
30°	1683	1734	1773
35°	1646	1706	1759
40°	1590	1677	1739
45°	1538	1644	1720
50°	1479	1613	1699
55°	1413	1583	1683
60°	1347	1559	1679
65°	1262	1532	1690
70°	1168	1540	1735
75°	1046	1568	1833
80°	845	1662	1794
85°	636	1459	1422



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.9	3.3
10°-20°	362.5	9.5
20°-30°	545.0	14.3
30°-40°	649.2	17.0
40°-50°	664.4	17.4
50°-60°	598.1	15.7
60°-70°	469.7	12.3
70°-80°	304.9	8.0
80°-90°	94.3	2.5
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°	1034.4	27.1
0°-40°	1683.6	44.1
0°-60°	2946.1	77.2
0°-90°	3815.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3815.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1340	1340	1340	1340	1340	
5°	1334	1337	1330	1338	1339	127
15°	1276	1280	1282	1293	1295	360
25°	1160	1169	1182	1201	1204	534
35°	1002	1014	1038	1064	1071	625
45°	808	828	864	897	904	623
55°	602	629	675	710	717	540
65°	396	426	481	521	531	394
75°	201	240	302	343	353	213
85°	41	76	94	92	92	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1340.2	1340.2	1340.2	1340.2	1340.2
2.5°	1341.4	1341.4	1335.4	1341.4	1342.7
5°	1334.2	1336.6	1330.5	1337.8	1339.0
7.5°	1326.9	1326.9	1323.3	1330.5	1331.8
10°	1313.6	1314.8	1313.6	1322.1	1323.3
12.5°	1296.6	1299.0	1300.2	1308.7	1309.9
15°	1276.0	1279.6	1282.1	1293.0	1295.4
17.5°	1253.0	1256.6	1262.7	1274.8	1277.2
20°	1225.1	1230.0	1237.2	1253.0	1256.6
22.5°	1194.8	1199.7	1211.8	1226.3	1232.4
25°	1159.7	1169.4	1181.5	1200.9	1204.5
27.5°	1124.5	1133.0	1148.8	1169.4	1174.2
30°	1083.3	1096.7	1116.1	1136.7	1141.5
32.5°	1043.3	1056.7	1079.7	1101.5	1107.6
35°	1002.1	1014.3	1038.5	1063.9	1071.2
37.5°	954.9	970.6	997.3	1022.7	1030.0
40°	905.2	924.6	954.9	981.5	990.0
42.5°	857.9	878.5	908.8	937.9	947.6
45°	808.3	827.6	864.0	896.7	904.0
47.5°	757.4	779.2	818.0	850.7	862.8
50°	706.5	729.5	770.7	804.6	811.9
52.5°	655.6	679.8	723.4	759.8	763.4
55°	602.3	628.9	675.0	710.1	717.4
57.5°	553.8	576.8	626.5	662.8	671.3
60°	500.5	525.9	579.2	613.2	624.1
62.5°	449.6	476.2	532.0	565.9	575.6
65°	396.3	426.5	481.1	521.1	530.8
67.5°	350.2	379.3	437.5	476.2	485.9
70°	296.9	329.6	391.4	431.4	441.1
72.5°	250.8	284.8	346.6	385.3	399.9
75°	201.2	239.9	301.7	342.9	352.6
77.5°	152.7	197.5	260.5	292.0	292.0
80°	109.1	156.3	214.5	229.0	231.5
82.5°	71.5	117.5	158.7	157.5	157.5
85°	41.2	76.3	94.5	92.1	92.1
87.5°	15.8	31.5	33.9	33.9	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)