

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: P310439

Luminaire Tested: **24FCZ2-70HE-UNV-L82765-RDP-CP250-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: P310439
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-70HE-UNV-L82765-RDP-CP250-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" 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: 4016.0 lumens
Efficiency: N/A
Efficacy: 68.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

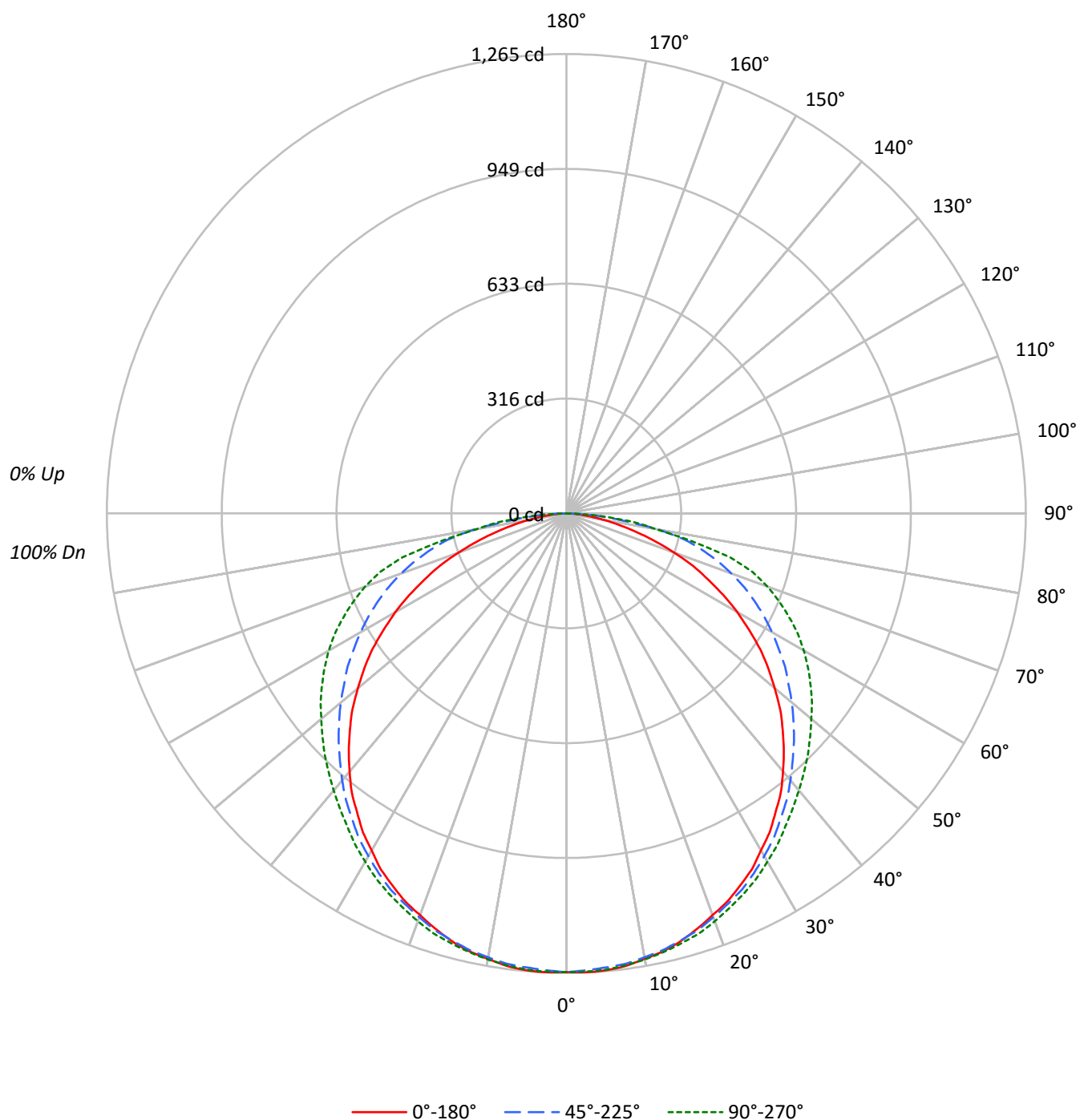
Input Watts (W): 58.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1699	1699	1699
5°	1706	1695	1703
10°	1701	1696	1704
15°	1698	1695	1707
20°	1686	1694	1711
25°	1680	1697	1715
30°	1665	1693	1721
35°	1649	1688	1728
40°	1630	1686	1749
45°	1603	1687	1789
50°	1568	1697	1843
55°	1528	1724	1925
60°	1463	1758	2032
65°	1370	1820	2156
70°	1246	1904	2319
75°	1056	2009	2423
80°	834	2022	1960
85°	614	1538	1723



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.8	3.0
10°-20°	344.8	8.6
20°-30°	527.2	13.1
30°-40°	644.6	16.0
40°-50°	687.0	17.1
50°-60°	656.8	16.4
60°-70°	556.4	13.9
70°-80°	373.9	9.3
80°-90°	105.5	2.6
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°	991.8	24.7
0°-40°	1636.4	40.7
0°-60°	2980.2	74.2
0°-90°	4016.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4016.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1263	1261	1255	1261	1261	120
15°	1219	1219	1217	1227	1225	344
25°	1131	1135	1143	1153	1155	521
35°	1004	1012	1028	1048	1052	629
45°	843	857	886	924	940	650
55°	651	675	735	793	821	580
65°	430	474	572	647	677	427
75°	203	277	386	452	466	218
85°	40	82	100	108	112	49
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1262.9	1262.9	1262.9	1262.9	1262.9
2.5°	1264.9	1264.9	1258.9	1262.9	1262.9
5°	1262.9	1260.9	1254.9	1260.9	1260.9
7.5°	1256.9	1254.9	1251.0	1256.9	1254.9
10°	1245.0	1245.0	1241.0	1247.0	1247.0
12.5°	1235.0	1233.0	1231.0	1239.0	1237.0
15°	1219.1	1219.1	1217.1	1227.1	1225.1
17.5°	1199.2	1201.2	1203.2	1211.1	1213.1
20°	1177.3	1181.2	1183.2	1195.2	1195.2
22.5°	1157.3	1159.3	1163.3	1175.3	1175.3
25°	1131.4	1135.4	1143.4	1153.4	1155.4
27.5°	1105.6	1107.5	1117.5	1131.4	1133.4
30°	1071.7	1077.7	1089.6	1105.6	1107.5
32.5°	1041.8	1047.8	1061.7	1077.7	1081.6
35°	1004.0	1011.9	1027.9	1047.8	1051.8
37.5°	970.1	976.1	996.0	1017.9	1023.9
40°	928.3	940.2	960.1	986.0	996.0
42.5°	886.4	898.4	922.3	956.2	968.1
45°	842.6	856.6	886.4	924.3	940.2
47.5°	798.8	814.7	848.6	892.4	910.3
50°	749.0	768.9	810.7	860.5	880.5
52.5°	701.2	725.1	770.9	826.7	852.6
55°	651.4	675.3	735.0	792.8	820.7
57.5°	595.6	627.5	693.2	758.9	788.8
60°	543.8	573.7	653.4	725.1	755.0
62.5°	488.0	527.9	613.5	689.2	719.1
65°	430.3	474.1	571.7	647.4	677.3
67.5°	378.5	426.3	529.9	605.6	635.4
70°	316.7	376.5	484.1	559.7	589.6
72.5°	259.0	324.7	436.2	509.9	537.8
75°	203.2	276.9	386.4	452.2	466.1
77.5°	151.4	229.1	334.7	362.5	352.6
80°	107.6	183.3	260.9	247.0	253.0
82.5°	69.7	139.4	161.4	183.3	189.2
85°	39.8	81.7	99.6	107.6	111.6
87.5°	17.9	29.9	39.8	39.8	37.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)