

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: P310692

Luminaire Tested: **24FCZ2-40HE-UNV-L82765-CP125-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: P310692
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: 24FCZ2-40HE-UNV-L82765-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, RIBBED LENS, 0.125" POLYCARB SHEET
Light Source: (336) 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: 3696.0 lumens
Efficiency: N/A
Efficacy: 119.2 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

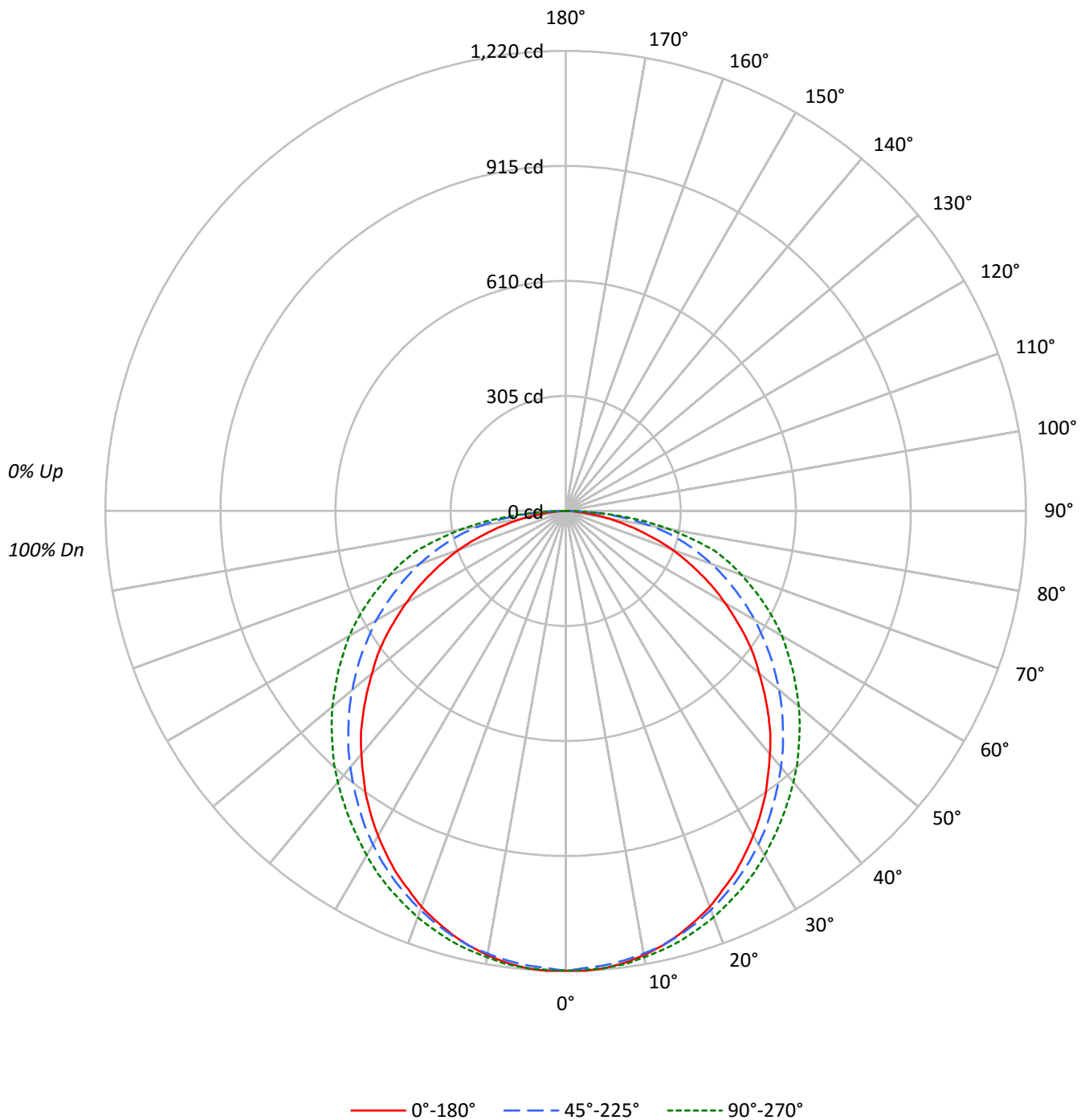
Input Watts (W): 31
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	92	89		92	89	87		82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		56
4	81	68	59	52	79	67	58	52	64	57	51		62	56	50		47
5	74	61	52	45	72	60	51	44	58	50	44		56	49	43		41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		36
7	64	50	41	34	62	49	40	34	47	39	34		46	39	34		31
8	59	45	37	31	57	45	36	30	43	36	30		42	35	30		28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1640	1640	1640
5°	1643	1633	1643
10°	1633	1628	1642
15°	1619	1623	1643
20°	1600	1612	1642
25°	1575	1600	1640
30°	1545	1587	1638
35°	1515	1571	1640
40°	1480	1559	1650
45°	1444	1549	1664
50°	1401	1545	1689
55°	1366	1548	1723
60°	1313	1561	1782
65°	1253	1577	1847
70°	1187	1626	1949
75°	1058	1696	2129
80°	903	1796	2176
85°	644	1780	2083



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	3.1
10°-20°	329.8	8.9
20°-30°	498.2	13.5
30°-40°	600.5	16.2
40°-50°	630.4	17.1
50°-60°	589.7	16.0
60°-70°	487.0	13.2
70°-80°	331.9	9.0
80°-90°	113.2	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°	943.4	25.5
0°-40°	1543.9	41.8
0°-60°	2764.0	74.8
0°-90°	3696.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3696.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1219	1219	1219	1219	1219	
5°	1216	1215	1209	1216	1216	115
15°	1162	1164	1165	1177	1180	328
25°	1061	1066	1078	1099	1105	488
35°	922	932	956	988	998	576
45°	759	775	814	858	874	585
55°	582	606	660	714	734	520
65°	394	427	495	558	580	390
75°	204	250	326	388	410	217
85°	42	82	115	130	135	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1218.9	1218.9	1218.9	1218.9	1218.9
2.5°	1220.1	1218.9	1212.8	1218.9	1217.7
5°	1216.5	1215.2	1209.1	1216.5	1216.5
7.5°	1207.9	1207.9	1201.7	1210.3	1211.6
10°	1195.6	1195.6	1191.9	1201.7	1201.7
12.5°	1180.9	1180.9	1180.9	1190.7	1191.9
15°	1162.5	1163.7	1165.0	1177.2	1179.7
17.5°	1140.4	1142.9	1146.6	1161.3	1163.7
20°	1117.1	1119.6	1125.7	1142.9	1146.6
22.5°	1087.7	1093.8	1102.4	1122.0	1125.7
25°	1060.7	1065.6	1077.9	1098.7	1104.9
27.5°	1027.6	1035.0	1050.9	1073.0	1081.6
30°	994.5	1001.9	1021.5	1047.2	1054.6
32.5°	958.9	970.0	990.8	1017.8	1026.4
35°	922.2	932.0	956.5	988.4	998.2
37.5°	881.7	895.2	922.2	956.5	968.8
40°	842.4	857.2	887.8	924.6	939.3
42.5°	803.2	817.9	852.3	893.9	908.7
45°	759.1	775.0	814.2	858.4	874.3
47.5°	714.9	734.5	777.5	824.1	841.2
50°	669.5	691.6	738.2	787.3	806.9
52.5°	629.1	649.9	699.0	751.7	770.1
55°	582.5	605.8	659.7	713.7	734.5
57.5°	534.7	560.4	618.0	676.9	697.7
60°	488.1	516.3	580.0	638.9	662.2
62.5°	442.7	470.9	537.1	598.4	621.7
65°	393.6	426.7	495.4	558.0	580.0
67.5°	347.0	382.6	454.9	516.3	538.3
70°	301.7	336.0	413.3	473.3	495.4
72.5°	252.6	291.9	369.1	431.6	454.9
75°	203.6	250.2	326.2	387.5	409.6
77.5°	158.2	206.0	282.0	332.3	343.4
80°	116.5	165.5	231.8	267.3	280.8
82.5°	74.8	123.9	176.6	202.3	213.4
85°	41.7	82.2	115.3	130.0	134.9
87.5°	17.2	35.6	46.6	52.7	52.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)