

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: P310330

Luminaire Tested: **24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-3500K**

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: P310330
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: 24FCZ2-60HE-UNV-L82765-RDP-CP125-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 3500K 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: 3539.0 lumens
Efficiency: N/A
Efficacy: 74.0 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

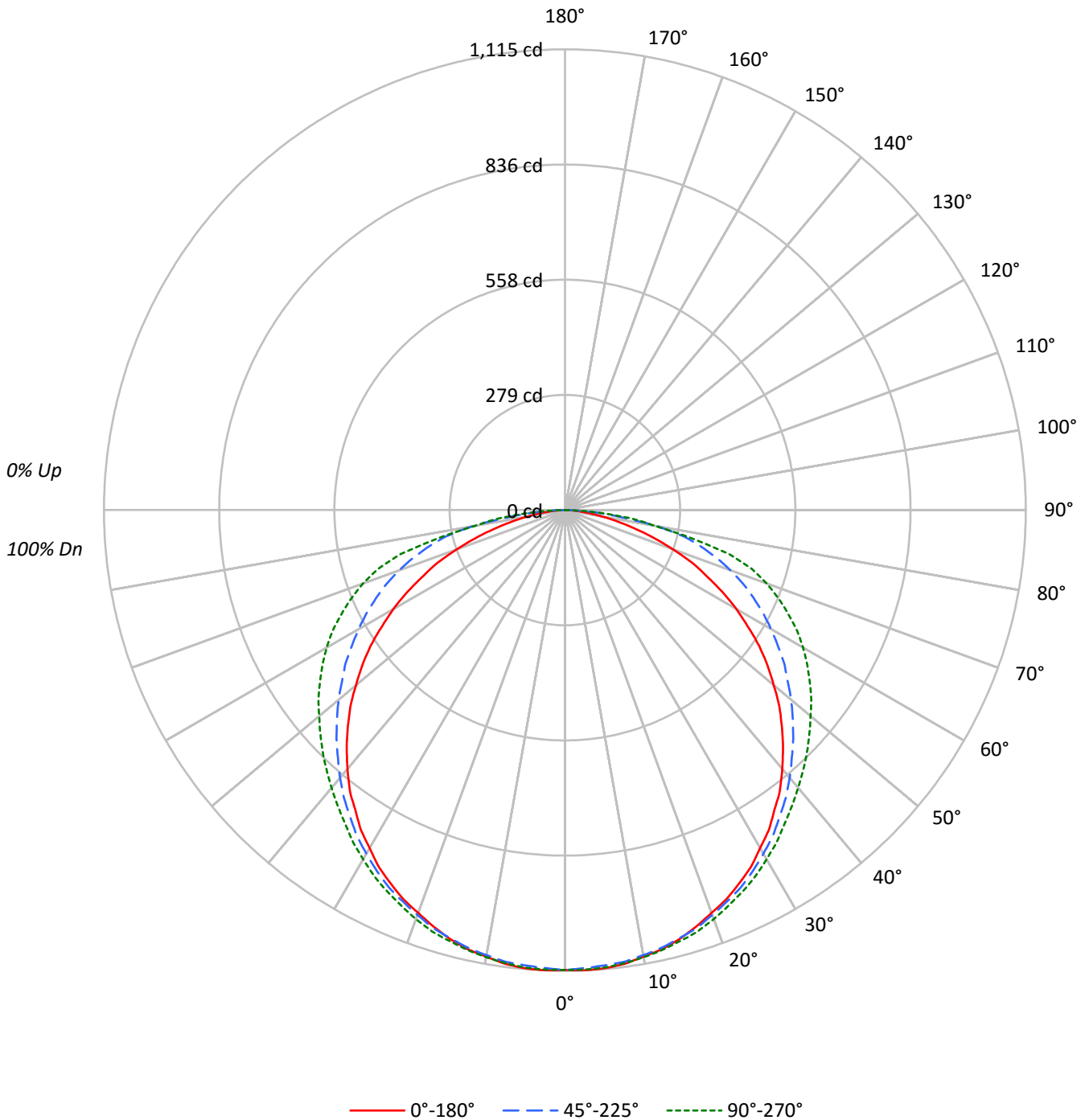
Input Watts (W): 47.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1497	1497	1497
5°	1503	1494	1501
10°	1499	1494	1501
15°	1496	1494	1504
20°	1485	1493	1508
25°	1480	1496	1511
30°	1467	1492	1516
35°	1453	1488	1522
40°	1437	1486	1542
45°	1413	1486	1576
50°	1382	1495	1624
55°	1346	1519	1696
60°	1290	1549	1790
65°	1207	1604	1900
70°	1098	1678	2044
75°	931	1770	2136
80°	735	1782	1727
85°	542	1355	1518



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.6	3.0
10°-20°	303.8	8.6
20°-30°	464.6	13.1
30°-40°	568.0	16.0
40°-50°	605.4	17.1
50°-60°	578.8	16.4
60°-70°	490.3	13.9
70°-80°	329.5	9.3
80°-90°	93.0	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°	874.0	24.7
0°-40°	1442.0	40.7
0°-60°	2626.2	74.2
0°-90°	3539.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3539.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1113	1113	1113	1113	1113	
5°	1113	1111	1106	1111	1111	106
15°	1074	1074	1072	1081	1080	303
25°	997	1001	1008	1016	1018	460
35°	885	892	906	923	927	554
45°	742	755	781	814	828	573
55°	574	595	648	699	723	511
65°	379	418	504	570	597	376
75°	179	244	340	398	411	192
85°	35	72	88	95	98	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1112.9	1112.9	1112.9	1112.9	1112.9
2.5°	1114.7	1114.7	1109.4	1112.9	1112.9
5°	1112.9	1111.2	1105.9	1111.2	1111.2
7.5°	1107.6	1105.9	1102.4	1107.6	1105.9
10°	1097.1	1097.1	1093.6	1098.9	1098.9
12.5°	1088.3	1086.6	1084.8	1091.8	1090.1
15°	1074.3	1074.3	1072.5	1081.3	1079.6
17.5°	1056.7	1058.5	1060.3	1067.3	1069.0
20°	1037.4	1040.9	1042.7	1053.2	1053.2
22.5°	1019.9	1021.6	1025.1	1035.7	1035.7
25°	997.1	1000.6	1007.6	1016.4	1018.1
27.5°	974.2	976.0	984.8	997.1	998.8
30°	944.4	949.7	960.2	974.2	976.0
32.5°	918.1	923.3	935.6	949.7	953.2
35°	884.7	891.7	905.8	923.3	926.8
37.5°	854.9	860.1	877.7	897.0	902.3
40°	818.0	828.5	846.1	868.9	877.7
42.5°	781.1	791.7	812.7	842.6	853.1
45°	742.5	754.8	781.1	814.5	828.5
47.5°	703.9	718.0	747.8	786.4	802.2
50°	660.0	677.6	714.4	758.3	775.9
52.5°	617.9	639.0	679.3	728.5	751.3
55°	574.0	595.1	647.7	698.6	723.2
57.5°	524.9	552.9	610.9	668.8	695.1
60°	479.2	505.6	575.8	639.0	665.3
62.5°	430.1	465.2	540.7	607.4	633.7
65°	379.2	417.8	503.8	570.5	596.8
67.5°	333.5	375.7	466.9	533.6	560.0
70°	279.1	331.8	426.6	493.3	519.6
72.5°	228.2	286.1	384.4	449.4	474.0
75°	179.0	244.0	340.5	398.5	410.8
77.5°	133.4	201.9	294.9	319.5	310.7
80°	94.8	161.5	230.0	217.7	222.9
82.5°	61.4	122.9	142.2	161.5	166.8
85°	35.1	72.0	87.8	94.8	98.3
87.5°	15.8	26.3	35.1	35.1	33.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)