

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: P311632

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-S-CA125-W2A-U-6500K**

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: P311632  
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: 24FCZ2-55HE-UNV-L82765-S-CA125-W2A-U-6500K  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS, 0.125" ACRYLIC SHEET  
Light Source: (336) 6500K 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: 5553.0 lumens  
Efficiency: N/A  
Efficacy: 123.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

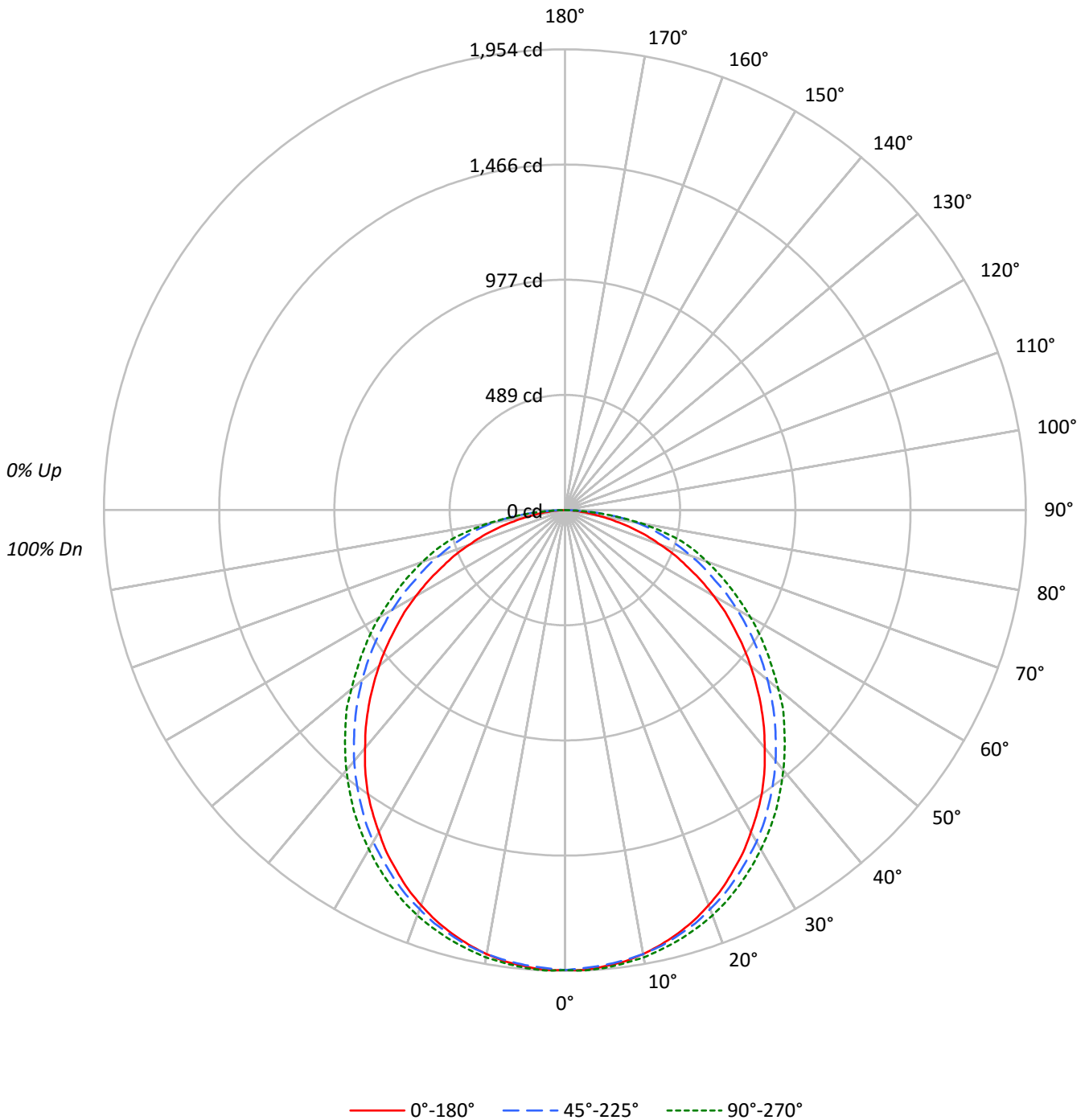
Input Watts (W): 45  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2625	2625	2625
5°	2623	2616	2632
10°	2612	2612	2632
15°	2587	2599	2626
20°	2553	2579	2619
25°	2506	2553	2603
30°	2450	2524	2581
35°	2396	2483	2561
40°	2314	2441	2531
45°	2239	2393	2504
50°	2152	2348	2474
55°	2056	2305	2449
60°	1960	2269	2444
65°	1836	2229	2460
70°	1700	2241	2526
75°	1522	2283	2668
80°	1230	2419	2610
85°	926	2124	2070



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.7	3.3
10°-20°	527.7	9.5
20°-30°	793.3	14.3
30°-40°	944.9	17.0
40°-50°	967.1	17.4
50°-60°	870.6	15.7
60°-70°	683.7	12.3
70°-80°	443.8	8.0
80°-90°	137.3	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°	1505.7	27.1
0°-40°	2450.6	44.1
0°-60°	4288.3	77.2
0°-90°	5553.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5553.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1951	1951	1951	1951	1951	
5°	1942	1946	1937	1947	1949	185
15°	1857	1863	1866	1882	1886	524
25°	1688	1702	1720	1748	1753	778
35°	1459	1476	1512	1549	1559	910
45°	1176	1205	1258	1305	1316	907
55°	877	915	982	1034	1044	786
65°	577	621	700	758	773	574
75°	293	349	439	499	513	310
85°	60	111	138	134	134	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1950.8	1950.8	1950.8	1950.8	1950.8
2.5°	1952.6	1952.6	1943.7	1952.6	1954.3
5°	1942.0	1945.5	1936.7	1947.3	1949.0
7.5°	1931.4	1931.4	1926.1	1936.7	1938.5
10°	1912.0	1913.8	1912.0	1924.3	1926.1
12.5°	1887.3	1890.8	1892.6	1904.9	1906.7
15°	1857.3	1862.6	1866.1	1882.0	1885.5
17.5°	1823.8	1829.1	1837.9	1855.6	1859.1
20°	1783.2	1790.3	1800.9	1823.8	1829.1
22.5°	1739.1	1746.2	1763.8	1785.0	1793.8
25°	1688.0	1702.1	1719.7	1748.0	1753.3
27.5°	1636.8	1649.2	1672.1	1702.1	1709.2
30°	1576.9	1596.3	1624.5	1654.5	1661.5
32.5°	1518.7	1538.1	1571.6	1603.3	1612.1
35°	1458.7	1476.3	1511.6	1548.7	1559.2
37.5°	1389.9	1412.8	1451.6	1488.7	1499.3
40°	1317.6	1345.8	1389.9	1428.7	1441.1
42.5°	1248.8	1278.8	1322.9	1365.2	1379.3
45°	1176.5	1204.7	1257.6	1305.2	1315.8
47.5°	1102.4	1134.1	1190.6	1238.2	1255.9
50°	1028.3	1061.8	1121.8	1171.2	1181.8
52.5°	954.2	989.5	1053.0	1105.9	1111.2
55°	876.6	915.4	982.5	1033.6	1044.2
57.5°	806.1	839.6	911.9	964.8	977.2
60°	728.5	765.5	843.1	892.5	908.4
62.5°	654.4	693.2	774.3	823.7	837.8
65°	576.8	620.9	700.2	758.5	772.6
67.5°	509.7	552.1	636.7	693.2	707.3
70°	432.1	479.8	569.7	627.9	642.0
72.5°	365.1	414.5	504.5	560.9	582.1
75°	292.8	349.2	439.2	499.2	513.3
77.5°	222.2	287.5	379.2	425.1	425.1
80°	158.7	227.5	312.2	333.4	336.9
82.5°	104.1	171.1	231.1	229.3	229.3
85°	60.0	111.1	137.6	134.1	134.1
87.5°	22.9	45.9	49.4	49.4	47.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)