

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: P309602

Luminaire Tested: **24FCZ2-55HE-UNV-L82765-HRP-CA125-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: P309602
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA125-W2A-U-4000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" ACRYLIC 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: 3829.0 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

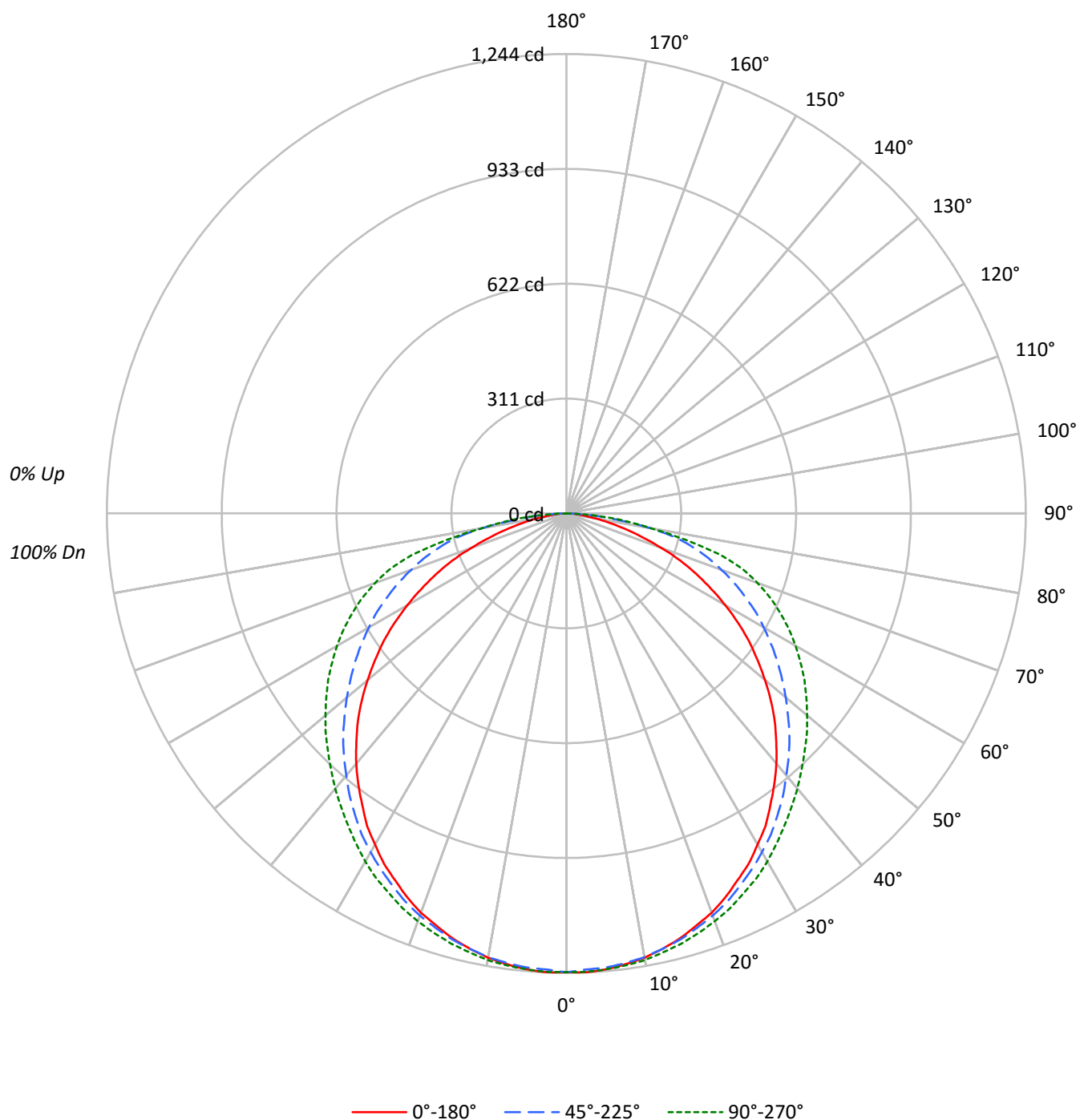
Input Watts (W): 43.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82		
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67		
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56		
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48		
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41		
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36		
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28		
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25		
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1672	1672	1672
5°	1674	1667	1674
10°	1669	1667	1678
15°	1659	1663	1679
20°	1648	1660	1682
25°	1628	1652	1685
30°	1609	1646	1691
35°	1582	1638	1693
40°	1554	1627	1709
45°	1519	1626	1736
50°	1470	1624	1782
55°	1418	1636	1846
60°	1337	1661	1928
65°	1235	1699	2036
70°	1078	1759	2169
75°	875	1850	2242
80°	646	1813	1813
85°	496	1337	1510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	3.1
10°-20°	338.0	8.8
20°-30°	514.5	13.4
30°-40°	624.7	16.3
40°-50°	660.0	17.2
50°-60°	622.8	16.3
60°-70°	517.8	13.5
70°-80°	340.7	8.9
80°-90°	92.9	2.4
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°	970.1	25.3
0°-40°	1594.8	41.7
0°-60°	2877.7	75.2
0°-90°	3829.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3829.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1242	1242	1242	1242	1242	
5°	1239	1239	1234	1239	1239	118
15°	1191	1193	1194	1206	1206	336
25°	1096	1103	1112	1132	1135	506
35°	963	975	997	1023	1031	603
45°	798	814	854	896	912	615
55°	604	630	697	763	787	538
65°	388	433	534	612	640	383
75°	168	245	356	422	431	181
85°	32	70	87	96	98	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1242.3	1242.3	1242.3	1242.3	1242.3
2.5°	1243.9	1242.3	1235.9	1242.3	1242.3
5°	1239.1	1239.1	1234.3	1239.1	1239.1
7.5°	1231.1	1231.1	1227.9	1234.3	1234.3
10°	1221.5	1221.5	1219.9	1227.9	1227.9
12.5°	1207.1	1208.7	1207.1	1216.7	1216.7
15°	1191.0	1192.6	1194.2	1205.5	1205.5
17.5°	1170.2	1173.4	1176.6	1189.4	1191.0
20°	1151.0	1152.6	1159.0	1173.4	1175.0
22.5°	1125.3	1130.1	1138.1	1152.6	1157.4
25°	1096.4	1102.9	1112.5	1131.7	1134.9
27.5°	1069.2	1074.0	1086.8	1107.7	1114.1
30°	1035.5	1043.6	1059.6	1080.4	1088.4
32.5°	1003.5	1011.5	1030.7	1053.2	1059.6
35°	963.4	974.6	997.1	1022.7	1030.7
37.5°	924.9	936.1	963.4	992.3	1001.9
40°	884.9	897.7	926.5	960.2	973.0
42.5°	841.6	859.2	891.3	928.1	942.6
45°	798.3	814.3	854.4	896.1	912.1
47.5°	751.8	771.0	814.3	864.0	883.3
50°	702.1	726.2	775.9	830.4	851.2
52.5°	652.4	679.7	735.8	796.7	819.1
55°	604.3	630.0	697.3	763.0	787.1
57.5°	551.4	583.5	657.2	727.8	751.8
60°	496.9	532.2	617.2	690.9	716.5
62.5°	442.4	482.5	578.7	652.4	679.7
65°	387.9	432.8	533.8	612.3	639.6
67.5°	335.0	384.7	492.1	570.7	597.9
70°	274.1	336.6	447.2	524.2	551.4
72.5°	218.0	290.1	404.0	476.1	500.1
75°	168.3	245.3	355.9	421.6	431.2
77.5°	123.4	200.4	306.2	328.6	330.2
80°	83.4	160.3	234.0	230.8	234.0
82.5°	54.5	120.2	147.5	165.1	166.7
85°	32.1	70.5	86.6	96.2	97.8
87.5°	16.0	24.0	30.5	32.1	35.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)