

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: P309792

Luminaire Tested: **24FCZ2-75HE-UNV-L82765-HRP-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: P309792
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: 24FCZ2-75HE-UNV-L82765-HRP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. 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: 5189.0 lumens
Efficiency: N/A
Efficacy: 81.1 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

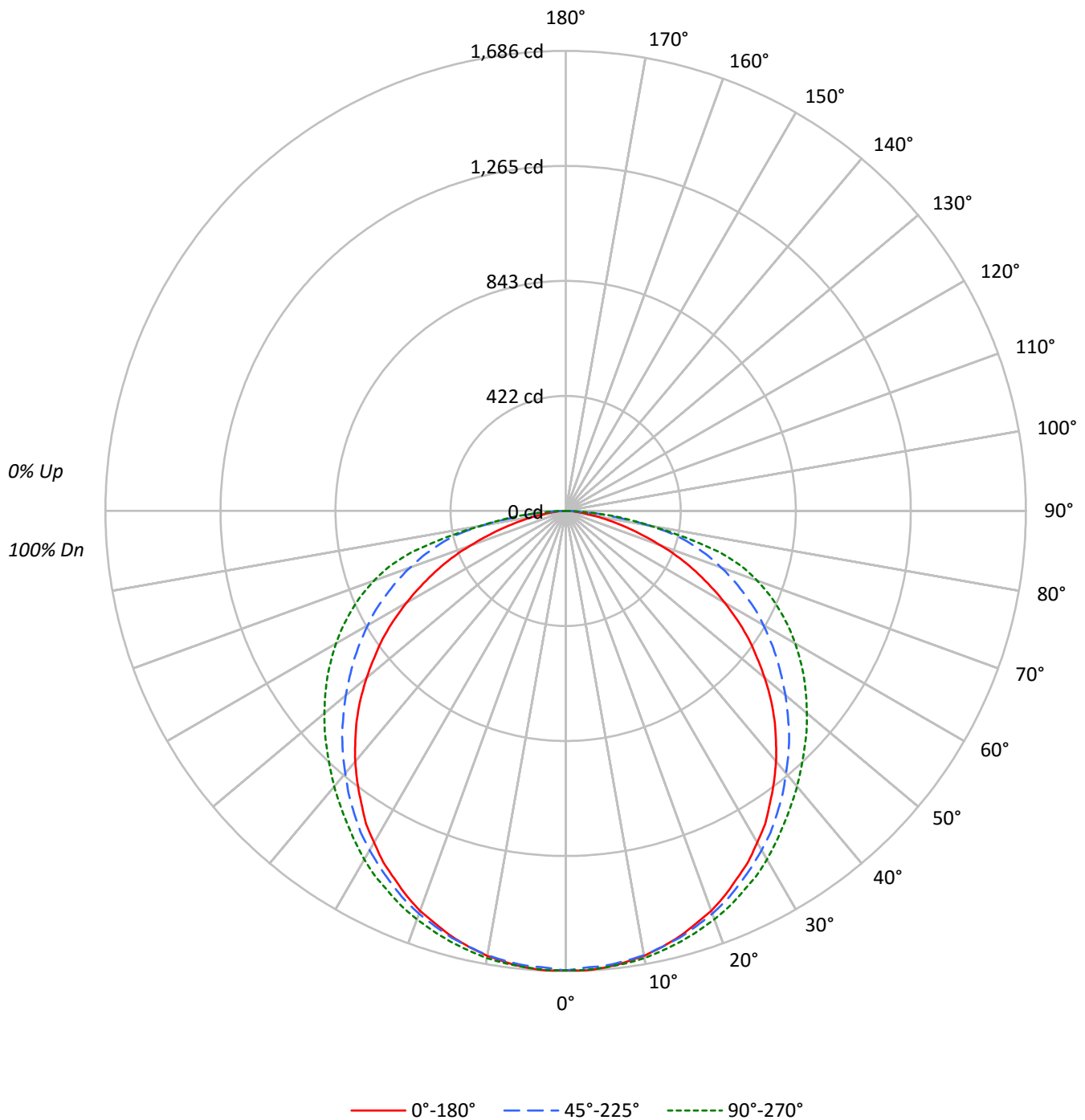
Input Watts (W): 64
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2265	2265	2265
5°	2268	2259	2268
10°	2262	2259	2273
15°	2248	2254	2276
20°	2233	2249	2280
25°	2206	2238	2283
30°	2180	2231	2292
35°	2144	2219	2294
40°	2106	2205	2316
45°	2058	2203	2352
50°	1992	2201	2415
55°	1921	2217	2502
60°	1812	2251	2613
65°	1674	2303	2760
70°	1461	2384	2940
75°	1186	2507	3038
80°	876	2458	2458
85°	670	1811	2046



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.5	3.1
10°-20°	458.0	8.8
20°-30°	697.2	13.4
30°-40°	846.6	16.3
40°-50°	894.4	17.2
50°-60°	844.0	16.3
60°-70°	701.7	13.5
70°-80°	461.7	8.9
80°-90°	125.8	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°	1314.7	25.3
0°-40°	2161.3	41.7
0°-60°	3899.7	75.2
0°-90°	5189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5189.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1684	1684	1684	1684	1684	
5°	1679	1679	1673	1679	1679	159
15°	1614	1616	1618	1634	1634	455
25°	1486	1495	1508	1534	1538	685
35°	1306	1321	1351	1386	1397	817
45°	1082	1104	1158	1214	1236	833
55°	819	854	945	1034	1067	729
65°	526	586	723	830	867	520
75°	228	332	482	571	584	246
85°	43	96	117	130	132	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1683.6	1683.6	1683.6	1683.6	1683.6
2.5°	1685.7	1683.6	1674.9	1683.6	1683.6
5°	1679.2	1679.2	1672.7	1679.2	1679.2
7.5°	1668.4	1668.4	1664.0	1672.7	1672.7
10°	1655.3	1655.3	1653.2	1664.0	1664.0
12.5°	1635.8	1638.0	1635.8	1648.8	1648.8
15°	1614.1	1616.2	1618.4	1633.6	1633.6
17.5°	1585.8	1590.2	1594.5	1611.9	1614.1
20°	1559.8	1561.9	1570.6	1590.2	1592.3
22.5°	1525.0	1531.5	1542.4	1561.9	1568.4
25°	1485.9	1494.6	1507.6	1533.7	1538.0
27.5°	1449.0	1455.5	1472.9	1501.1	1509.8
30°	1403.3	1414.2	1435.9	1464.2	1475.0
32.5°	1359.9	1370.8	1396.8	1427.2	1435.9
35°	1305.6	1320.8	1351.2	1386.0	1396.8
37.5°	1253.4	1268.7	1305.6	1344.7	1357.7
40°	1199.1	1216.5	1255.6	1301.2	1318.6
42.5°	1140.5	1164.4	1207.8	1257.8	1277.3
45°	1081.8	1103.6	1157.9	1214.3	1236.1
47.5°	1018.8	1044.9	1103.6	1170.9	1197.0
50°	951.5	984.1	1051.4	1125.3	1153.5
52.5°	884.1	921.1	997.1	1079.7	1110.1
55°	819.0	853.7	945.0	1034.0	1066.6
57.5°	747.3	790.7	890.7	986.2	1018.8
60°	673.4	721.2	836.4	936.3	971.0
62.5°	599.6	653.9	784.2	884.1	921.1
65°	525.7	586.5	723.4	829.8	866.8
67.5°	454.0	521.4	666.9	773.4	810.3
70°	371.5	456.2	606.1	710.4	747.3
72.5°	295.4	393.2	547.4	645.2	677.8
75°	228.1	332.4	482.3	571.3	584.4
77.5°	167.3	271.5	414.9	445.3	447.5
80°	113.0	217.2	317.2	312.8	317.2
82.5°	73.9	162.9	199.9	223.8	225.9
85°	43.4	95.6	117.3	130.3	132.5
87.5°	21.7	32.6	41.3	43.4	47.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)