

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: P309747

Luminaire Tested: **24FCZ2-70HE-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: P309747
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: 24FCZ2-70HE-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: 4854.0 lumens
Efficiency: N/A
Efficacy: 82.6 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

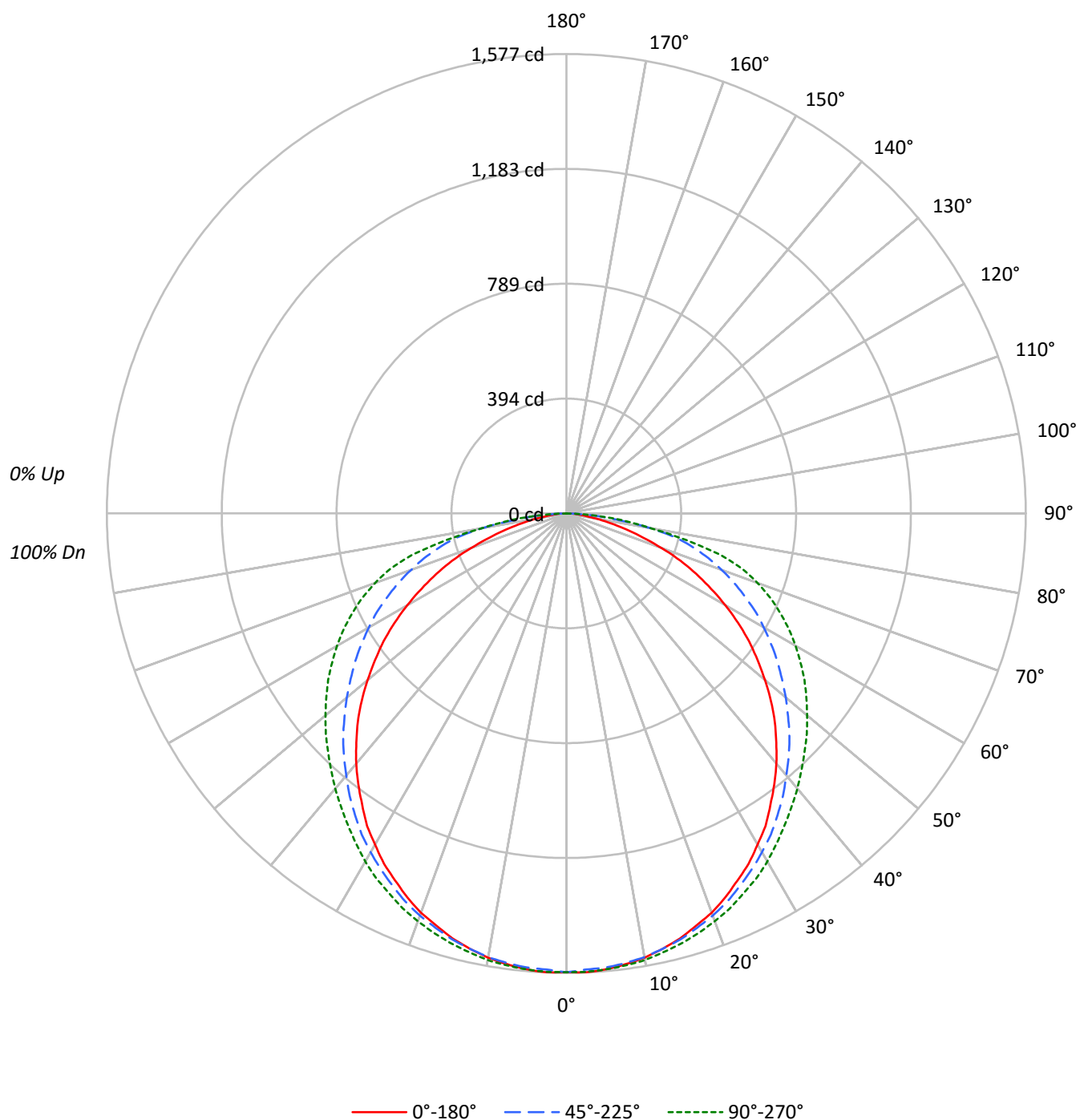
Input Watts (W): 58.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309747

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CP125-W2A-U-4500K

Luminous Intensity Polar Plot





TEST NUMBER: P309747

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CP125-W2A-U-4500K

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°	2119	2119	2119
5°	2122	2113	2122
10°	2116	2113	2127
15°	2103	2109	2129
20°	2089	2104	2133
25°	2064	2094	2136
30°	2039	2087	2144
35°	2006	2076	2146
40°	1970	2063	2167
45°	1926	2061	2200
50°	1863	2059	2259
55°	1797	2074	2341
60°	1695	2105	2444
65°	1566	2154	2581
70°	1367	2231	2750
75°	1109	2345	2842
80°	819	2299	2299
85°	627	1694	1914



TEST NUMBER: P309747

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CP125-W2A-U-4500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.2	3.1
10°-20°	428.4	8.8
20°-30°	652.2	13.4
30°-40°	791.9	16.3
40°-50°	836.7	17.2
50°-60°	789.5	16.3
60°-70°	656.5	13.5
70°-80°	431.9	8.9
80°-90°	117.7	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°	1229.8	25.3
0°-40°	2021.8	41.7
0°-60°	3648.0	75.2
0°-90°	4854.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4854.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1575	1575	1575	1575	1575	
5°	1571	1571	1565	1571	1571	149
15°	1510	1512	1514	1528	1528	426
25°	1390	1398	1410	1435	1439	641
35°	1221	1236	1264	1296	1307	765
45°	1012	1032	1083	1136	1156	779
55°	766	799	884	967	998	682
65°	492	549	677	776	811	486
75°	213	311	451	534	547	230
85°	41	89	110	122	124	50
90°	0	0	0	0	0	



TEST NUMBER: P309747

CATALOG NUMBER: 24FCZ2-70HE-UNV-L82765-HRP-CP125-W2A-U-4500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1574.9	1574.9	1574.9	1574.9	1574.9
2.5°	1576.9	1574.9	1566.8	1574.9	1574.9
5°	1570.8	1570.8	1564.7	1570.8	1570.8
7.5°	1560.7	1560.7	1556.6	1564.7	1564.7
10°	1548.5	1548.5	1546.4	1556.6	1556.6
12.5°	1530.2	1532.2	1530.2	1542.4	1542.4
15°	1509.9	1511.9	1513.9	1528.1	1528.1
17.5°	1483.4	1487.5	1491.6	1507.8	1509.9
20°	1459.1	1461.1	1469.2	1487.5	1489.5
22.5°	1426.5	1432.6	1442.8	1461.1	1467.2
25°	1390.0	1398.1	1410.3	1434.7	1438.7
27.5°	1355.4	1361.5	1377.8	1404.2	1412.3
30°	1312.7	1322.9	1343.2	1369.6	1379.8
32.5°	1272.1	1282.3	1306.6	1335.1	1343.2
35°	1221.3	1235.5	1264.0	1296.5	1306.6
37.5°	1172.5	1186.8	1221.3	1257.9	1270.1
40°	1121.7	1138.0	1174.6	1217.2	1233.5
42.5°	1066.9	1089.2	1129.9	1176.6	1194.9
45°	1012.0	1032.3	1083.1	1135.9	1156.3
47.5°	953.1	977.4	1032.3	1095.3	1119.7
50°	890.1	920.5	983.5	1052.6	1079.0
52.5°	827.1	861.6	932.7	1010.0	1038.4
55°	766.1	798.6	884.0	967.3	997.8
57.5°	699.0	739.7	833.2	922.6	953.1
60°	630.0	674.7	782.4	875.8	908.4
62.5°	560.9	611.7	733.6	827.1	861.6
65°	491.8	548.7	676.7	776.3	810.8
67.5°	424.7	487.7	623.9	723.4	758.0
70°	347.5	426.7	567.0	664.5	699.0
72.5°	276.4	367.8	512.1	603.5	634.0
75°	213.4	310.9	451.1	534.4	546.6
77.5°	156.5	254.0	388.1	416.6	418.6
80°	105.7	203.2	296.7	292.6	296.7
82.5°	69.1	152.4	187.0	209.3	211.3
85°	40.6	89.4	109.7	121.9	124.0
87.5°	20.3	30.5	38.6	40.6	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)