

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: NEO-RAY

Report Number: P243312

Luminaire Tested: **S123DR-H560D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243312
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-49)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H560D940-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1907.6 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

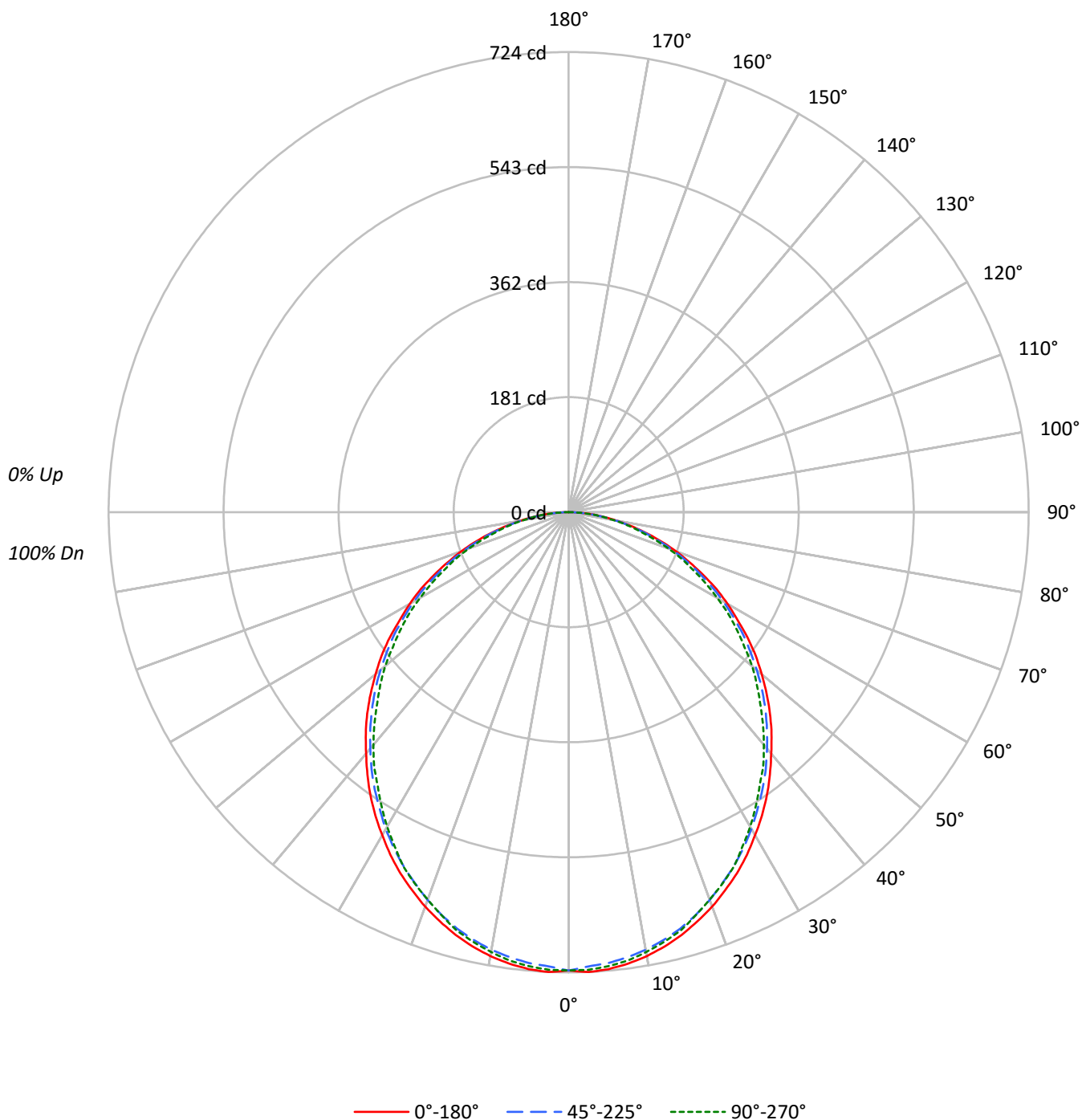
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
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	109	104	100	96	106	102	98	94	97	94	91	94	91	89	90	88	86	84		
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70		
3	90	80	72	65	88	78	71	65	75	69	64	73	67	62	70	65	61	59		
4	83	71	62	55	80	70	61	55	67	60	54	65	59	54	63	57	53	51		
5	76	63	54	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44		
6	70	57	48	42	69	56	48	42	54	47	41	53	46	41	51	45	41	39		
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34		
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30		
9	57	44	35	30	56	43	35	30	42	35	30	41	34	29	40	34	29	27		
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8741	8741	8741
5°	8781	8666	8724
10°	8729	8605	8649
15°	8639	8512	8550
20°	8520	8374	8366
25°	8380	8221	8229
30°	8213	8055	7996
35°	8050	7874	7758
40°	7845	7685	7563
45°	7683	7500	7306
50°	7477	7286	7107
55°	7261	7073	6834
60°	7004	6817	6543
65°	6700	6496	6224
70°	6361	6152	5901
75°	5901	5737	5428
80°	5312	5186	5019
85°	4965	4715	4548

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.0	3.6
10°-20°	192.4	10.1
20°-30°	284.8	14.9
30°-40°	334.1	17.5
40°-50°	337.7	17.7
50°-60°	298.7	15.7
60°-70°	224.3	11.8
70°-80°	129.3	6.8
80°-90°	38.3	2.0
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°	545.3	28.6
0°-40°	879.3	46.1
0°-60°	1515.7	79.5
0°-90°	1907.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1907.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	721	721	721	721	721	
5°	722	719	712	718	717	68
15°	688	685	678	683	681	194
25°	627	622	615	618	615	288
35°	544	539	532	530	524	340
45°	448	445	438	432	426	345
55°	344	341	335	328	323	307
65°	234	232	226	221	217	231
75°	126	125	122	119	116	134
85°	36	35	34	33	33	40
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	721.1	721.1	721.1	721.1	721.1
2.5°	724.1	721.7	715.2	721.7	720.5
5°	721.7	718.7	712.2	718.1	717.0
7.5°	716.4	713.4	706.3	712.8	711.6
10°	709.2	706.3	699.1	704.5	702.7
12.5°	699.7	696.7	689.6	693.8	692.6
15°	688.4	684.8	678.3	683.1	681.3
17.5°	674.7	671.8	664.6	670.6	665.2
20°	660.5	657.5	649.2	654.5	648.6
22.5°	643.8	640.3	631.9	635.5	632.5
25°	626.6	621.8	614.7	617.7	615.3
27.5°	607.6	602.8	595.7	596.9	592.7
30°	586.8	582.6	575.5	576.7	571.3
32.5°	566.0	562.4	553.5	553.5	548.1
35°	544.0	539.2	532.1	530.3	524.3
37.5°	520.2	516.0	509.5	506.5	502.9
40°	495.8	493.4	485.7	482.1	478.0
42.5°	472.6	468.5	461.9	457.2	452.4
45°	448.2	444.7	437.5	431.6	426.2
47.5°	422.7	419.7	412.6	406.0	401.9
50°	396.5	394.1	386.4	379.3	376.9
52.5°	371.0	368.0	360.3	353.7	349.0
55°	343.6	341.2	334.7	328.2	323.4
57.5°	314.5	314.5	307.3	301.4	297.8
60°	288.9	285.9	281.2	274.7	269.9
62.5°	262.2	260.4	253.8	247.3	243.7
65°	233.6	231.9	226.5	220.6	217.0
67.5°	205.7	205.1	200.3	195.6	193.2
70°	179.5	178.3	173.6	168.8	166.5
72.5°	152.8	151.6	147.4	143.3	140.3
75°	126.0	124.8	122.5	118.9	115.9
77.5°	99.9	99.9	96.9	95.7	94.5
80°	76.1	75.5	74.3	73.1	71.9
82.5°	54.7	54.1	52.9	52.3	52.3
85°	35.7	35.1	33.9	33.3	32.7
87.5°	18.4	17.2	16.6	15.5	14.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)