

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: P243376

Luminaire Tested: **S123DR-H560D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243376
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-54)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H560D935-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1868.4 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

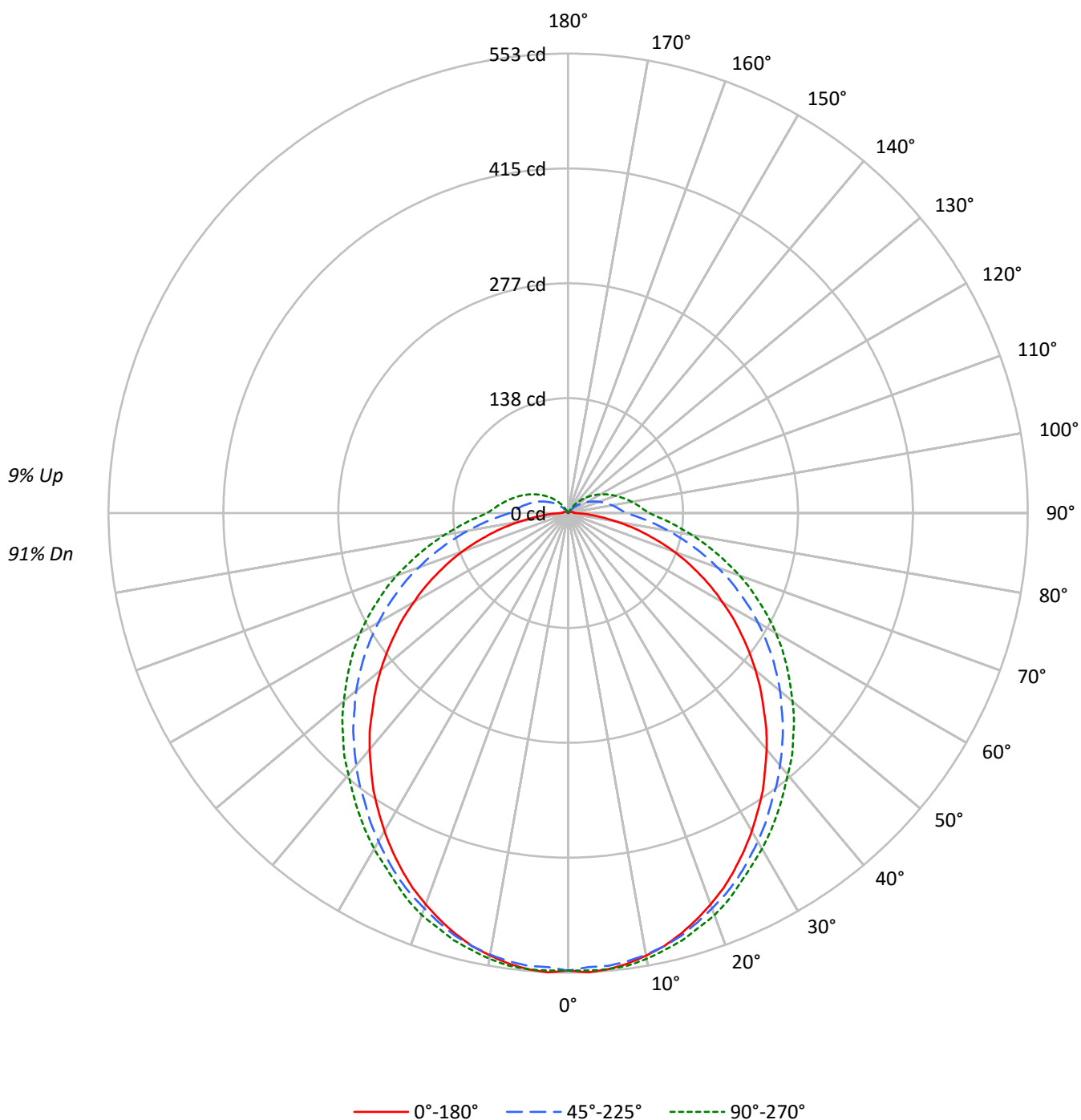
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RCR																	
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6673	6673	6673
5°	6693	6501	6499
10°	6630	6337	6300
15°	6539	6156	6084
20°	6414	5942	5865
25°	6271	5743	5612
30°	6111	5519	5399
35°	5949	5293	5186
40°	5773	5108	4983
45°	5578	4926	4813
50°	5415	4739	4636
55°	5214	4551	4464
60°	5004	4341	4294
65°	4784	4116	4088
70°	4534	3874	3888
75°	4158	3614	3650
80°	3677	3355	3442
85°	3271	3145	3283

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.3	2.8
10°-20°	149.0	8.0
20°-30°	223.2	11.9
30°-40°	267.0	14.3
40°-50°	280.0	15.0
50°-60°	263.2	14.1
60°-70°	220.3	11.8
70°-80°	158.1	8.5
80°-90°	94.7	5.1
90°-100°	60.0	3.2
100°-110°	44.2	2.4
110°-120°	29.6	1.6
120°-130°	17.1	0.9
130°-140°	7.9	0.4
140°-150°	1.8	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	424.4	22.7
0°-40°	691.4	37.0
0°-60°	1234.6	66.1
0°-90°	1707.7	91.4
90°-120°	133.9	7.2
90°-150°	160.6	8.6
90°-180°	161.0	8.6
0°-180°	1868.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	551	550	547	552	551	52
15°	524	528	526	533	532	148
25°	474	480	484	491	491	218
35°	408	418	426	437	440	255
45°	332	349	366	378	383	257
55°	254	276	299	315	321	228
65°	174	200	227	247	254	173
75°	96	125	156	177	184	102
85°	29	60	93	114	122	30
90°	8	38	70	91	98	6
95°	6	31	61	80	87	5
105°	5	20	46	64	69	5
115°	3	10	33	48	53	3
125°	2	2	20	33	37	2
135°	1	1	9	19	22	1
145°	1	0	0	6	8	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	550.5	550.5	550.5	550.5	550.5
2.5°	553.3	551.6	547.0	552.2	551.1
5°	551.1	550.5	547.0	551.6	551.1
7.5°	547.0	547.0	544.2	549.3	549.3
10°	540.7	542.4	539.6	545.3	544.7
12.5°	533.8	536.1	533.8	540.1	538.4
15°	524.1	527.5	526.4	533.3	532.1
17.5°	513.2	517.2	516.6	523.5	522.9
20°	501.1	506.3	506.3	513.2	514.9
22.5°	488.5	494.2	495.9	502.8	504.0
25°	473.6	479.9	483.9	491.4	490.8
27.5°	458.1	465.5	470.1	478.2	478.2
30°	442.0	450.6	456.3	464.9	466.7
32.5°	424.8	435.1	442.0	451.2	453.5
35°	408.1	417.9	425.9	436.8	439.7
37.5°	389.2	401.2	412.1	423.6	425.3
40°	371.4	384.6	396.6	408.7	411.0
42.5°	353.0	366.8	381.1	393.2	398.4
45°	332.4	349.0	365.6	378.3	382.9
47.5°	314.0	330.6	348.4	363.3	368.5
50°	294.5	311.7	332.9	347.3	352.4
52.5°	274.4	293.3	315.7	331.2	336.4
55°	254.3	275.5	299.1	315.1	320.9
57.5°	235.3	256.6	281.3	299.1	305.4
60°	214.1	237.6	263.5	281.8	288.7
62.5°	195.2	219.3	246.3	264.6	271.5
65°	174.5	200.3	227.3	247.4	253.7
67.5°	155.6	180.8	210.1	230.2	237.1
70°	135.5	161.9	191.1	211.8	219.3
72.5°	115.4	143.5	173.4	194.6	200.9
75°	95.9	125.1	155.6	176.8	183.7
77.5°	77.5	106.8	138.3	159.6	167.0
80°	59.1	89.5	122.3	143.5	151.0
82.5°	43.1	74.0	107.3	128.0	134.9
85°	29.3	59.7	93.0	114.2	121.7
87.5°	17.2	48.2	80.4	101.6	107.9
90°	8.0	37.9	70.0	91.3	97.6
92.5°	7.5	33.9	64.9	85.0	91.3
95°	6.3	31.0	60.8	80.4	86.7
97.5°	6.3	28.1	57.4	76.3	82.1
100°	5.7	25.3	54.0	71.8	77.5
102.5°	5.2	22.4	49.9	67.7	73.5
105°	4.6	20.1	46.5	63.7	68.9
107.5°	4.0	17.2	43.1	59.7	64.9
110°	4.0	14.9	39.6	55.7	60.8

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.4	12.6	36.2	51.7	56.8
115°	2.9	10.3	32.7	47.6	52.8
117.5°	2.9	8.0	29.3	44.2	48.8
120°	2.9	6.3	26.4	40.2	44.8
122.5°	2.3	4.0	23.5	36.7	41.3
125°	2.3	2.3	20.1	32.7	37.3
127.5°	1.7	1.1	17.2	29.3	33.3
130°	1.7	1.1	14.4	25.8	29.8
132.5°	1.1	1.1	11.5	22.4	26.4
135°	1.1	0.6	8.6	18.9	22.4
137.5°	1.1	0.6	5.7	15.5	18.9
140°	0.6	0.6	2.9	12.1	15.5
142.5°	0.6	0.0	0.6	9.2	12.1
145°	0.6	0.0	0.0	5.7	8.0
147.5°	0.6	0.0	0.0	2.9	5.2
150°	0.6	0.0	0.0	0.0	1.7
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)