

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: P242545

Luminaire Tested: **S123RDR-S560D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242545  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S560D930-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1630.7 lumens  
Efficiency: N/A  
Efficacy: 86.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')  
CIE Type: Direct

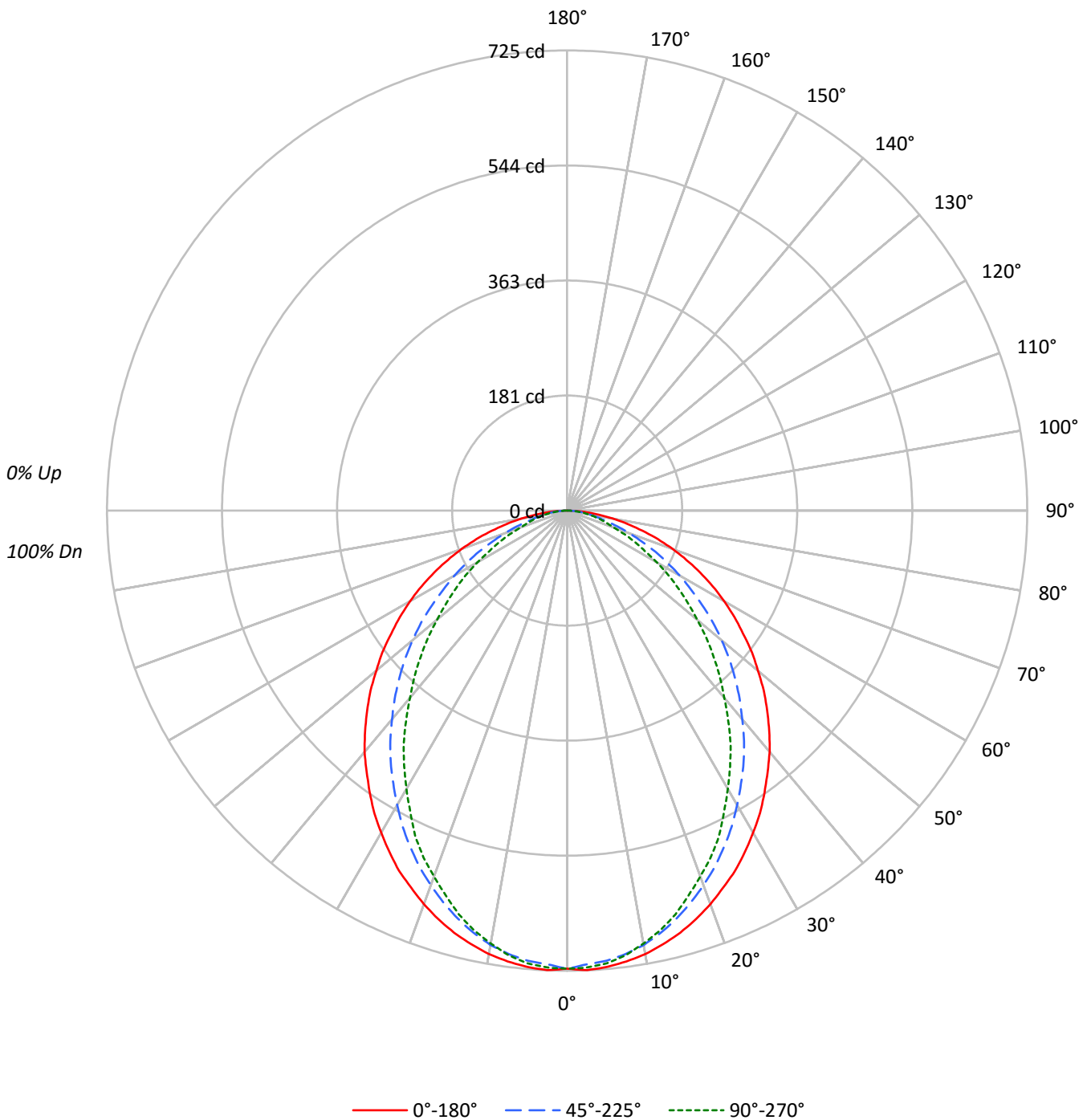
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8749	8749	8749
5°	8783	8662	8712
10°	8733	8553	8523
15°	8639	8352	8265
20°	8511	8102	7914
25°	8378	7821	7571
30°	8202	7496	7088
35°	8022	7172	6644
40°	7855	6790	6095
45°	7637	6413	5600
50°	7396	5983	5044
55°	7151	5492	4529
60°	6926	4967	3959
65°	6631	4400	3393
70°	6266	3693	2740
75°	5732	2908	2576
80°	5110	2576	2373
85°	4311	2281	2114



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.9	4.2
10°-20°	188.8	11.6
20°-30°	271.8	16.7
30°-40°	306.1	18.8
40°-50°	292.8	18.0
50°-60°	239.7	14.7
60°-70°	161.6	9.9
70°-80°	81.0	5.0
80°-90°	21.2	1.3
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°	528.4	32.4
0°-40°	834.5	51.2
0°-60°	1366.9	83.8
0°-90°	1630.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1630.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	722	722	722	722	722	
5°	722	719	712	717	716	68
15°	688	682	666	663	659	194
25°	626	612	585	572	566	288
35°	542	521	485	460	449	339
45°	446	419	374	341	327	344
55°	338	310	260	226	214	303
65°	231	199	153	125	118	229
75°	122	94	62	56	55	130
85°	31	18	16	15	15	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	721.8	721.8	721.8	721.8	721.8
2.5°	724.7	722.4	715.4	721.8	720.6
5°	721.8	718.9	711.9	717.1	716.0
7.5°	716.5	713.6	704.8	708.3	706.6
10°	709.5	705.4	694.9	695.5	692.5
12.5°	699.6	694.9	681.4	680.8	677.3
15°	688.4	682.0	665.6	662.7	658.6
17.5°	675.0	667.9	647.5	641.6	635.8
20°	659.8	650.4	628.1	620.5	613.5
22.5°	642.8	631.7	607.7	597.7	591.3
25°	626.4	611.8	584.8	572.5	566.1
27.5°	606.5	590.7	561.4	545.0	535.1
30°	586.0	568.4	535.6	515.7	506.4
32.5°	565.5	545.0	509.9	487.6	477.7
35°	542.1	521.0	484.7	459.5	449.0
37.5°	518.7	495.8	457.8	429.7	416.8
40°	496.4	470.7	429.1	398.7	385.2
42.5°	471.3	445.5	402.2	368.2	356.5
45°	445.5	419.2	374.1	340.7	326.7
47.5°	420.3	391.1	346.6	310.3	298.0
50°	392.2	364.7	317.3	281.0	267.5
52.5°	367.1	336.6	289.8	251.7	240.0
55°	338.4	309.7	259.9	226.0	214.3
57.5°	312.6	281.6	231.2	199.0	189.1
60°	285.7	253.5	204.9	173.3	163.3
62.5°	258.7	226.6	178.0	148.7	138.2
65°	231.2	199.0	153.4	124.7	118.3
67.5°	203.7	170.9	126.4	104.8	97.8
70°	176.8	145.2	104.2	83.7	77.3
72.5°	149.9	118.8	82.5	66.7	65.0
75°	122.4	94.3	62.1	56.2	55.0
77.5°	97.2	71.4	48.6	45.1	43.9
80°	73.2	49.2	36.9	35.1	34.0
82.5°	50.3	30.4	26.3	24.6	24.6
85°	31.0	18.1	16.4	15.2	15.2
87.5°	14.0	7.6	7.6	7.0	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)