

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: P242550

Luminaire Tested: **S123RDR-S560D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242550  
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-S560D935-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1722.1 lumens  
Efficiency: N/A  
Efficacy: 91.6 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

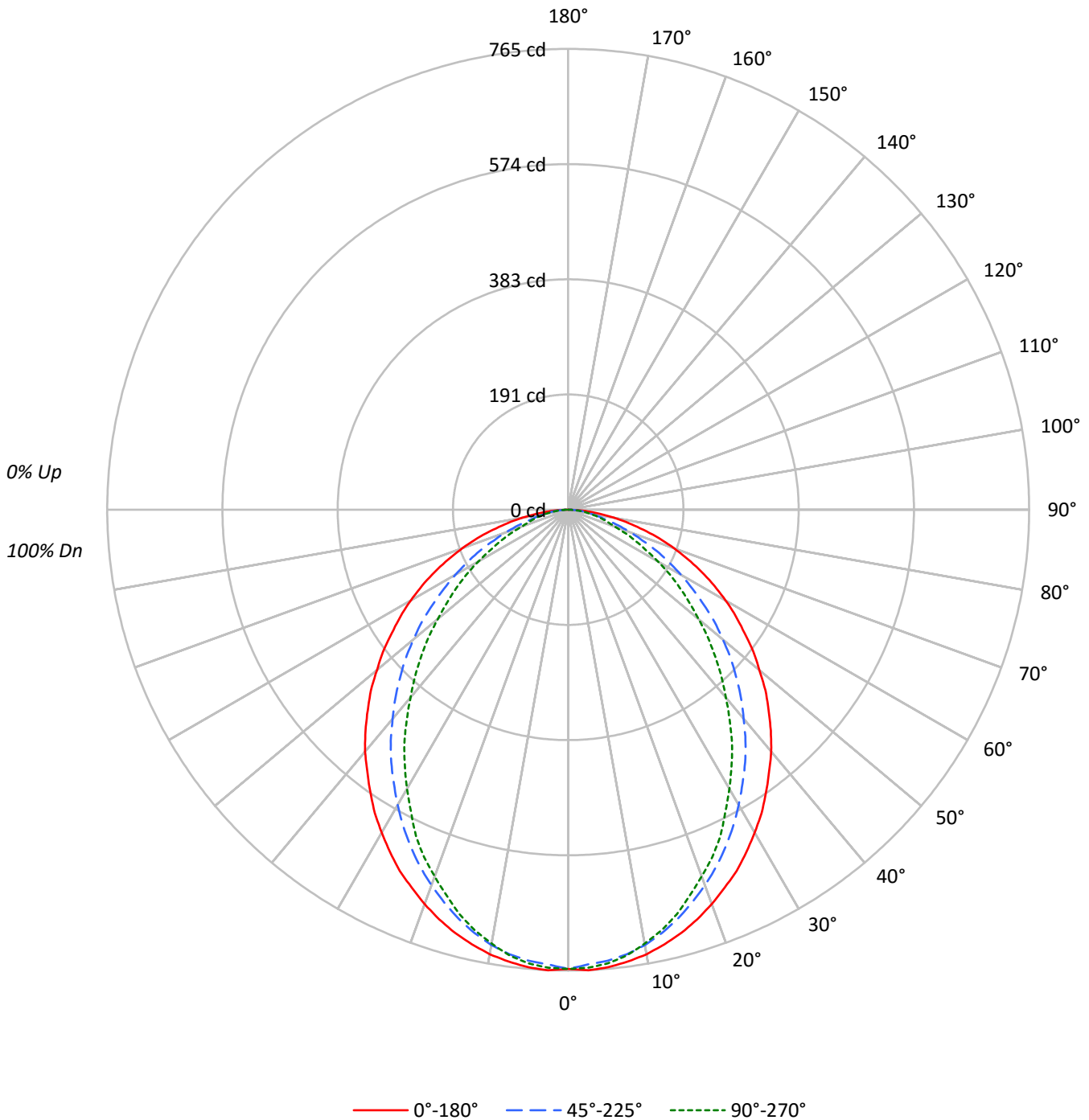
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	9240	9240	9240
5°	9275	9148	9200
10°	9223	9032	9002
15°	9123	8821	8728
20°	8987	8557	8357
25°	8847	8260	7995
30°	8661	7918	7485
35°	8471	7575	7017
40°	8296	7171	6437
45°	8065	6771	5914
50°	7811	6319	5327
55°	7551	5801	4782
60°	7314	5246	4182
65°	7004	4646	3582
70°	6617	3898	2892
75°	6051	3068	2721
80°	5396	2715	2506
85°	4562	2406	2239



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	71.7	4.2
10°-20°	199.3	11.6
20°-30°	287.0	16.7
30°-40°	323.2	18.8
40°-50°	309.2	18.0
50°-60°	253.1	14.7
60°-70°	170.6	9.9
70°-80°	85.6	5.0
80°-90°	22.4	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°	558.0	32.4
0°-40°	881.2	51.2
0°-60°	1443.5	83.8
0°-90°	1722.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1722.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	762	759	752	757	756	72
15°	727	720	703	700	696	205
25°	662	646	618	605	598	304
35°	572	550	512	485	474	358
45°	470	443	395	360	345	363
55°	357	327	274	239	226	320
65°	244	210	162	132	125	242
75°	129	100	66	59	58	138
85°	33	19	17	16	16	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	762.3	762.3	762.3	762.3	762.3
2.5°	765.4	762.9	755.5	762.3	761.0
5°	762.3	759.2	751.8	757.3	756.1
7.5°	756.7	753.6	744.3	748.0	746.2
10°	749.3	745.0	733.8	734.4	731.4
12.5°	738.8	733.8	719.6	719.0	715.3
15°	727.0	720.2	702.9	699.8	695.5
17.5°	712.8	705.4	683.8	677.6	671.4
20°	696.7	686.8	663.4	655.3	647.9
22.5°	678.8	667.1	641.7	631.2	624.4
25°	661.5	646.0	617.6	604.6	597.8
27.5°	640.5	623.8	592.9	575.6	565.1
30°	618.8	600.3	565.7	544.7	534.8
32.5°	597.2	575.6	538.5	515.0	504.5
35°	572.5	550.2	511.9	485.3	474.2
37.5°	547.7	523.6	483.4	453.8	440.2
40°	524.3	497.0	453.2	421.0	406.8
42.5°	497.7	470.5	424.7	388.9	376.5
45°	470.5	442.6	395.0	359.8	345.0
47.5°	443.9	413.0	366.0	327.7	314.7
50°	414.2	385.2	335.1	296.7	282.5
52.5°	387.6	355.5	306.0	265.8	253.5
55°	357.3	327.0	274.5	238.6	226.3
57.5°	330.1	297.4	244.2	210.2	199.7
60°	301.7	267.7	216.4	183.0	172.5
62.5°	273.3	239.3	187.9	157.0	145.9
65°	244.2	210.2	162.0	131.7	124.9
67.5°	215.1	180.5	133.5	110.7	103.2
70°	186.7	153.3	110.0	88.4	81.6
72.5°	158.3	125.5	87.2	70.5	68.6
75°	129.2	99.5	65.5	59.3	58.1
77.5°	102.6	75.4	51.3	47.6	46.4
80°	77.3	51.9	38.9	37.1	35.9
82.5°	53.2	32.1	27.8	26.0	26.0
85°	32.8	19.2	17.3	16.1	16.1
87.5°	14.8	8.0	8.0	7.4	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)