

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: P243042

Luminaire Tested: **S121RDR-H490D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243042  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-62)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-H490D927-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1159.0 lumens  
Efficiency: N/A  
Efficacy: 67.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct

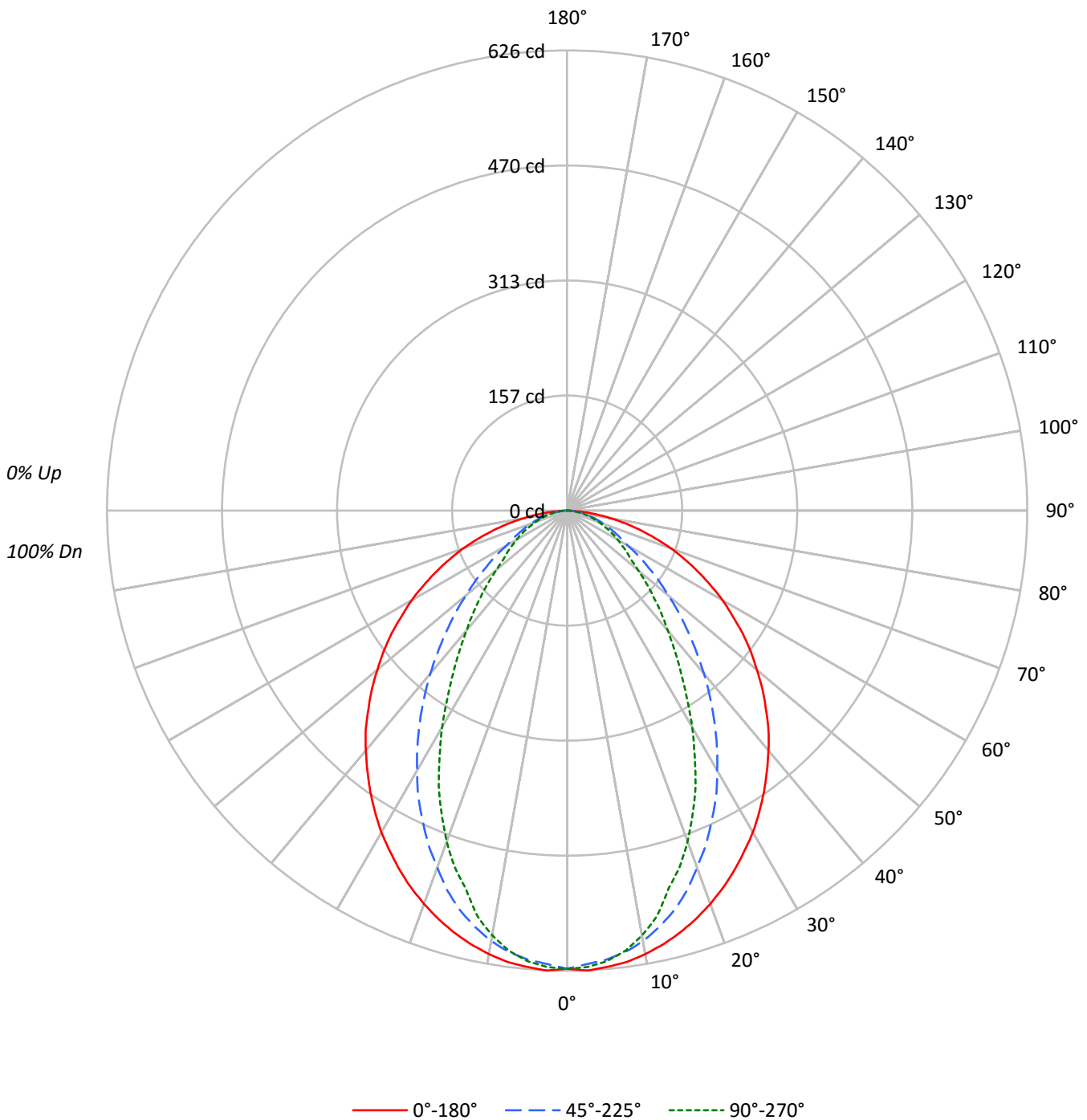
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31

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

	0°	45°	90°
0°	18465	18465	18465
5°	18536	18238	18301
10°	18431	17893	17655
15°	18227	17270	16331
20°	17951	16286	15103
25°	17628	15212	13518
30°	17291	13966	11636
35°	16888	12627	9781
40°	16485	11194	8231
45°	16024	9717	6973
50°	15530	8279	5794
55°	15058	6984	5155
60°	14489	5665	4723
65°	13777	5076	4333
70°	13038	4574	3976
75°	11906	4110	3629
80°	10187	3600	3242
85°	7887	3060	2686



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.3	5.0
10°-20°	158.6	13.7
20°-30°	216.4	18.7
30°-40°	224.3	19.4
40°-50°	195.7	16.9
50°-60°	147.3	12.7
60°-70°	96.6	8.3
70°-80°	49.2	4.2
80°-90°	12.5	1.1
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°	433.3	37.4
0°-40°	657.6	56.7
0°-60°	1000.6	86.3
0°-90°	1159.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1159.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	623	623	623	623	623	
5°	623	620	613	617	615	59
15°	594	586	563	547	532	167
25°	539	517	465	426	414	248
35°	467	427	349	290	270	292
45°	382	327	232	180	166	295
55°	292	222	135	102	100	260
65°	196	122	72	64	62	195
75°	104	48	36	33	32	110
85°	23	10	9	8	8	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	623.2	623.2	623.2	623.2	623.2
2.5°	626.4	623.7	617.4	622.7	621.6
5°	623.2	620.0	613.2	616.9	615.3
7.5°	619.5	615.3	605.8	607.4	604.2
10°	612.6	607.4	594.7	591.5	586.8
12.5°	604.2	598.4	579.9	572.5	565.1
15°	594.2	585.7	563.0	547.1	532.4
17.5°	582.5	572.0	541.9	519.7	508.6
20°	569.3	555.6	516.5	490.6	479.0
22.5°	555.1	537.6	492.7	460.0	446.3
25°	539.2	517.0	465.3	426.2	413.5
27.5°	522.3	497.0	438.9	394.0	375.5
30°	505.4	473.7	408.2	358.1	340.1
32.5°	486.4	450.5	379.2	323.7	303.7
35°	466.9	426.7	349.1	290.5	270.4
37.5°	446.3	403.0	319.0	259.8	240.3
40°	426.2	377.1	289.4	230.3	212.8
42.5°	405.6	351.2	259.8	204.4	189.6
45°	382.4	326.9	231.9	180.1	166.4
47.5°	360.7	300.5	206.5	158.4	145.8
50°	336.9	274.6	179.6	138.4	125.7
52.5°	314.8	248.2	157.4	117.2	109.3
55°	291.5	221.8	135.2	102.5	99.8
57.5°	266.7	195.9	115.7	91.9	88.7
60°	244.5	171.1	95.6	82.4	79.7
62.5°	219.7	146.3	82.9	73.4	70.8
65°	196.5	122.5	72.4	63.9	61.8
67.5°	173.2	100.9	62.3	55.5	53.3
70°	150.5	80.3	52.8	47.5	45.9
72.5°	125.7	60.7	44.4	40.1	39.1
75°	104.0	47.5	35.9	32.7	31.7
77.5°	81.3	35.9	28.0	25.9	25.4
80°	59.7	25.9	21.1	19.5	19.0
82.5°	40.7	17.4	14.8	13.7	13.2
85°	23.2	9.5	9.0	7.9	7.9
87.5°	9.0	3.7	3.2	3.2	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)