

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: P243066

Luminaire Tested: **S121RDR-H490D935-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243066  
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-H490D935-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH 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: 1259.6 lumens  
Efficiency: N/A  
Efficacy: 73.2 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

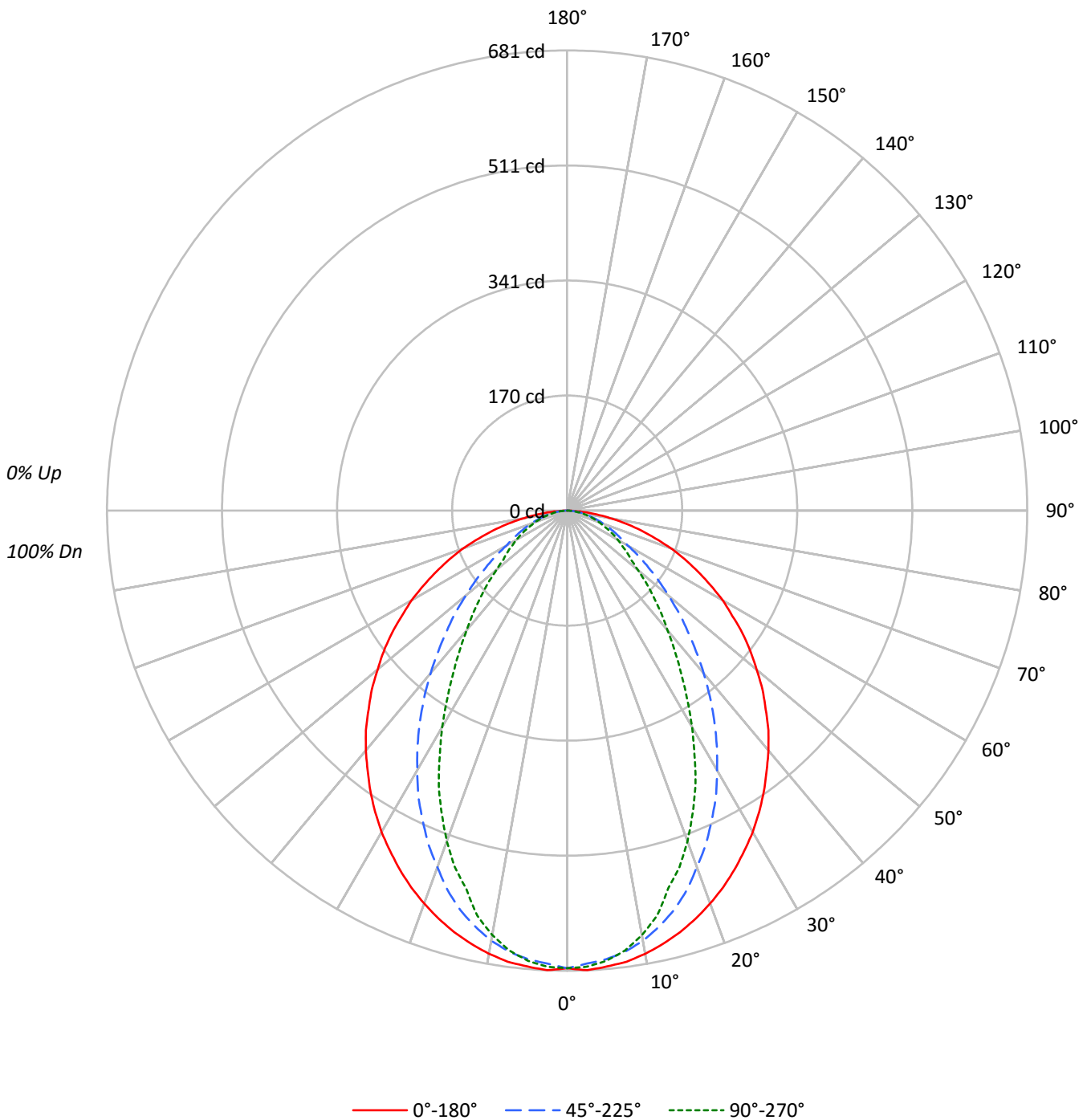
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	20068	20068	20068
5°	20145	19821	19889
10°	20035	19445	19186
15°	19810	18770	17749
20°	19512	17702	16415
25°	19161	16533	14695
30°	18793	15180	12649
35°	18353	13723	10631
40°	17916	12168	8946
45°	17415	10559	7576
50°	16880	8998	6297
55°	16370	7589	5605
60°	15751	6157	5138
65°	14968	5511	4711
70°	14173	4973	4323
75°	12948	4465	3938
80°	11074	3925	3532
85°	8601	3332	2924



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.4	5.0
10°-20°	172.4	13.7
20°-30°	235.2	18.7
30°-40°	243.8	19.4
40°-50°	212.7	16.9
50°-60°	160.1	12.7
60°-70°	105.0	8.3
70°-80°	53.5	4.2
80°-90°	13.6	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°	471.0	37.4
0°-40°	714.8	56.7
0°-60°	1087.6	86.3
0°-90°	1259.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1259.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	677	677	677	677	677	
5°	677	674	666	670	669	64
15°	646	637	612	595	579	182
25°	586	562	506	463	450	270
35°	507	464	379	316	294	317
45°	416	355	252	196	181	321
55°	317	241	147	111	108	283
65°	214	133	79	70	67	212
75°	113	52	39	36	34	119
85°	25	10	10	9	9	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	677.3	677.3	677.3	677.3	677.3
2.5°	680.8	677.9	671.0	676.8	675.6
5°	677.3	673.9	666.4	670.4	668.7
7.5°	673.3	668.7	658.4	660.1	656.7
10°	665.9	660.1	646.3	642.9	637.7
12.5°	656.7	650.4	630.3	622.2	614.2
15°	645.8	636.6	611.9	594.7	578.6
17.5°	633.1	621.7	588.9	564.8	552.8
20°	618.8	603.9	561.4	533.3	520.6
22.5°	603.3	584.3	535.6	500.0	485.0
25°	586.1	562.0	505.7	463.2	449.5
27.5°	567.7	540.1	477.0	428.2	408.1
30°	549.3	514.9	443.7	389.2	369.7
32.5°	528.7	489.6	412.1	351.9	330.1
35°	507.4	463.8	379.4	315.7	293.9
37.5°	485.0	438.0	346.7	282.4	261.2
40°	463.2	409.8	314.6	250.3	231.3
42.5°	440.8	381.7	282.4	222.1	206.1
45°	415.6	355.3	252.0	195.7	180.8
47.5°	392.1	326.6	224.4	172.2	158.4
50°	366.2	298.5	195.2	150.4	136.6
52.5°	342.1	269.8	171.1	127.4	118.8
55°	316.9	241.1	146.9	111.4	108.5
57.5°	289.9	213.0	125.7	99.9	96.4
60°	265.8	186.0	103.9	89.5	86.7
62.5°	238.8	159.0	90.1	79.8	76.9
65°	213.5	133.2	78.6	69.5	67.2
67.5°	188.3	109.6	67.7	60.3	58.0
70°	163.6	87.2	57.4	51.7	49.9
72.5°	136.6	66.0	48.2	43.6	42.5
75°	113.1	51.7	39.0	35.6	34.4
77.5°	88.4	39.0	30.4	28.1	27.6
80°	64.9	28.1	23.0	21.2	20.7
82.5°	44.2	18.9	16.1	14.9	14.4
85°	25.3	10.3	9.8	8.6	8.6
87.5°	9.8	4.0	3.4	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)