

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: P243063

Luminaire Tested: **S121RDR-H880D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243063  
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-H880D930-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2154.3 lumens  
Efficiency: N/A  
Efficacy: 68.4 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

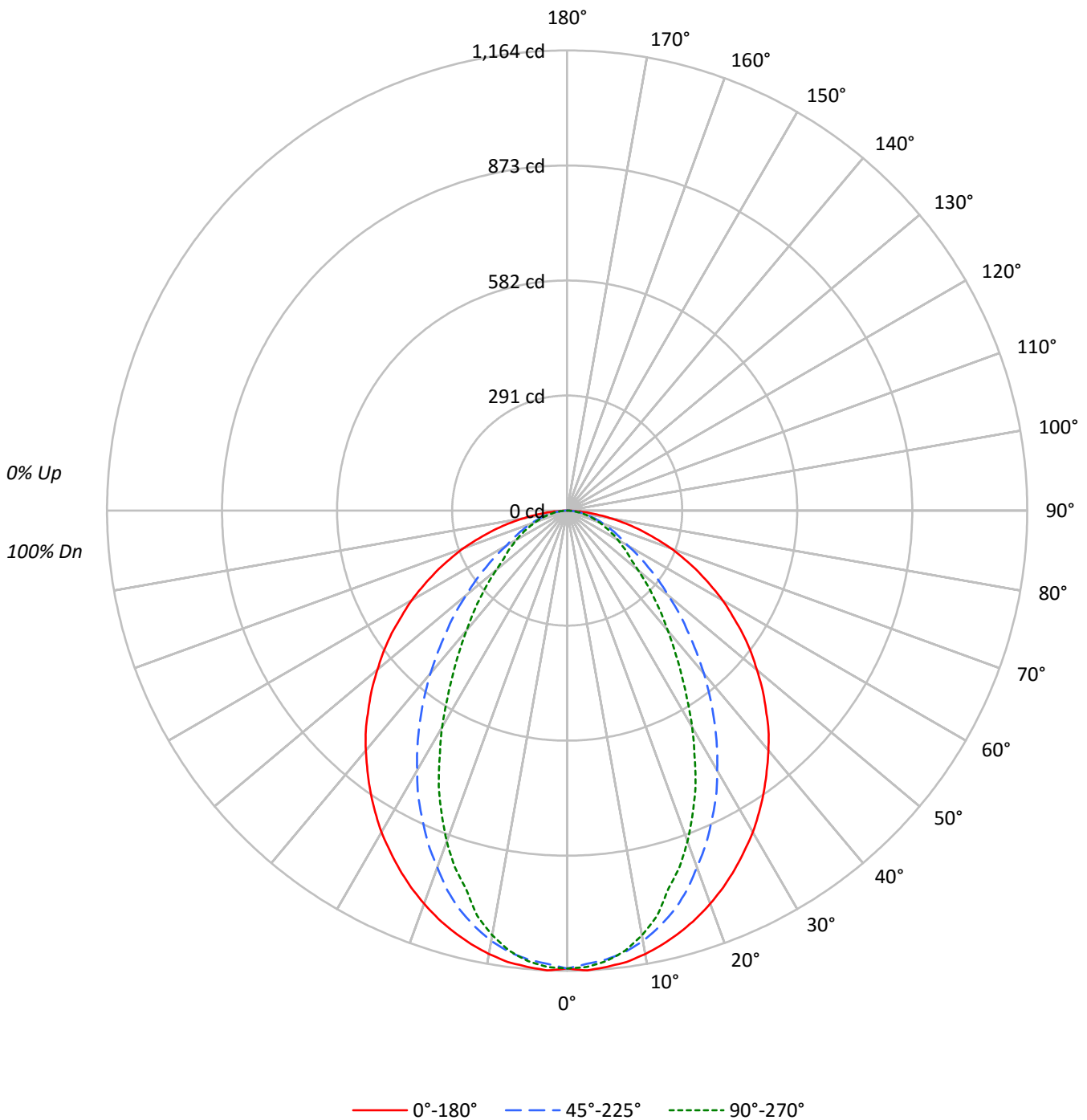
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P243063

CATALOG NUMBER: S121RDR-H880D930-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P243063

CATALOG NUMBER: S121RDR-H880D930-X4F0-XX-UDD-F-W

**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	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	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75	75	75	75	75	75	75		
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65		
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57		
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52	50	50	50	50	50	50	50		
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45		
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41	41	41	41	41	41	41		
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37		
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34	34	34	34	34	34	34		
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31	31	31	31	31	31	31		

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

	0°	45°	90°
0°	34323	34323	34323
5°	34454	33901	34017
10°	34263	33258	32816
15°	33877	32101	30356
20°	33370	30273	28075
25°	32768	28276	25131
30°	32144	25965	21630
35°	31389	23471	18180
40°	30641	20809	15301
45°	29784	18060	12956
50°	28870	15387	10768
55°	27993	12982	9583
60°	26933	10530	8782
65°	25604	9430	8056
70°	24239	8507	7398
75°	22141	7647	6743
80°	18923	6706	6023
85°	14686	5677	4997



TEST NUMBER: P243063

CATALOG NUMBER: S121RDR-H880D930-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.5	5.0
10°-20°	294.8	13.7
20°-30°	402.2	18.7
30°-40°	417.0	19.4
40°-50°	363.8	16.9
50°-60°	273.8	12.7
60°-70°	179.5	8.3
70°-80°	91.5	4.2
80°-90°	23.2	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°	805.4	37.4
0°-40°	1222.4	56.7
0°-60°	1860.0	86.3
0°-90°	2154.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2154.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1158	1158	1158	1158	1158	
5°	1158	1152	1140	1147	1144	110
15°	1104	1089	1046	1017	990	311
25°	1002	961	865	792	769	462
35°	868	793	649	540	503	543
45°	711	608	431	335	309	549
55°	542	412	251	190	186	484
65°	365	228	134	119	115	362
75°	193	88	67	61	59	204
85°	43	18	17	15	15	52
90°	0	0	0	0	0	



TEST NUMBER: P243063

CATALOG NUMBER: S121RDR-H880D930-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1158.4	1158.4	1158.4	1158.4	1158.4
2.5°	1164.3	1159.4	1147.6	1157.4	1155.5
5°	1158.4	1152.5	1139.8	1146.6	1143.7
7.5°	1151.5	1143.7	1126.0	1129.0	1123.1
10°	1138.8	1129.0	1105.4	1099.5	1090.7
12.5°	1123.1	1112.3	1077.9	1064.2	1050.4
15°	1104.4	1088.7	1046.5	1017.0	989.6
17.5°	1082.8	1063.2	1007.2	966.0	945.4
20°	1058.3	1032.8	960.1	912.0	890.4
22.5°	1031.8	999.4	915.9	855.1	829.5
25°	1002.3	961.1	864.9	792.2	768.7
27.5°	970.9	923.8	815.8	732.3	698.0
30°	939.5	880.6	758.9	665.6	632.2
32.5°	904.1	837.4	704.9	601.8	564.5
35°	867.8	793.2	648.9	539.9	502.6
37.5°	829.5	749.0	592.9	483.0	446.7
40°	792.2	700.9	538.0	428.0	395.6
42.5°	753.9	652.8	483.0	379.9	352.4
45°	710.8	607.7	431.0	334.8	309.2
47.5°	670.5	558.6	383.8	294.5	270.9
50°	626.3	510.5	333.8	257.2	233.6
52.5°	585.1	461.4	292.5	217.9	203.2
55°	541.9	412.3	251.3	190.5	185.5
57.5°	495.8	364.2	215.0	170.8	164.9
60°	454.5	318.1	177.7	153.1	148.2
62.5°	408.4	271.9	154.1	136.5	131.5
65°	365.2	227.8	134.5	118.8	114.9
67.5°	322.0	187.5	115.8	103.1	99.2
70°	279.8	149.2	98.2	88.4	85.4
72.5°	233.6	112.9	82.5	74.6	72.6
75°	193.4	88.4	66.8	60.9	58.9
77.5°	151.2	66.8	52.0	48.1	47.1
80°	110.9	48.1	39.3	36.3	35.3
82.5°	75.6	32.4	27.5	25.5	24.5
85°	43.2	17.7	16.7	14.7	14.7
87.5°	16.7	6.9	5.9	5.9	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)