

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: P231717

Luminaire Tested: **S121-RDR-1-35-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231717  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33908)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121-RDR-1-35-X-0048-1-U-DD-1-W  
Description: DEFINE 1 LED LINEAR REGRESSED DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2144.1 lumens  
Efficiency: N/A  
Efficacy: 76.9 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 0.93 / 1.1  
Luminous Opening: Rectangular (W 0.1' x L: 3.92' x H: 0')  
CIE Type: Direct

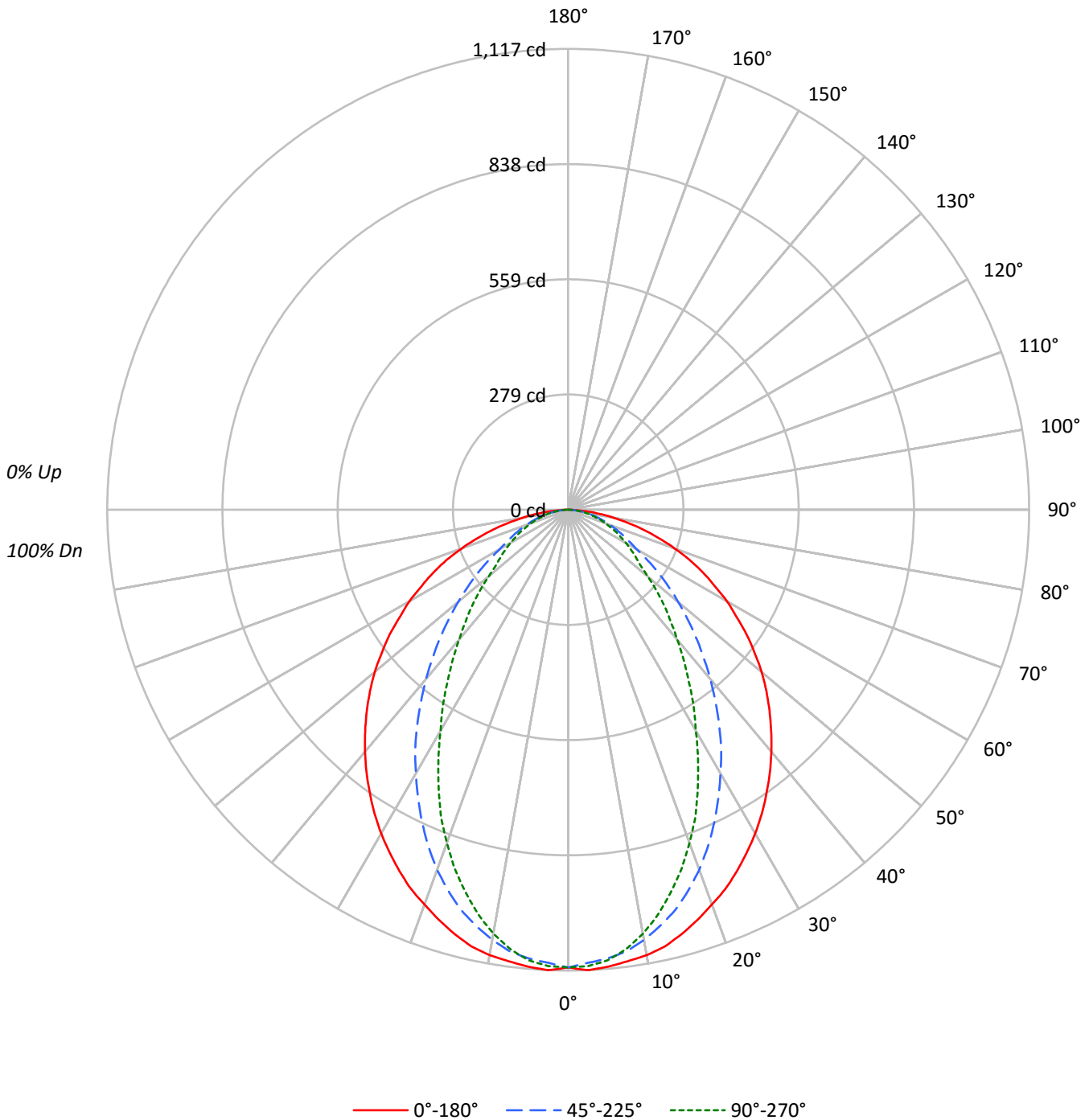
Input Watts (W): 27.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	104	100	97	99	97	94		96	93	91		92	90	88	86
2	101	94	88	83	99	92	86	82	89	84	80		85	81	78		82	79	76	74
3	93	84	76	70	91	82	75	70	79	73	69		77	72	67		74	70	66	64
4	86	75	67	61	84	74	66	61	71	65	60		69	64	59		67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47		57	51	47		56	50	46	44
7	69	57	48	43	67	56	48	42	54	47	42		53	47	42		52	46	42	40
8	65	52	44	39	63	51	44	38	50	43	38		49	43	38		48	42	38	36
9	61	48	40	35	59	47	40	35	46	40	35		45	39	35		44	39	35	33
10	57	45	37	32	56	44	37	32	43	37	32		42	36	32		41	36	32	30

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

	0°	45°	90°
0°	31019	31019	31019
5°	31199	30643	30767
10°	31122	30064	29626
15°	30810	29062	27789
20°	30296	27618	25557
25°	29820	25822	22907
30°	29258	23831	19967
35°	28607	21782	17396
40°	27945	19565	14992
45°	27277	17329	13032
50°	26614	15145	10895
55°	25755	13009	9744
60°	24876	10685	9030
65°	23835	9665	8428
70°	22446	8894	7815
75°	20524	8069	7118
80°	17871	7068	6537
85°	14082	5998	5646



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.0	4.8
10°-20°	283.6	13.2
20°-30°	389.2	18.2
30°-40°	409.8	19.1
40°-50°	365.1	17.0
50°-60°	280.6	13.1
60°-70°	187.9	8.8
70°-80°	98.2	4.6
80°-90°	25.8	1.2
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°	776.7	36.2
0°-40°	1186.6	55.3
0°-60°	1832.2	85.5
0°-90°	2144.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2144.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1110	1110	1110	1110	1110	
5°	1112	1105	1092	1100	1096	106
15°	1064	1050	1004	979	960	300
25°	967	926	837	773	743	445
35°	838	769	638	543	510	524
45°	690	592	438	353	330	532
55°	528	412	267	206	200	472
65°	360	236	146	131	127	356
75°	190	97	75	68	66	201
85°	44	21	19	18	18	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1109.5	1109.5	1109.5	1109.5	1109.5
2.5°	1117.2	1110.6	1099.6	1109.5	1107.3
5°	1111.7	1105.1	1091.9	1099.6	1096.3
7.5°	1104.0	1095.2	1079.9	1082.0	1074.4
10°	1096.3	1084.2	1059.0	1053.5	1043.6
12.5°	1084.2	1071.1	1032.6	1017.2	1005.2
15°	1064.5	1050.2	1004.1	978.8	960.1
17.5°	1042.5	1020.5	967.8	932.7	912.9
20°	1018.3	992.0	928.3	883.2	859.0
22.5°	995.3	960.1	884.3	830.5	805.2
25°	966.7	926.1	837.1	773.4	742.6
27.5°	937.0	887.6	787.6	716.2	681.1
30°	906.3	849.2	738.2	655.8	618.5
32.5°	873.3	808.5	689.9	598.7	565.7
35°	838.2	769.0	638.2	542.7	509.7
37.5°	803.0	723.9	585.5	489.9	460.3
40°	765.7	681.1	536.1	440.5	410.8
42.5°	728.3	636.0	485.5	395.5	368.0
45°	689.9	592.1	438.3	352.6	329.6
47.5°	651.4	547.1	392.2	312.0	290.0
50°	611.9	502.0	348.2	273.5	250.5
52.5°	569.0	457.0	306.5	235.1	218.6
55°	528.4	411.9	266.9	206.5	199.9
57.5°	483.4	366.9	228.5	186.7	180.2
60°	444.9	321.9	191.1	168.1	161.5
62.5°	399.9	277.9	167.0	149.4	143.9
65°	360.3	236.2	146.1	130.7	127.4
67.5°	318.6	195.5	126.3	114.2	109.9
70°	274.6	157.1	108.8	97.8	95.6
72.5°	231.8	121.9	90.1	82.4	81.3
75°	190.0	96.7	74.7	68.1	65.9
77.5°	149.4	73.6	59.3	54.9	53.8
80°	111.0	53.8	43.9	41.7	40.6
82.5°	75.8	36.3	30.8	28.6	28.6
85°	43.9	20.9	18.7	17.6	17.6
87.5°	16.5	8.8	7.7	7.7	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)