

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: P242944

Luminaire Tested: **S121DR-H490D830-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242944  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-47)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-H490D830-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

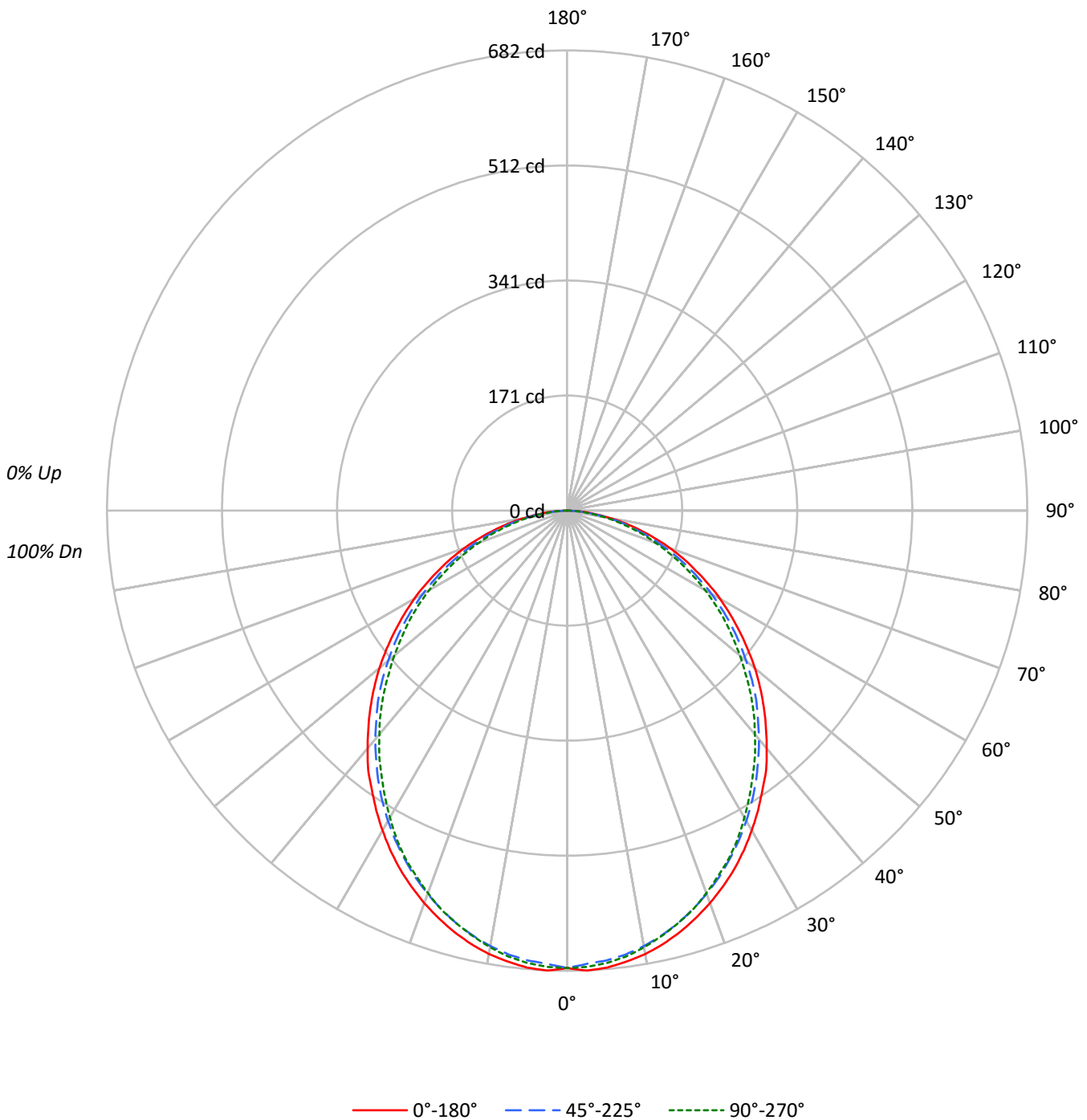
Lumens per Lamp: N/A  
Luminaire Lumens: 1720.1 lumens  
Efficiency: N/A  
Efficacy: 100.0 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (Ain): 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	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	42	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	31	56	44	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

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

	0°	45°	90°
0°	20089	20089	20089
5°	20222	19904	20017
10°	20077	19719	19776
15°	19834	19429	19429
20°	19518	19061	19020
25°	19168	18632	18573
30°	18725	18167	17972
35°	18252	17659	17344
40°	17792	17112	16748
45°	17272	16589	16116
50°	16742	15958	15410
55°	16102	15353	14769
60°	15526	14637	14003
65°	14758	13833	13082
70°	13991	12847	12033
75°	12810	11654	10933
80°	11159	10289	9538
85°	9621	7887	6629



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.9	3.7
10°-20°	179.8	10.5
20°-30°	264.3	15.4
30°-40°	306.7	17.8
40°-50°	305.9	17.8
50°-60°	266.3	15.5
60°-70°	196.0	11.4
70°-80°	109.2	6.3
80°-90°	28.1	1.6
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°	507.9	29.5
0°-40°	814.7	47.4
0°-60°	1386.9	80.6
0°-90°	1720.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1720.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	678	678	678	678	678	
5°	680	676	669	674	673	64
15°	647	643	633	636	633	182
25°	586	579	570	570	568	270
35°	505	498	488	483	480	316
45°	412	405	396	388	385	318
55°	312	306	297	289	286	279
65°	210	206	197	189	187	209
75°	112	107	102	97	96	119
85°	28	26	23	20	20	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	678.0	678.0	678.0	678.0	678.0
2.5°	682.4	678.6	672.4	678.0	676.8
5°	679.9	676.1	669.2	674.2	673.0
7.5°	674.2	671.1	663.6	668.0	666.7
10°	667.3	663.6	655.4	659.2	657.3
12.5°	657.9	654.8	645.3	648.5	646.0
15°	646.6	642.8	633.4	635.9	633.4
17.5°	633.4	629.6	619.6	621.5	620.2
20°	619.0	613.9	604.5	605.8	603.2
22.5°	603.2	597.6	588.2	588.2	585.6
25°	586.3	579.4	569.9	569.9	568.1
27.5°	567.4	561.1	551.1	549.8	547.9
30°	547.3	541.0	531.0	528.5	525.3
32.5°	526.6	519.7	510.2	505.8	502.7
35°	504.6	498.3	488.2	482.6	479.5
37.5°	484.5	475.7	465.0	460.0	457.5
40°	460.0	452.4	442.4	435.5	433.0
42.5°	436.1	429.2	418.5	411.6	409.7
45°	412.2	405.3	395.9	387.7	384.6
47.5°	387.7	380.8	371.4	363.2	358.8
50°	363.2	356.3	346.2	338.1	334.3
52.5°	337.4	332.4	321.7	314.2	309.2
55°	311.7	306.0	297.2	289.1	285.9
57.5°	286.5	281.5	272.1	263.3	261.4
60°	262.0	257.0	247.0	239.4	236.3
62.5°	236.3	231.2	221.8	214.3	211.1
65°	210.5	206.1	197.3	189.1	186.6
67.5°	186.6	181.0	172.8	165.3	162.1
70°	161.5	155.2	148.3	142.0	138.9
72.5°	136.4	131.3	125.7	119.4	118.1
75°	111.9	106.8	101.8	97.4	95.5
77.5°	88.6	84.8	81.1	76.7	75.4
80°	65.4	62.8	60.3	57.2	55.9
82.5°	45.9	44.0	40.2	37.7	36.4
85°	28.3	26.4	23.2	20.1	19.5
87.5°	13.2	10.7	8.2	6.9	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)