

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: P242079

Luminaire Tested: **S121DR-S490D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242079  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-S490D927-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1564.4 lumens  
Efficiency: N/A  
Efficacy: 83.2 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

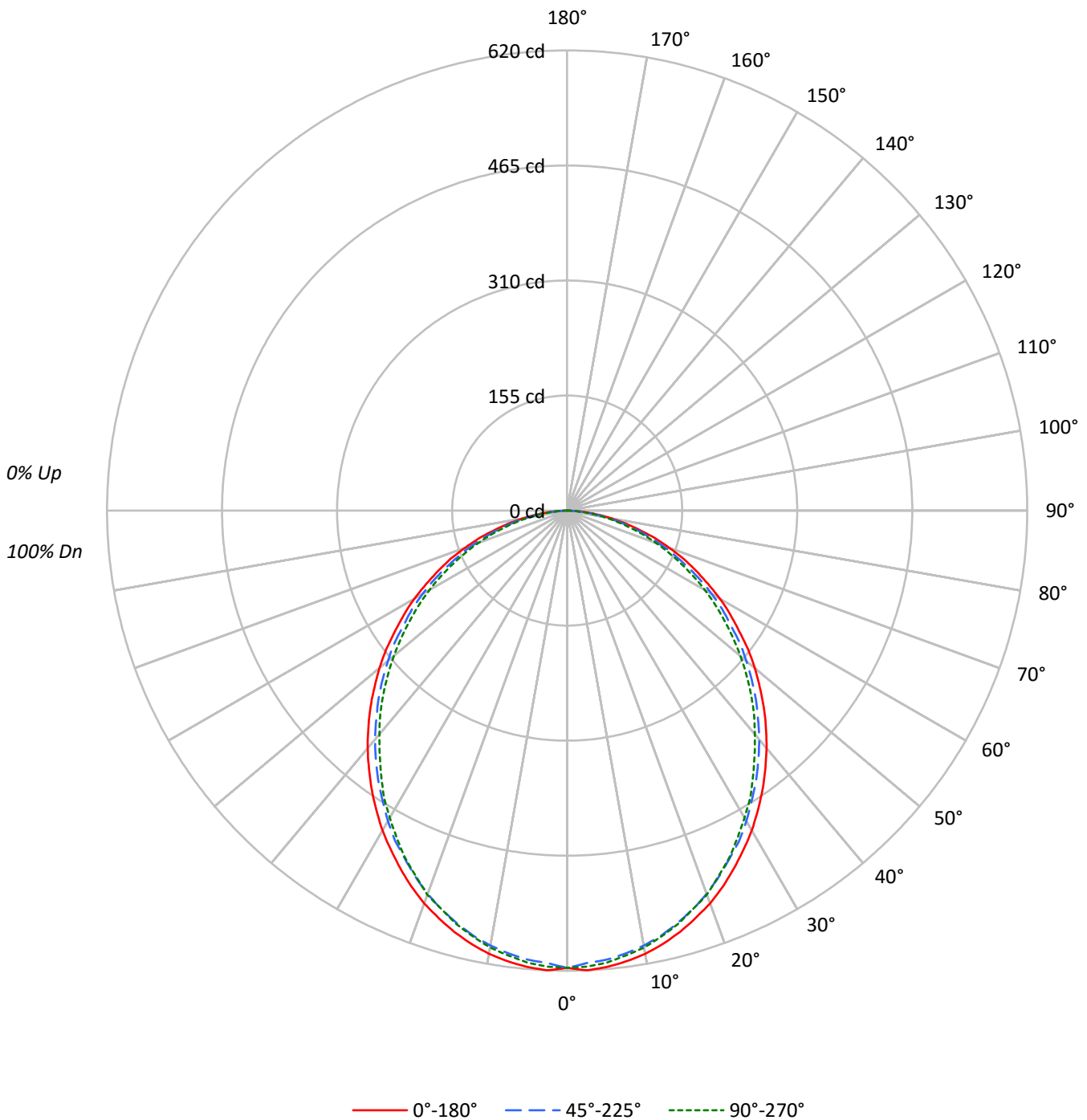
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	100	96	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	80	72	66	88	79	71	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°	18252	18252	18252
5°	18357	18069	18188
10°	18242	17902	17986
15°	18025	17641	17693
20°	17755	17326	17361
25°	17386	16922	16886
30°	17028	16522	16347
35°	16603	16049	15800
40°	16172	15576	15224
45°	15705	15064	14683
50°	15207	14525	14055
55°	14604	13870	13369
60°	14092	13345	12741
65°	13398	12522	11884
70°	12614	11678	11037
75°	11585	10612	9903
80°	10289	9316	8634
85°	8499	6969	6187



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.0	3.7
10°-20°	163.3	10.4
20°-30°	240.2	15.4
30°-40°	279.0	17.8
40°-50°	278.3	17.8
50°-60°	242.2	15.5
60°-70°	178.4	11.4
70°-80°	99.4	6.4
80°-90°	25.6	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°	461.6	29.5
0°-40°	740.5	47.3
0°-60°	1261.0	80.6
0°-90°	1564.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1564.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	616	616	616	616	616	
5°	617	614	608	613	612	59
15°	588	583	575	579	577	166
25°	532	526	518	519	516	245
35°	459	453	444	439	437	287
45°	375	369	360	353	350	289
55°	283	279	268	263	259	254
65°	191	187	179	173	170	190
75°	101	98	93	89	86	108
85°	25	24	20	19	18	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	616.0	616.0	616.0	616.0	616.0
2.5°	620.0	616.6	610.3	615.4	614.9
5°	617.2	614.3	607.5	612.6	611.5
7.5°	612.6	609.2	601.8	606.3	604.6
10°	606.3	602.9	595.0	598.4	597.8
12.5°	597.8	593.8	586.4	589.3	587.6
15°	587.6	583.0	575.1	579.0	576.8
17.5°	575.6	570.5	563.1	565.4	563.1
20°	563.1	557.4	549.5	551.7	550.6
22.5°	548.3	543.2	534.1	535.2	533.0
25°	531.8	526.1	517.6	518.8	516.5
27.5°	514.8	509.7	501.7	500.0	497.1
30°	497.7	491.4	482.9	480.6	477.8
32.5°	478.4	472.7	463.0	460.7	459.0
35°	459.0	453.3	443.7	439.1	436.8
37.5°	438.6	432.9	423.2	418.1	414.7
40°	418.1	411.8	402.7	397.6	393.6
42.5°	396.5	390.8	380.5	375.4	372.6
45°	374.8	368.6	359.5	352.7	350.4
47.5°	352.1	346.4	337.3	329.9	327.6
50°	329.9	323.7	315.1	307.7	304.9
52.5°	307.2	301.5	293.5	286.1	281.6
55°	282.7	279.3	268.5	263.4	258.8
57.5°	260.5	256.5	248.0	239.5	236.6
60°	237.8	233.2	225.2	217.9	215.0
62.5°	213.9	210.5	202.5	195.7	191.7
65°	191.1	187.1	178.6	172.9	169.5
67.5°	170.1	165.0	156.4	150.7	147.9
70°	145.6	141.6	134.8	130.3	127.4
72.5°	124.6	120.0	113.8	109.2	106.4
75°	101.2	98.4	92.7	88.7	86.5
77.5°	80.8	76.8	72.8	70.0	68.3
80°	60.3	57.4	54.6	51.8	50.6
82.5°	42.1	39.8	37.0	35.3	33.6
85°	25.0	23.9	20.5	19.3	18.2
87.5°	11.9	10.2	6.8	6.3	5.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)