

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: P243056

Luminaire Tested: **S121RDR-H490D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243056  
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-H490D840-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1477.4 lumens  
Efficiency: N/A  
Efficacy: 85.9 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

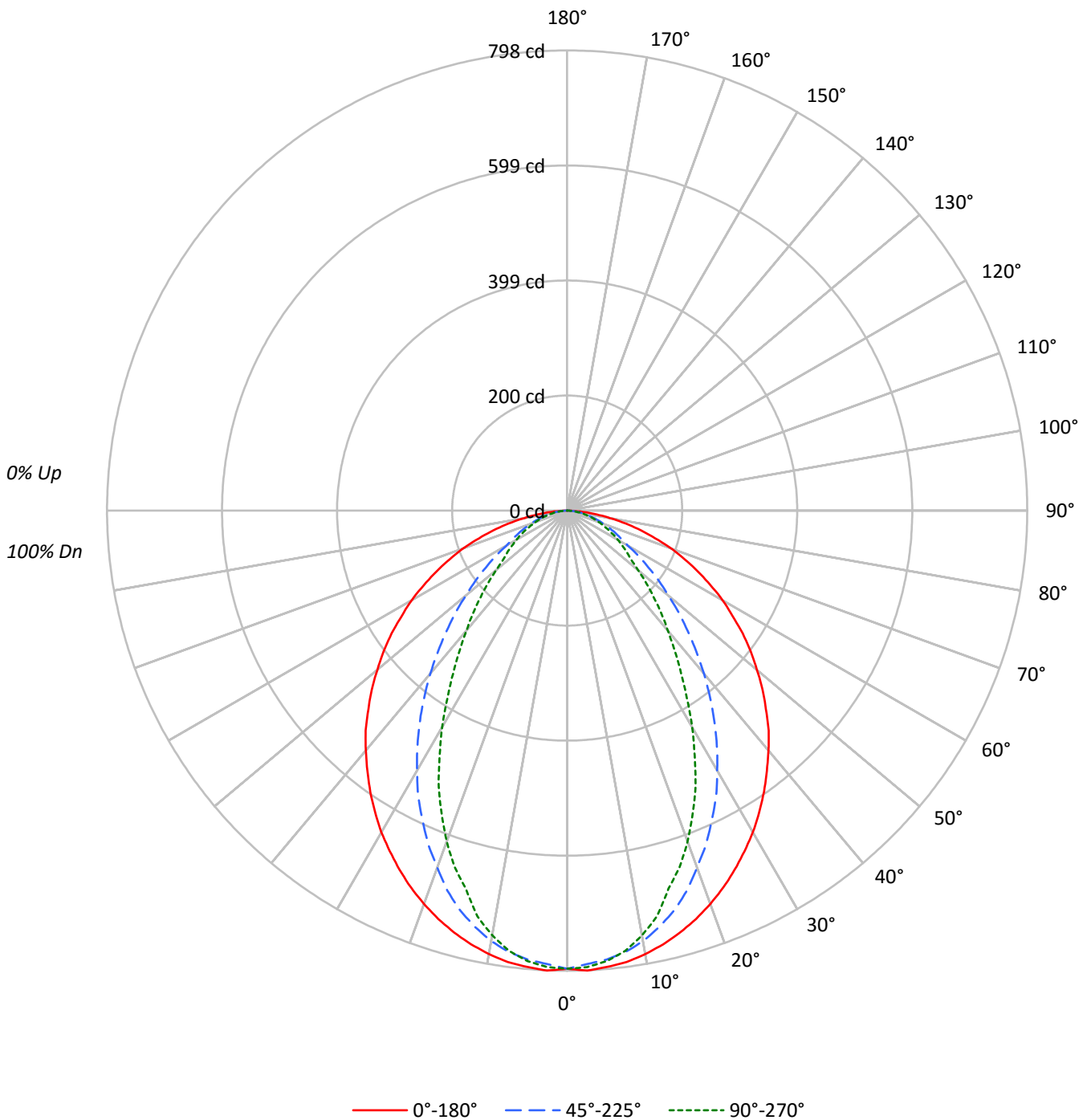
Input Watts (W): 17.2  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	23538	23538	23538
5°	23628	23250	23327
10°	23498	22809	22505
15°	23233	22015	20816
20°	22885	20760	19253
25°	22473	19390	17236
30°	22044	17805	14835
35°	21529	16096	12468
40°	21014	14269	10494
45°	20423	12386	8888
50°	19798	10551	7385
55°	19196	8906	6571
60°	18471	7224	6027
65°	17563	6464	5525
70°	16625	5830	5077
75°	15180	5243	4625
80°	12985	4590	4129
85°	10063	3876	3434



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	74.4	5.0
10°-20°	202.2	13.7
20°-30°	275.9	18.7
30°-40°	285.9	19.4
40°-50°	249.5	16.9
50°-60°	187.8	12.7
60°-70°	123.1	8.3
70°-80°	62.8	4.2
80°-90°	15.9	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°	552.4	37.4
0°-40°	838.3	56.7
0°-60°	1275.6	86.3
0°-90°	1477.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1477.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	794	794	794	794	794	
5°	794	790	782	786	784	75
15°	757	747	718	698	679	213
25°	687	659	593	543	527	317
35°	595	544	445	370	345	372
45°	487	417	296	230	212	376
55°	372	283	172	131	127	332
65°	250	156	92	82	79	248
75°	133	61	46	42	40	140
85°	30	12	11	10	10	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	794.4	794.4	794.4	794.4	794.4
2.5°	798.5	795.1	787.0	793.8	792.4
5°	794.4	790.4	781.7	786.4	784.3
7.5°	789.7	784.3	772.2	774.2	770.2
10°	781.0	774.2	758.1	754.0	748.0
12.5°	770.2	762.8	739.2	729.8	720.4
15°	757.4	746.6	717.7	697.5	678.6
17.5°	742.6	729.1	690.8	662.5	648.3
20°	725.8	708.3	658.4	625.5	610.6
22.5°	707.6	685.4	628.2	586.4	568.9
25°	687.4	659.1	593.1	543.3	527.2
27.5°	665.9	633.5	559.5	502.3	478.7
30°	644.3	603.9	520.4	456.5	433.6
32.5°	620.1	574.3	483.4	412.7	387.1
35°	595.2	544.0	445.0	370.3	344.7
37.5°	568.9	513.7	406.6	331.2	306.3
40°	543.3	480.7	368.9	293.5	271.3
42.5°	517.1	447.7	331.2	260.6	241.7
45°	487.4	416.7	295.6	229.6	212.1
47.5°	459.8	383.1	263.2	202.0	185.8
50°	429.5	350.1	228.9	176.4	160.2
52.5°	401.3	316.4	200.6	149.5	139.4
55°	371.6	282.8	172.4	130.6	127.2
57.5°	340.0	249.8	147.4	117.1	113.1
60°	311.7	218.1	121.9	105.0	101.7
62.5°	280.1	186.5	105.7	93.6	90.2
65°	250.5	156.2	92.2	81.5	78.8
67.5°	220.8	128.6	79.4	70.7	68.0
70°	191.9	102.3	67.3	60.6	58.6
72.5°	160.2	77.4	56.6	51.2	49.8
75°	132.6	60.6	45.8	41.7	40.4
77.5°	103.7	45.8	35.7	33.0	32.3
80°	76.1	33.0	26.9	24.9	24.2
82.5°	51.8	22.2	18.9	17.5	16.8
85°	29.6	12.1	11.4	10.1	10.1
87.5°	11.4	4.7	4.0	4.0	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)