

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: P242201

Luminaire Tested: **S121RDR-S490D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242201  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-23)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121RDR-S490D930-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1309.2 lumens  
Efficiency: N/A  
Efficacy: 69.6 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

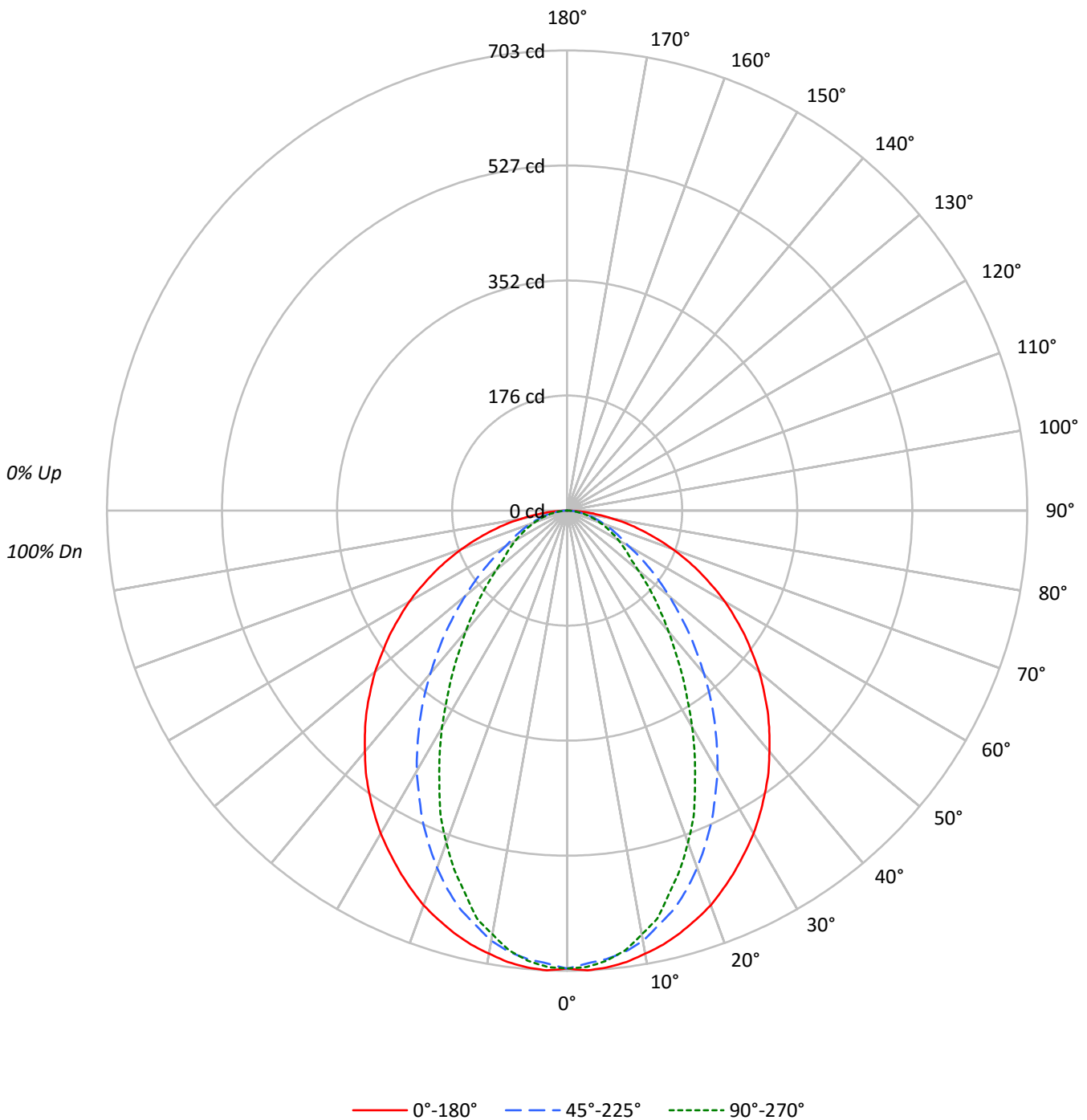
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	93	91	92	90	89					87				
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77					75				
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	75	70	67					65				
4	86	76	68	62	84	74	67	61	72	65	60	70	64	60	68	63	59					57				
5	80	68	60	54	78	67	60	54	65	59	53	63	57	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	38					37				
9	61	49	41	36	60	48	41	36	47	40	35	46	40	35	45	39	35					33				
10	58	45	38	33	56	45	37	33	44	37	33	43	37	32	42	36	32					31				

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

	0°	45°	90°
0°	20729	20729	20729
5°	20841	20460	20529
10°	20679	20080	19779
15°	20488	19341	18531
20°	20230	18310	17017
25°	19848	17092	15101
30°	19488	15721	13080
35°	19059	14186	11076
40°	18589	12567	9329
45°	18152	10966	7874
50°	17650	9390	6504
55°	17088	7924	5806
60°	16516	6418	5375
65°	15719	5784	4964
70°	14805	5224	4565
75°	13600	4762	4224
80°	11893	4198	3788
85°	9757	3570	3196



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.5	5.0
10°-20°	178.1	13.6
20°-30°	243.1	18.6
30°-40°	252.7	19.3
40°-50°	220.8	16.9
50°-60°	166.9	12.7
60°-70°	110.2	8.4
70°-80°	56.8	4.3
80°-90°	15.1	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°	486.7	37.2
0°-40°	739.4	56.5
0°-60°	1127.1	86.1
0°-90°	1309.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1309.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	700	700	700	700	700	
5°	701	697	688	693	690	66
15°	668	658	630	614	604	188
25°	607	583	523	479	462	280
35°	527	480	392	328	306	330
45°	433	368	262	203	188	334
55°	331	251	153	116	112	295
65°	224	140	82	73	71	222
75°	119	55	42	38	37	126
85°	29	12	10	10	9	33
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	699.6	699.6	699.6	699.6	699.6
2.5°	703.1	699.6	692.5	699.0	697.8
5°	700.7	696.6	687.9	693.1	690.2
7.5°	695.5	690.8	679.7	681.4	677.9
10°	687.3	682.0	667.4	664.4	657.4
12.5°	679.1	670.9	648.0	642.2	638.1
15°	667.9	658.0	630.5	614.1	604.1
17.5°	655.1	641.6	607.1	584.8	574.3
20°	641.6	624.0	580.7	550.3	539.7
22.5°	624.6	604.1	552.0	515.7	505.2
25°	607.1	583.1	522.8	479.4	461.9
27.5°	588.3	559.1	490.0	441.4	422.1
30°	569.6	533.9	459.5	401.0	382.3
32.5°	548.5	508.7	425.6	364.1	341.9
35°	526.9	480.0	392.2	327.8	306.2
37.5°	505.2	453.7	358.9	293.9	271.0
40°	480.6	426.2	324.9	258.2	241.2
42.5°	457.2	397.5	292.7	230.6	212.5
45°	433.2	368.2	261.7	203.1	187.9
47.5°	407.4	339.5	231.2	179.1	163.9
50°	382.9	309.1	203.7	155.7	141.1
52.5°	355.9	280.4	178.0	131.7	123.5
55°	330.8	251.1	153.4	116.5	112.4
57.5°	303.8	223.0	130.5	105.4	100.7
60°	278.7	194.9	108.3	93.7	90.7
62.5°	250.6	168.0	94.3	83.1	80.2
65°	224.2	139.9	82.5	72.6	70.8
67.5°	197.9	115.9	71.4	63.2	61.5
70°	170.9	91.9	60.3	54.4	52.7
72.5°	144.6	70.2	50.3	45.7	44.5
75°	118.8	55.0	41.6	38.1	36.9
77.5°	96.0	42.1	32.8	29.9	29.3
80°	69.7	31.0	24.6	22.8	22.2
82.5°	47.4	21.1	17.6	16.4	15.2
85°	28.7	11.7	10.5	10.0	9.4
87.5°	11.7	5.3	4.7	4.1	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)