

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: P242182

Luminaire Tested: **S121RDR-S490D927-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242182  
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-S490D927-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED 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: 1272.1 lumens  
Efficiency: N/A  
Efficacy: 67.7 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

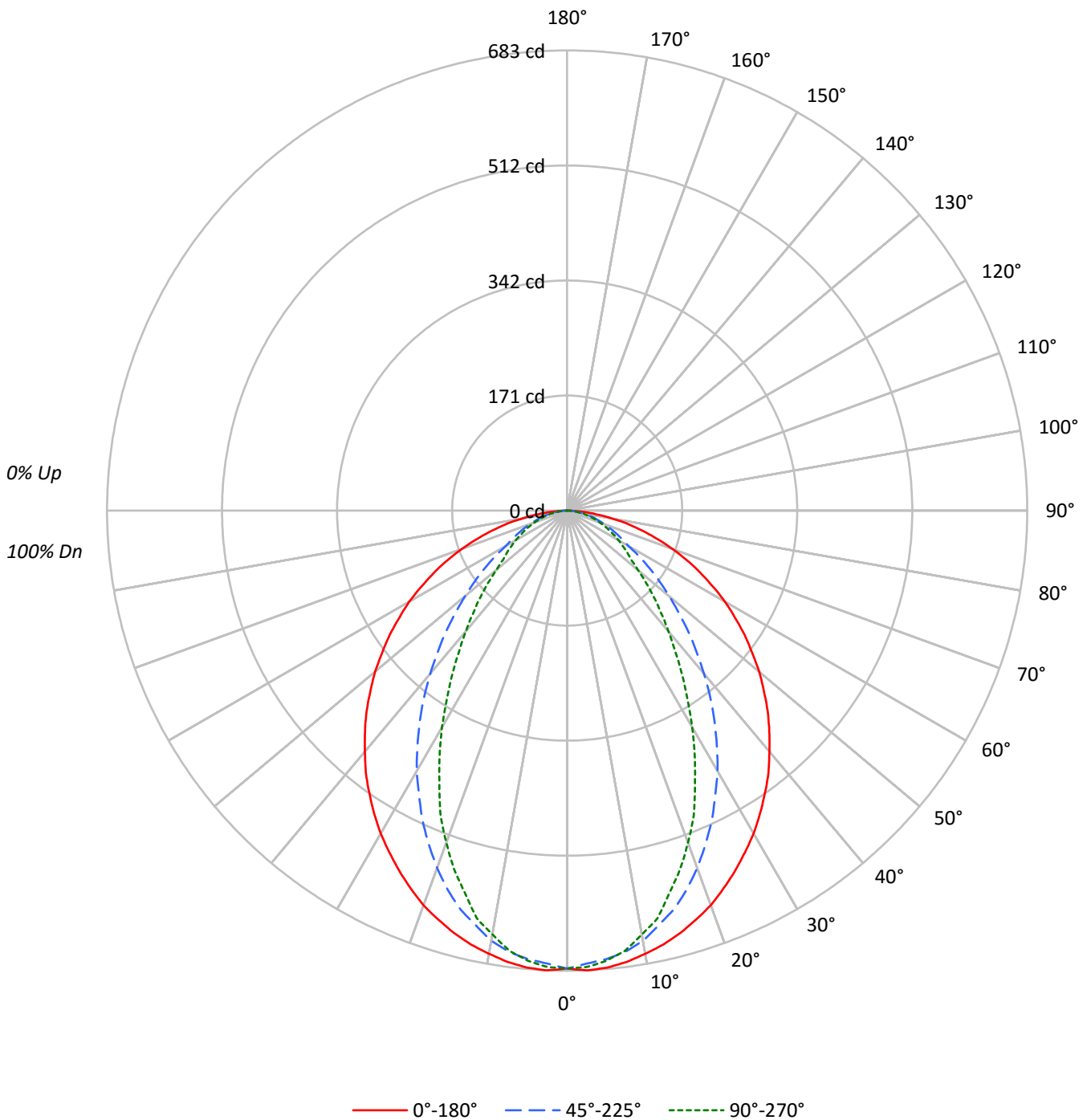
Input Watts (W): 18.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	20139	20139	20139
5°	20252	19877	19946
10°	20092	19508	19219
15°	19908	18791	18006
20°	19657	17793	16535
25°	19285	16605	14673
30°	18934	15276	12707
35°	18516	13785	10761
40°	18063	12211	9062
45°	17637	10656	7651
50°	17148	9122	6320
55°	16603	7697	5641
60°	16047	6234	5227
65°	15277	5623	4824
70°	14389	5077	4436
75°	13222	4625	4098
80°	11552	4078	3686
85°	9485	3468	3094



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.6	5.0
10°-20°	173.1	13.6
20°-30°	236.2	18.6
30°-40°	245.5	19.3
40°-50°	214.5	16.9
50°-60°	162.2	12.7
60°-70°	107.1	8.4
70°-80°	55.2	4.3
80°-90°	14.7	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°	472.9	37.2
0°-40°	718.4	56.5
0°-60°	1095.1	86.1
0°-90°	1272.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1272.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	680	680	680	680	680	
5°	681	677	668	674	671	65
15°	649	639	613	597	587	183
25°	590	566	508	466	449	272
35°	512	466	381	318	298	320
45°	421	358	254	197	183	324
55°	321	244	149	113	109	287
65°	218	136	80	70	69	216
75°	116	54	40	37	36	123
85°	28	11	10	10	9	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	679.7	679.7	679.7	679.7	679.7
2.5°	683.1	679.7	672.9	679.2	678.0
5°	680.9	676.9	668.3	673.5	670.6
7.5°	675.7	671.2	660.4	662.1	658.7
10°	667.8	662.7	648.4	645.6	638.8
12.5°	659.8	651.9	629.7	624.0	620.0
15°	649.0	639.3	612.6	596.7	587.0
17.5°	636.5	623.4	589.9	568.2	558.0
20°	623.4	606.3	564.3	534.7	524.4
22.5°	606.9	587.0	536.4	501.1	490.9
25°	589.9	566.5	507.9	465.9	448.8
27.5°	571.7	543.2	476.1	428.9	410.1
30°	553.4	518.8	446.5	389.6	371.4
32.5°	533.0	494.3	413.5	353.8	332.2
35°	511.9	466.4	381.1	318.5	297.5
37.5°	490.9	440.8	348.7	285.5	263.4
40°	467.0	414.1	315.7	250.8	234.3
42.5°	444.2	386.2	284.4	224.1	206.5
45°	420.9	357.8	254.3	197.4	182.6
47.5°	395.9	329.9	224.7	174.1	159.3
50°	372.0	300.3	197.9	151.3	137.1
52.5°	345.8	272.5	172.9	128.0	120.0
55°	321.4	244.0	149.0	113.2	109.2
57.5°	295.2	216.7	126.8	102.4	97.8
60°	270.8	189.4	105.2	91.0	88.2
62.5°	243.4	163.2	91.6	80.8	77.9
65°	217.9	135.9	80.2	70.5	68.8
67.5°	192.3	112.6	69.4	61.4	59.7
70°	166.1	89.3	58.6	52.9	51.2
72.5°	140.5	68.3	48.9	44.4	43.2
75°	115.5	53.5	40.4	37.0	35.8
77.5°	93.3	41.0	31.9	29.0	28.4
80°	67.7	30.1	23.9	22.2	21.6
82.5°	46.1	20.5	17.1	15.9	14.8
85°	27.9	11.4	10.2	9.7	9.1
87.5°	11.4	5.1	4.6	4.0	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)