

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: P243062

Luminaire Tested: **S121RDR-H685D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243062  
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-H685D930-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

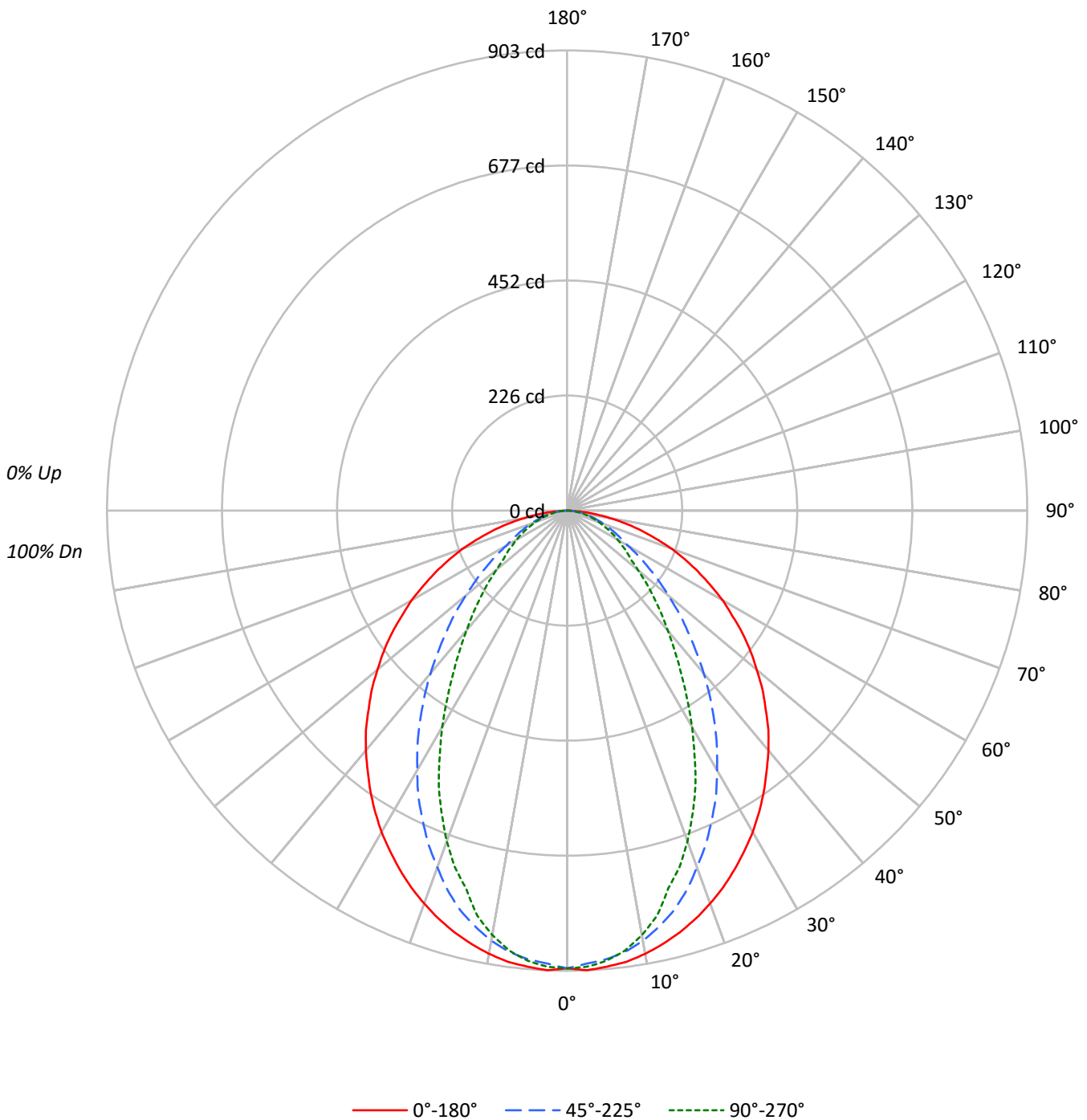
Lumens per Lamp: N/A  
Luminaire Lumens: 1670.5 lumens  
Efficiency: N/A  
Efficacy: 70.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 0.92 / 1.09  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<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				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77					75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67					65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59					57				
5	80	69	60	54	78	67	60	54	65	59	54	64	58	53	62	57	52					50				
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42					41				
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39					37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35					34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32					31				

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

	0°	45°	90°
0°	26616	26616	26616
5°	26718	26287	26376
10°	26567	25787	25444
15°	26270	24893	23537
20°	25875	23475	21769
25°	25409	21924	19485
30°	24924	20131	16771
35°	24340	18201	14096
40°	23760	16137	11867
45°	23093	14004	10048
50°	22389	11930	8353
55°	21707	10068	7434
60°	20883	8166	6809
65°	19855	7312	6247
70°	18799	6593	5735
75°	17172	5930	5232
80°	14674	5187	4675
85°	11389	4386	3876



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.1	5.0
10°-20°	228.6	13.7
20°-30°	311.9	18.7
30°-40°	323.3	19.4
40°-50°	282.1	16.9
50°-60°	212.3	12.7
60°-70°	139.2	8.3
70°-80°	71.0	4.2
80°-90°	18.0	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°	624.5	37.4
0°-40°	947.9	56.7
0°-60°	1442.3	86.3
0°-90°	1670.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1670.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	898	894	884	889	887	85
15°	856	844	812	789	767	241
25°	777	745	671	614	596	358
35°	673	615	503	419	390	421
45°	551	471	334	260	240	426
55°	420	320	195	148	144	375
65°	283	177	104	92	89	281
75°	150	68	52	47	46	158
85°	34	14	13	11	11	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	898.3	898.3	898.3	898.3	898.3
2.5°	902.8	899.0	889.9	897.5	896.0
5°	898.3	893.7	883.8	889.1	886.8
7.5°	892.9	886.8	873.1	875.4	870.8
10°	883.0	875.4	857.1	852.6	845.7
12.5°	870.8	862.5	835.8	825.2	814.5
15°	856.4	844.2	811.5	788.6	767.3
17.5°	839.6	824.4	781.0	749.0	733.1
20°	820.6	800.8	744.5	707.2	690.4
22.5°	800.1	774.9	710.2	663.0	643.2
25°	777.2	745.2	670.6	614.3	596.0
27.5°	752.9	716.3	632.6	567.9	541.2
30°	728.5	682.8	588.4	516.1	490.2
32.5°	701.1	649.3	546.6	466.6	437.7
35°	672.9	615.1	503.2	418.7	389.7
37.5°	643.2	580.8	459.8	374.5	346.4
40°	614.3	543.5	417.2	331.9	306.8
42.5°	584.6	506.2	374.5	294.6	273.3
45°	551.1	471.2	334.2	259.6	239.8
47.5°	519.9	433.1	297.6	228.4	210.1
50°	485.7	395.8	258.8	199.4	181.2
52.5°	453.7	357.8	226.8	169.0	157.6
55°	420.2	319.7	194.9	147.7	143.9
57.5°	384.4	282.4	166.7	132.5	127.9
60°	352.4	246.6	137.8	118.8	114.9
62.5°	316.7	210.9	119.5	105.8	102.0
65°	283.2	176.6	104.3	92.1	89.1
67.5°	249.7	145.4	89.8	79.9	76.9
70°	217.0	115.7	76.1	68.5	66.2
72.5°	181.2	87.5	63.9	57.9	56.3
75°	150.0	68.5	51.8	47.2	45.7
77.5°	117.2	51.8	40.3	37.3	36.5
80°	86.0	37.3	30.4	28.2	27.4
82.5°	58.6	25.1	21.3	19.8	19.0
85°	33.5	13.7	12.9	11.4	11.4
87.5°	12.9	5.3	4.6	4.6	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)