

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: P243072

Luminaire Tested: **S121RDR-H685D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243072  
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-H685D940-X4F0-XX-UDD-F-W  
Description: DEFINE 1 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1827.1 lumens  
Efficiency: N/A  
Efficacy: 77.4 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

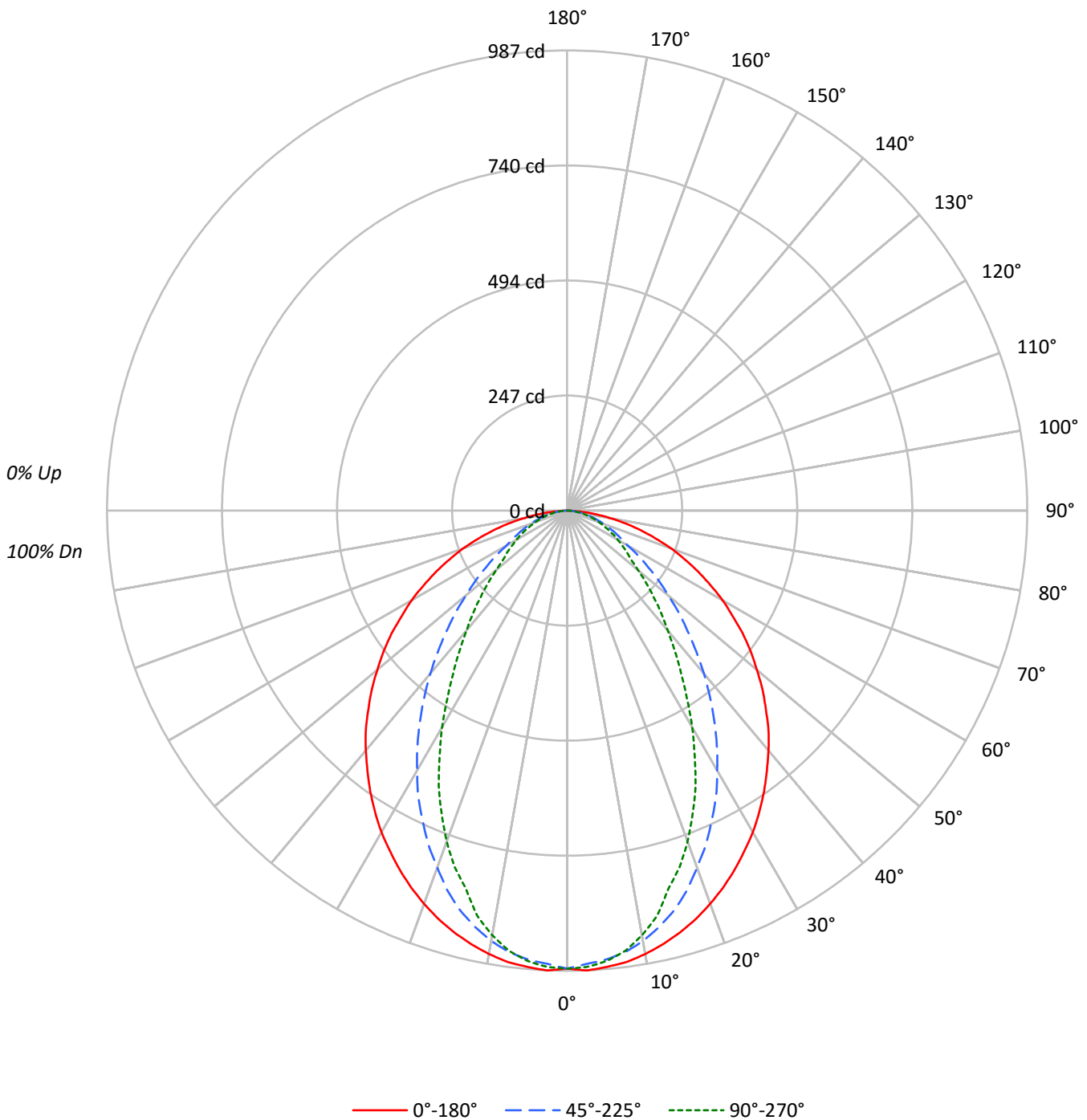
Input Watts (W): 23.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	29108	29108	29108
5°	29219	28749	28848
10°	29058	28206	27830
15°	28730	27224	25742
20°	28299	25676	23809
25°	27792	23980	21312
30°	27261	22020	18345
35°	26622	19905	15420
40°	25988	17649	12977
45°	25259	15315	10991
50°	24486	13050	9136
55°	23742	11008	8131
60°	22844	8930	7449
65°	21713	8000	6829
70°	20558	7216	6272
75°	18775	6480	5724
80°	16056	5682	5119
85°	12443	4827	4250



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.0	5.0
10°-20°	250.0	13.7
20°-30°	341.1	18.7
30°-40°	353.6	19.4
40°-50°	308.6	16.9
50°-60°	232.2	12.7
60°-70°	152.3	8.3
70°-80°	77.6	4.2
80°-90°	19.7	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°	683.1	37.4
0°-40°	1036.7	56.7
0°-60°	1577.5	86.3
0°-90°	1827.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1827.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	982	982	982	982	982	
5°	982	977	967	972	970	93
15°	937	923	888	862	839	264
25°	850	815	734	672	652	392
35°	736	673	550	458	426	460
45°	603	515	366	284	262	466
55°	460	350	213	162	157	410
65°	310	193	114	101	97	307
75°	164	75	57	52	50	173
85°	37	15	14	12	12	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	982.4	982.4	982.4	982.4	982.4
2.5°	987.4	983.3	973.3	981.6	979.9
5°	982.4	977.4	966.6	972.4	969.9
7.5°	976.6	969.9	955.0	957.5	952.5
10°	965.8	957.5	937.5	932.5	925.0
12.5°	952.5	943.3	914.2	902.5	890.9
15°	936.6	923.3	887.5	862.5	839.2
17.5°	918.3	901.7	854.2	819.3	801.8
20°	897.5	875.9	814.3	773.5	755.1
22.5°	875.0	847.6	776.8	725.2	703.5
25°	850.1	815.1	733.5	671.9	651.9
27.5°	823.4	783.5	691.9	621.1	592.0
30°	796.8	746.8	643.6	564.5	536.2
32.5°	766.8	710.2	597.8	510.4	478.7
35°	736.0	672.7	550.3	457.9	426.3
37.5°	703.5	635.3	502.9	409.6	378.8
40°	671.9	594.5	456.3	363.0	335.5
42.5°	639.4	553.7	409.6	322.2	298.9
45°	602.8	515.4	365.5	283.9	262.3
47.5°	568.6	473.7	325.5	249.8	229.8
50°	531.2	432.9	283.1	218.1	198.2
52.5°	496.2	391.3	248.1	184.8	172.3
55°	459.6	349.7	213.1	161.5	157.4
57.5°	420.4	308.9	182.3	144.9	139.9
60°	385.5	269.8	150.7	129.9	125.7
62.5°	346.4	230.6	130.7	115.7	111.6
65°	309.7	193.2	114.1	100.7	97.4
67.5°	273.1	159.0	98.2	87.4	84.1
70°	237.3	126.6	83.3	74.9	72.4
72.5°	198.2	95.7	69.9	63.3	61.6
75°	164.0	74.9	56.6	51.6	50.0
77.5°	128.2	56.6	44.1	40.8	40.0
80°	94.1	40.8	33.3	30.8	30.0
82.5°	64.1	27.5	23.3	21.6	20.8
85°	36.6	15.0	14.2	12.5	12.5
87.5°	14.2	5.8	5.0	5.0	5.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)