

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: P242960

Luminaire Tested: **S121DR-H880D930-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242960  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-47)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S121DR-H880D930-X4F0-XX-UDD-F-W  
Description: DEFINE 1 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

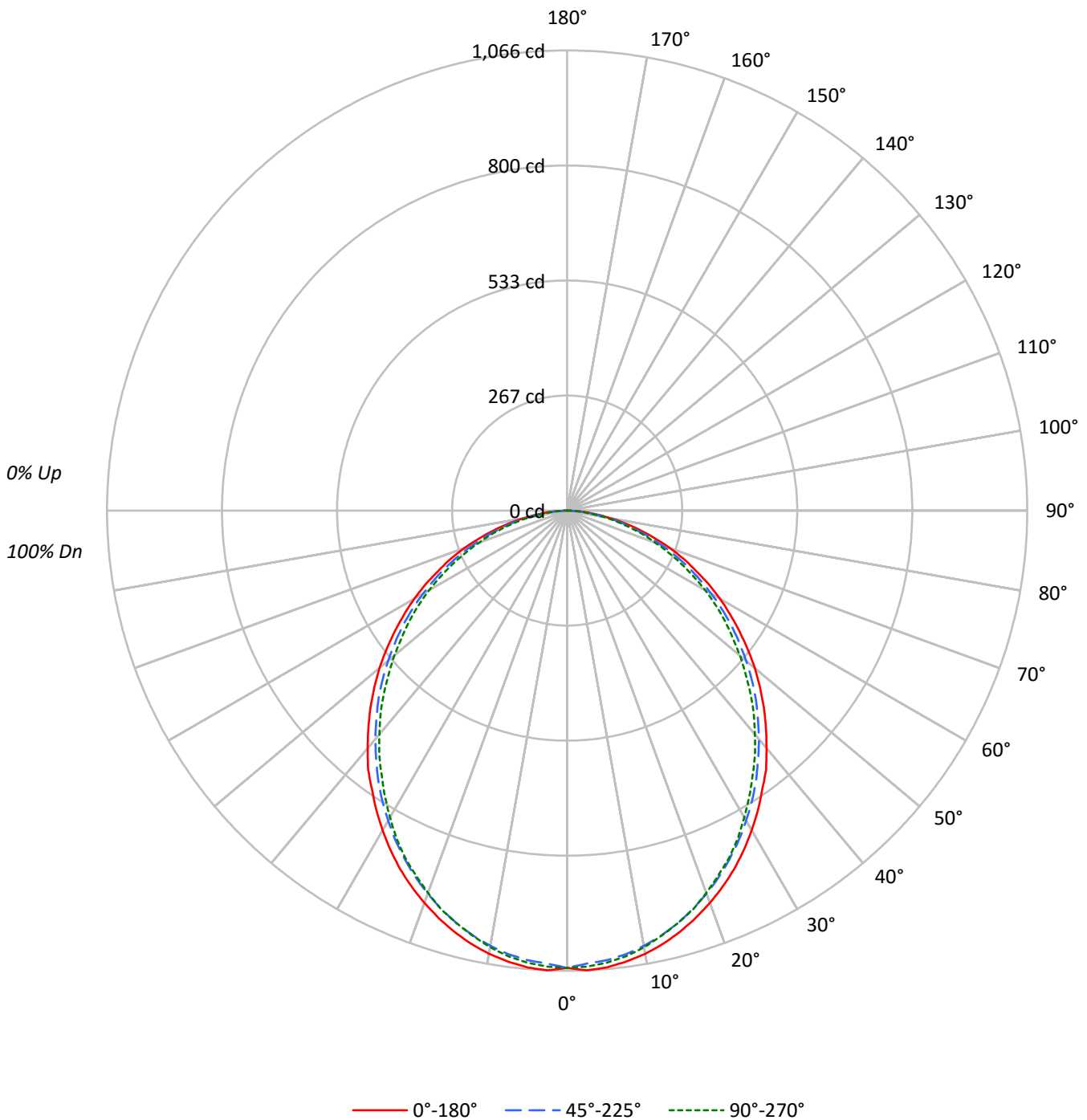
Lumens per Lamp: N/A  
Luminaire Lumens: 2687.3 lumens  
Efficiency: N/A  
Efficacy: 85.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29  
Luminous Opening: Rectangular (W 0.09' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	104	100	97	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	64	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	55	48	61	54	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	49	42	55	48	42	53	47	42	52	46	41	39
7	66	53	44	38	64	52	44	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	34	45	38	33	44	38	33	31
9	57	44	36	31	56	44	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

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

	0°	45°	90°
0°	31387	31387	31387
5°	31593	31096	31272
10°	31368	30806	30896
15°	30988	30356	30356
20°	30491	29778	29715
25°	29943	29110	29015
30°	29256	28380	28079
35°	28514	27591	27092
40°	27795	26731	26162
45°	26985	25917	25175
50°	26155	24933	24076
55°	25152	23985	23076
60°	24261	22862	21873
65°	23059	21615	20444
70°	21857	20073	18799
75°	20000	18202	17080
80°	17421	16073	14913
85°	15026	12341	10335



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.8	3.7
10°-20°	280.8	10.5
20°-30°	412.9	15.4
30°-40°	479.2	17.8
40°-50°	477.9	17.8
50°-60°	416.0	15.5
60°-70°	306.2	11.4
70°-80°	170.5	6.3
80°-90°	43.8	1.6
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°	793.5	29.5
0°-40°	1272.7	47.4
0°-60°	2166.7	80.6
0°-90°	2687.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2687.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1059	1059	1059	1059	1059	
5°	1062	1056	1046	1053	1051	101
15°	1010	1004	990	994	990	285
25°	916	905	890	890	888	422
35°	788	778	763	754	749	494
45°	644	633	618	606	601	497
55°	487	478	464	452	447	436
65°	329	322	308	296	292	327
75°	175	167	159	152	149	185
85°	44	41	36	31	30	51
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1059.3	1059.3	1059.3	1059.3	1059.3
2.5°	1066.1	1060.2	1050.4	1059.3	1057.3
5°	1062.2	1056.3	1045.5	1053.4	1051.4
7.5°	1053.4	1048.5	1036.7	1043.6	1041.6
10°	1042.6	1036.7	1023.9	1029.8	1026.9
12.5°	1027.8	1022.9	1008.2	1013.1	1009.2
15°	1010.2	1004.3	989.6	993.5	989.6
17.5°	989.6	983.7	968.0	970.9	968.9
20°	967.0	959.1	944.4	946.4	942.4
22.5°	942.4	933.6	918.9	918.9	914.9
25°	915.9	905.1	890.4	890.4	887.5
27.5°	886.5	876.7	861.0	859.0	856.0
30°	855.1	845.2	829.5	825.6	820.7
32.5°	822.7	811.9	797.1	790.3	785.4
35°	788.3	778.5	762.8	753.9	749.0
37.5°	756.9	743.1	726.5	718.6	714.7
40°	718.6	706.8	691.1	680.3	676.4
42.5°	681.3	670.5	653.8	643.0	640.1
45°	644.0	633.2	618.5	605.7	600.8
47.5°	605.7	594.9	580.2	567.4	560.6
50°	567.4	556.6	540.9	528.2	522.3
52.5°	527.2	519.3	502.6	490.9	483.0
55°	486.9	478.1	464.3	451.6	446.7
57.5°	447.7	439.8	425.1	411.3	408.4
60°	409.4	401.5	385.8	374.0	369.1
62.5°	369.1	361.3	346.5	334.8	329.9
65°	328.9	322.0	308.3	295.5	291.6
67.5°	291.6	282.7	270.0	258.2	253.3
70°	252.3	242.5	231.7	221.9	217.0
72.5°	213.0	205.2	196.3	186.5	184.6
75°	174.7	166.9	159.0	152.2	149.2
77.5°	138.4	132.5	126.6	119.8	117.8
80°	102.1	98.2	94.2	89.3	87.4
82.5°	71.7	68.7	62.8	58.9	56.9
85°	44.2	41.2	36.3	31.4	30.4
87.5°	20.6	16.7	12.8	10.8	9.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)