

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: P243073

Luminaire Tested: **S121RDR-H880D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P243073  
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-H880D940-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: 2356.2 lumens  
Efficiency: N/A  
Efficacy: 74.8 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

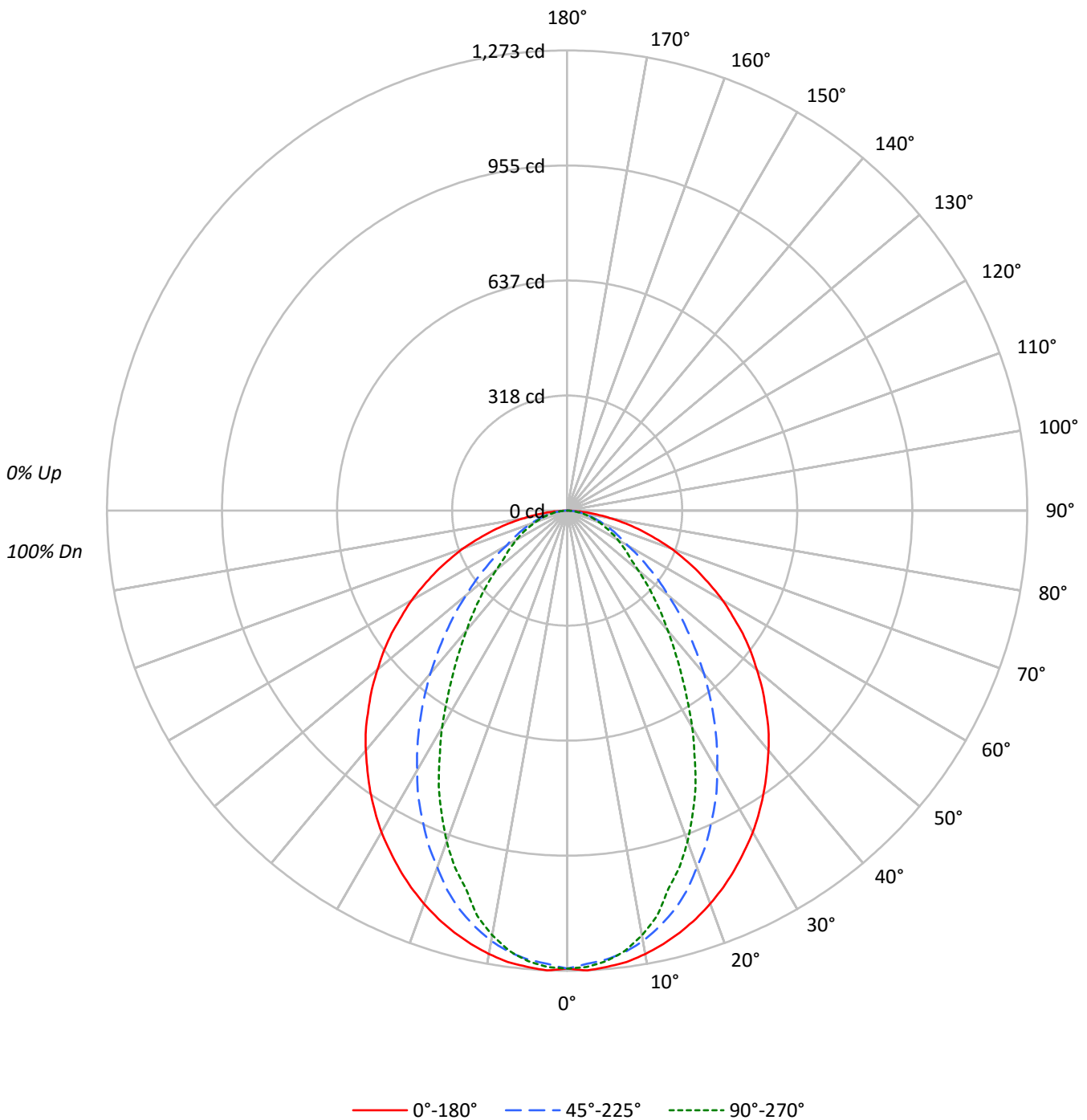
Input Watts (W): 31.5  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	37541	37541	37541
5°	37684	37077	37205
10°	37473	36375	35891
15°	37052	35111	33199
20°	36497	33111	30708
25°	35841	30924	27485
30°	35154	28397	23659
35°	34334	25671	19883
40°	33515	22759	16736
45°	32575	19753	14172
50°	31576	16830	11777
55°	30618	14201	10481
60°	29458	11514	9606
65°	28002	10313	8806
70°	26509	9304	8091
75°	24213	8357	7373
80°	20697	7320	6603
85°	16046	6221	5473



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.6	5.0
10°-20°	322.4	13.7
20°-30°	439.9	18.7
30°-40°	456.0	19.4
40°-50°	397.9	16.9
50°-60°	299.5	12.7
60°-70°	196.4	8.3
70°-80°	100.1	4.2
80°-90°	25.4	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°	880.9	37.4
0°-40°	1337.0	56.7
0°-60°	2034.3	86.3
0°-90°	2356.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2356.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1267	1267	1267	1267	1267	
5°	1267	1260	1247	1254	1251	120
15°	1208	1191	1145	1112	1082	340
25°	1096	1051	946	866	841	505
35°	949	868	710	590	550	594
45°	777	665	471	366	338	600
55°	593	451	275	208	203	529
65°	399	249	147	130	126	396
75°	212	97	73	67	64	223
85°	47	19	18	16	16	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1267.0	1267.0	1267.0	1267.0	1267.0
2.5°	1273.4	1268.1	1255.2	1265.9	1263.8
5°	1267.0	1260.5	1246.6	1254.1	1250.9
7.5°	1259.5	1250.9	1231.5	1234.8	1228.3
10°	1245.5	1234.8	1209.0	1202.6	1192.9
12.5°	1228.3	1216.5	1178.9	1163.9	1148.9
15°	1207.9	1190.7	1144.6	1112.4	1082.3
17.5°	1184.3	1162.8	1101.6	1056.5	1034.0
20°	1157.5	1129.5	1050.1	997.5	973.9
22.5°	1128.5	1093.0	1001.8	935.2	907.3
25°	1096.3	1051.2	945.9	866.5	840.7
27.5°	1061.9	1010.4	892.3	801.0	763.4
30°	1027.5	963.1	830.0	728.0	691.5
32.5°	988.9	915.9	770.9	658.2	617.4
35°	949.2	867.6	709.7	590.5	549.7
37.5°	907.3	819.2	648.5	528.3	488.5
40°	866.5	766.6	588.4	468.1	432.7
42.5°	824.6	714.0	528.3	415.5	385.5
45°	777.4	664.6	471.4	366.1	338.2
47.5°	733.3	610.9	419.8	322.1	296.3
50°	685.0	558.3	365.1	281.3	255.5
52.5°	639.9	504.6	320.0	238.4	222.3
55°	592.7	451.0	274.9	208.3	202.9
57.5°	542.2	398.3	235.1	186.8	180.4
60°	497.1	347.9	194.3	167.5	162.1
62.5°	446.7	297.4	168.6	149.2	143.9
65°	399.4	249.1	147.1	129.9	125.6
67.5°	352.2	205.1	126.7	112.7	108.4
70°	306.0	163.2	107.4	96.6	93.4
72.5°	255.5	123.5	90.2	81.6	79.5
75°	211.5	96.6	73.0	66.6	64.4
77.5°	165.4	73.0	56.9	52.6	51.5
80°	121.3	52.6	42.9	39.7	38.7
82.5°	82.7	35.4	30.1	27.9	26.8
85°	47.2	19.3	18.3	16.1	16.1
87.5°	18.3	7.5	6.4	6.4	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)