

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: P242558

Luminaire Tested: **S123RDR-S1165D940-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242558  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-25)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S1165D940-X4F0-XX-UDD-F-W  
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3681.4 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.07 / 1.22  
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')  
CIE Type: Direct

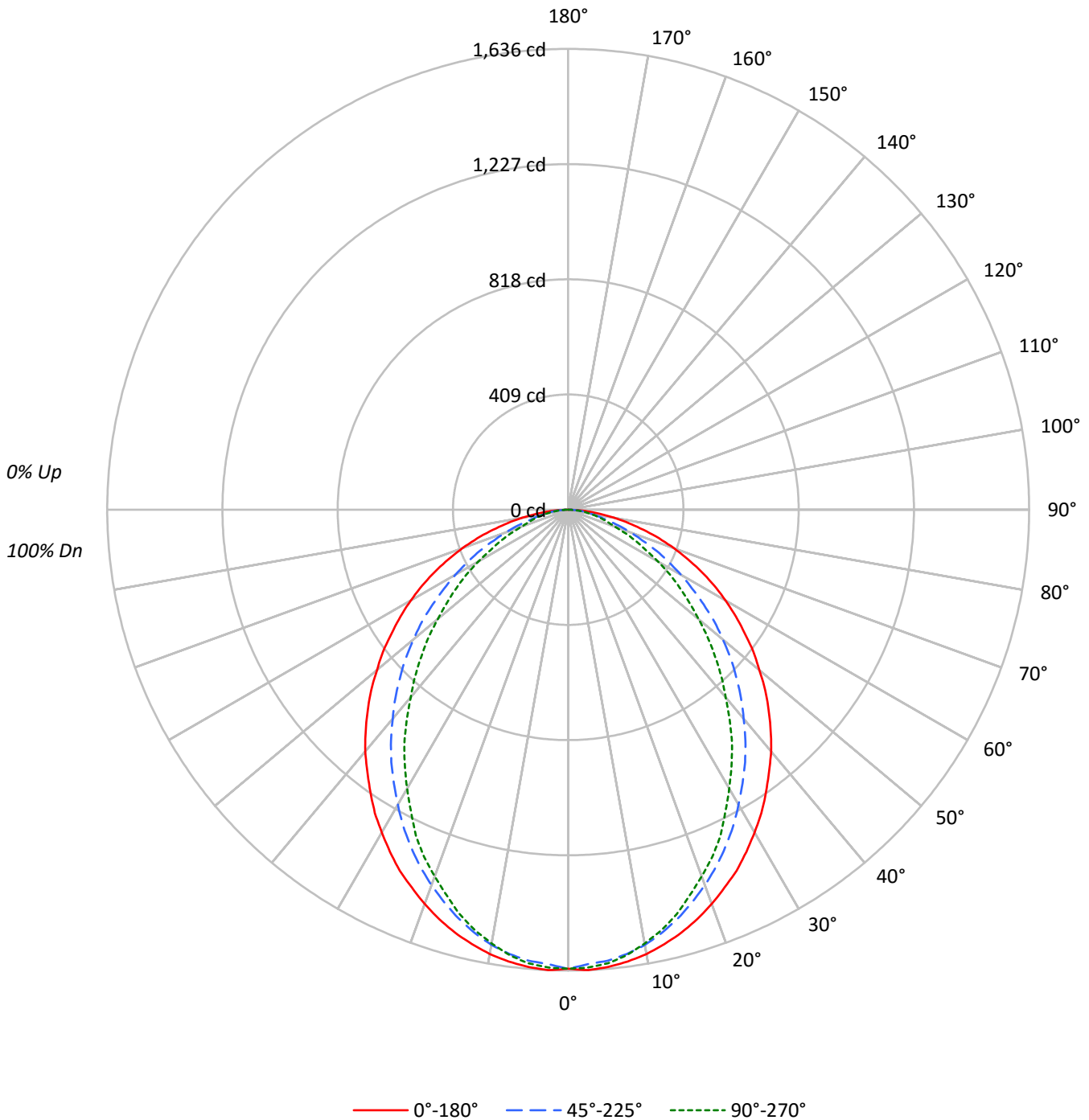
Input Watts (W): 41.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	110	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88	86
2	100	93	86	81	98	91	85	80	87	83	78	84	80	77	81	78	75	73
3	92	82	75	68	90	81	74	68	78	72	67	75	70	66	73	68	64	62
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56	54
5	78	66	57	51	76	65	57	51	63	56	50	61	55	50	59	54	49	47
6	73	60	51	45	71	59	51	45	57	50	45	55	49	44	54	48	44	42
7	67	54	46	40	66	54	46	40	52	45	40	51	44	39	49	44	39	37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	28

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

	0°	45°	90°
0°	19752	19752	19752
5°	19827	19553	19666
10°	19715	19308	19243
15°	19503	18856	18658
20°	19212	18292	17865
25°	18913	17658	17092
30°	18516	16926	16001
35°	18109	16193	15000
40°	17733	15328	13760
45°	17240	14476	12641
50°	16698	13507	11390
55°	16143	12401	10222
60°	15634	11215	8938
65°	14972	9932	7658
70°	14144	8336	6181
75°	12935	6561	5817
80°	11532	5815	5354
85°	9735	5146	4784



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	153.2	4.2
10°-20°	426.1	11.6
20°-30°	613.6	16.7
30°-40°	691.0	18.8
40°-50°	660.9	18.0
50°-60°	541.0	14.7
60°-70°	364.8	9.9
70°-80°	183.0	5.0
80°-90°	47.8	1.3
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°	1192.9	32.4
0°-40°	1883.8	51.2
0°-60°	3085.8	83.8
0°-90°	3681.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3681.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1630	1630	1630	1630	1630	
5°	1630	1623	1607	1619	1616	155
15°	1554	1540	1503	1496	1487	438
25°	1414	1381	1320	1292	1278	650
35°	1224	1176	1094	1037	1014	766
45°	1006	946	844	769	737	776
55°	764	699	587	510	484	685
65°	522	449	346	282	267	517
75°	276	213	140	127	124	294
85°	70	41	37	34	34	81
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1629.5	1629.5	1629.5	1629.5	1629.5
2.5°	1636.1	1630.8	1615.0	1629.5	1626.9
5°	1629.5	1622.9	1607.0	1618.9	1616.3
7.5°	1617.6	1611.0	1591.2	1599.1	1595.2
10°	1601.8	1592.5	1568.7	1570.0	1563.4
12.5°	1579.3	1568.7	1538.3	1537.0	1529.1
15°	1554.2	1539.6	1502.6	1496.0	1486.8
17.5°	1523.8	1507.9	1461.7	1448.5	1435.2
20°	1489.4	1468.3	1418.1	1400.9	1385.0
22.5°	1451.1	1426.0	1371.8	1349.3	1334.8
25°	1414.1	1381.1	1320.3	1292.5	1278.0
27.5°	1369.2	1333.5	1267.4	1230.4	1207.9
30°	1322.9	1283.3	1209.3	1164.3	1143.2
32.5°	1276.7	1230.4	1151.1	1100.9	1078.4
35°	1223.8	1176.2	1094.3	1037.4	1013.7
37.5°	1170.9	1119.4	1033.5	970.0	941.0
40°	1120.7	1062.6	968.7	900.0	869.6
42.5°	1063.9	1005.7	907.9	831.3	804.8
45°	1005.7	946.3	844.5	769.2	737.4
47.5°	948.9	882.8	782.4	700.4	672.7
50°	885.5	823.3	716.3	634.4	604.0
52.5°	828.6	759.9	654.2	568.3	541.9
55°	763.9	699.1	586.8	510.1	483.7
57.5°	705.7	635.7	522.0	449.3	426.9
60°	644.9	572.2	462.6	391.2	368.7
62.5°	584.1	511.5	401.8	335.7	311.9
65°	522.0	449.3	346.3	281.5	267.0
67.5°	459.9	385.9	285.5	236.6	220.7
70°	399.1	327.8	235.2	189.0	174.4
72.5°	338.3	268.3	186.3	150.7	146.7
75°	276.2	212.8	140.1	126.9	124.2
77.5°	219.4	161.2	109.7	101.8	99.1
80°	165.2	111.0	83.3	79.3	76.7
82.5°	113.7	68.7	59.5	55.5	55.5
85°	70.0	41.0	37.0	34.4	34.4
87.5°	31.7	17.2	17.2	15.9	14.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)