

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: P231684

Luminaire Tested: **S123-DR-2-30-X-0048-1-U-DD-1-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P231684  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29683)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S123-DR-2-30-X-0048-1-U-DD-1-W  
Description: DEFINE 3 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH FLUSH LENS.  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3950.2 lumens  
Efficiency: N/A  
Efficacy: 92.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.31  
Luminous Opening: Rectangular (W 0.22' x L: 3.92' x H: 0')  
CIE Type: Direct

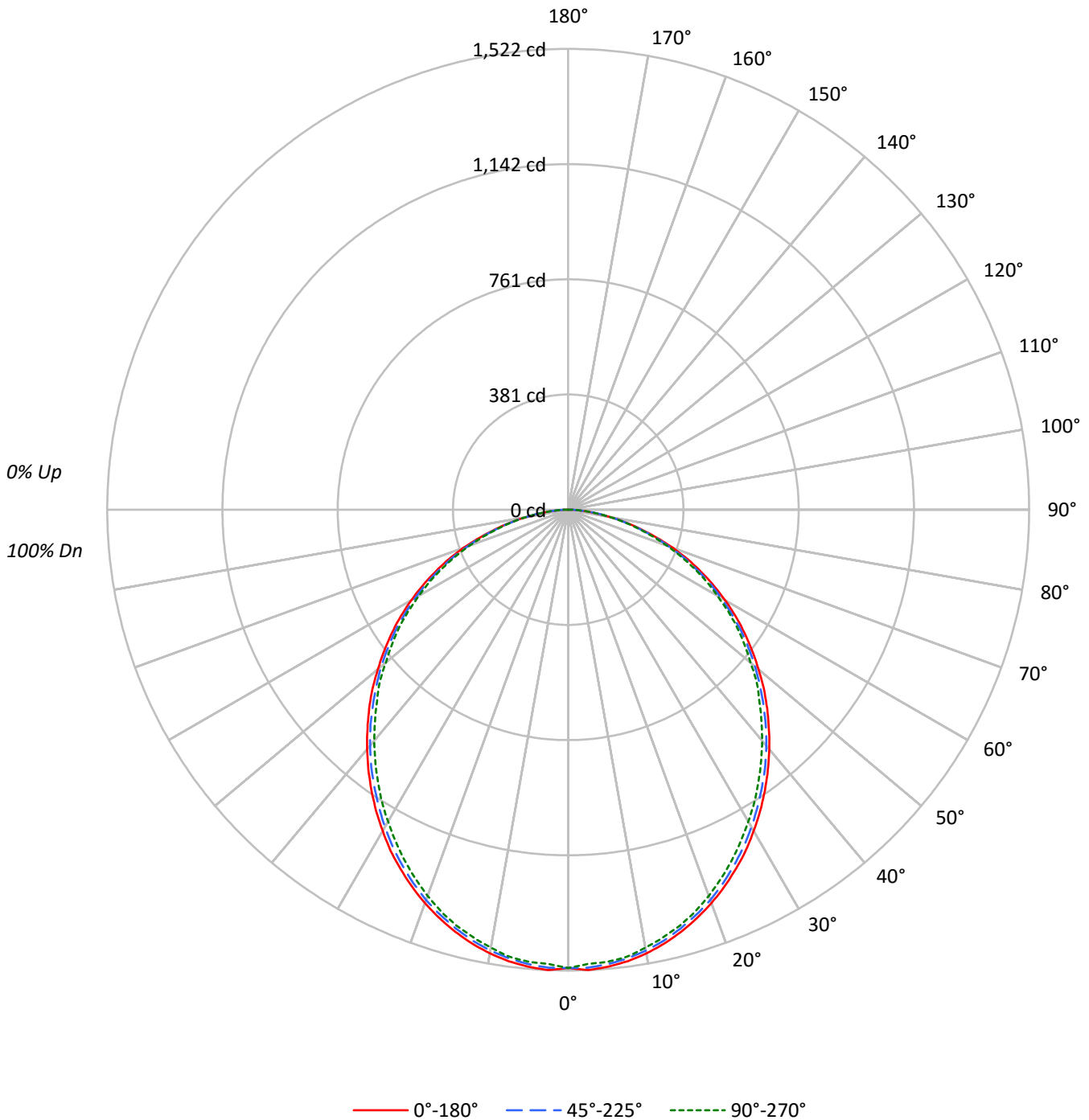
Input Watts (W): 42.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	57	53	51
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

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

	0°	45°	90°
0°	18629	18629	18629
5°	18718	18617	18517
10°	18594	18474	18356
15°	18385	18246	18125
20°	18112	17969	17774
25°	17781	17595	17355
30°	17407	17194	16904
35°	17011	16766	16459
40°	16593	16352	16002
45°	16173	15865	15532
50°	15704	15417	15053
55°	15260	14938	14647
60°	14722	14355	13986
65°	14086	13649	13373
70°	13188	12749	12454
75°	11793	11531	11274
80°	10043	10043	10043
85°	8077	8473	8473



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.6	3.6
10°-20°	402.8	10.2
20°-30°	594.6	15.1
30°-40°	695.5	17.6
40°-50°	701.8	17.8
50°-60°	620.9	15.7
60°-70°	464.6	11.8
70°-80°	258.0	6.5
80°-90°	69.4	1.8
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°	1140.0	28.9
0°-40°	1835.5	46.5
0°-60°	3158.1	79.9
0°-90°	3950.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3950.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1514	1514	1514	1514	1514	
5°	1515	1500	1507	1502	1499	144
15°	1443	1426	1432	1426	1422	407
25°	1309	1293	1296	1282	1278	603
35°	1132	1117	1116	1100	1096	708
45°	929	917	912	896	892	717
55°	711	704	696	683	683	635
65°	484	477	469	462	459	478
75°	248	245	242	238	237	264
85°	57	60	60	59	60	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1513.7	1513.7	1513.7	1513.7	1513.7
2.5°	1521.9	1505.6	1513.7	1509.7	1501.5
5°	1515.1	1500.1	1506.9	1501.5	1498.8
7.5°	1504.2	1487.9	1494.7	1489.2	1489.2
10°	1487.9	1471.5	1478.3	1471.5	1468.8
12.5°	1467.4	1451.1	1457.9	1449.7	1447.0
15°	1442.9	1426.5	1432.0	1426.5	1422.5
17.5°	1414.3	1399.3	1403.4	1396.6	1392.5
20°	1382.9	1366.6	1372.0	1361.1	1357.1
22.5°	1347.5	1331.2	1335.3	1321.6	1318.9
25°	1309.4	1293.0	1295.7	1282.1	1278.0
27.5°	1269.9	1252.1	1254.9	1239.9	1234.4
30°	1224.9	1208.5	1209.9	1194.9	1189.5
32.5°	1179.9	1163.6	1163.6	1147.2	1144.5
35°	1132.2	1117.3	1115.9	1099.5	1095.5
37.5°	1083.2	1069.6	1068.2	1050.5	1046.4
40°	1032.8	1020.5	1017.8	1000.1	996.0
42.5°	981.0	968.7	966.0	948.3	944.2
45°	929.2	917.0	911.5	896.5	892.4
47.5°	876.1	866.6	858.4	844.8	844.8
50°	820.2	812.1	805.2	791.6	786.2
52.5°	765.7	758.9	750.7	738.5	734.4
55°	711.2	704.4	696.2	682.6	682.6
57.5°	655.4	647.2	639.0	629.5	626.8
60°	598.1	591.3	583.2	573.6	568.2
62.5°	540.9	535.5	527.3	519.1	516.4
65°	483.7	476.9	468.7	461.9	459.2
67.5°	426.5	418.3	411.5	404.7	403.3
70°	366.5	359.7	354.3	346.1	346.1
72.5°	305.2	299.8	297.0	292.9	291.6
75°	248.0	245.3	242.5	238.4	237.1
77.5°	193.5	193.5	190.8	189.4	189.4
80°	141.7	144.4	141.7	141.7	141.7
82.5°	95.4	96.7	98.1	98.1	96.7
85°	57.2	60.0	60.0	58.6	60.0
87.5°	27.3	27.3	27.3	27.3	27.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)