

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: P242349

Luminaire Tested: **S122DR-S485D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242349
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-14)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DR-S485D940-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1685.7 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.31 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.15' x L: 3.88' x H: 0.08')
CIE Type: Semi-Direct

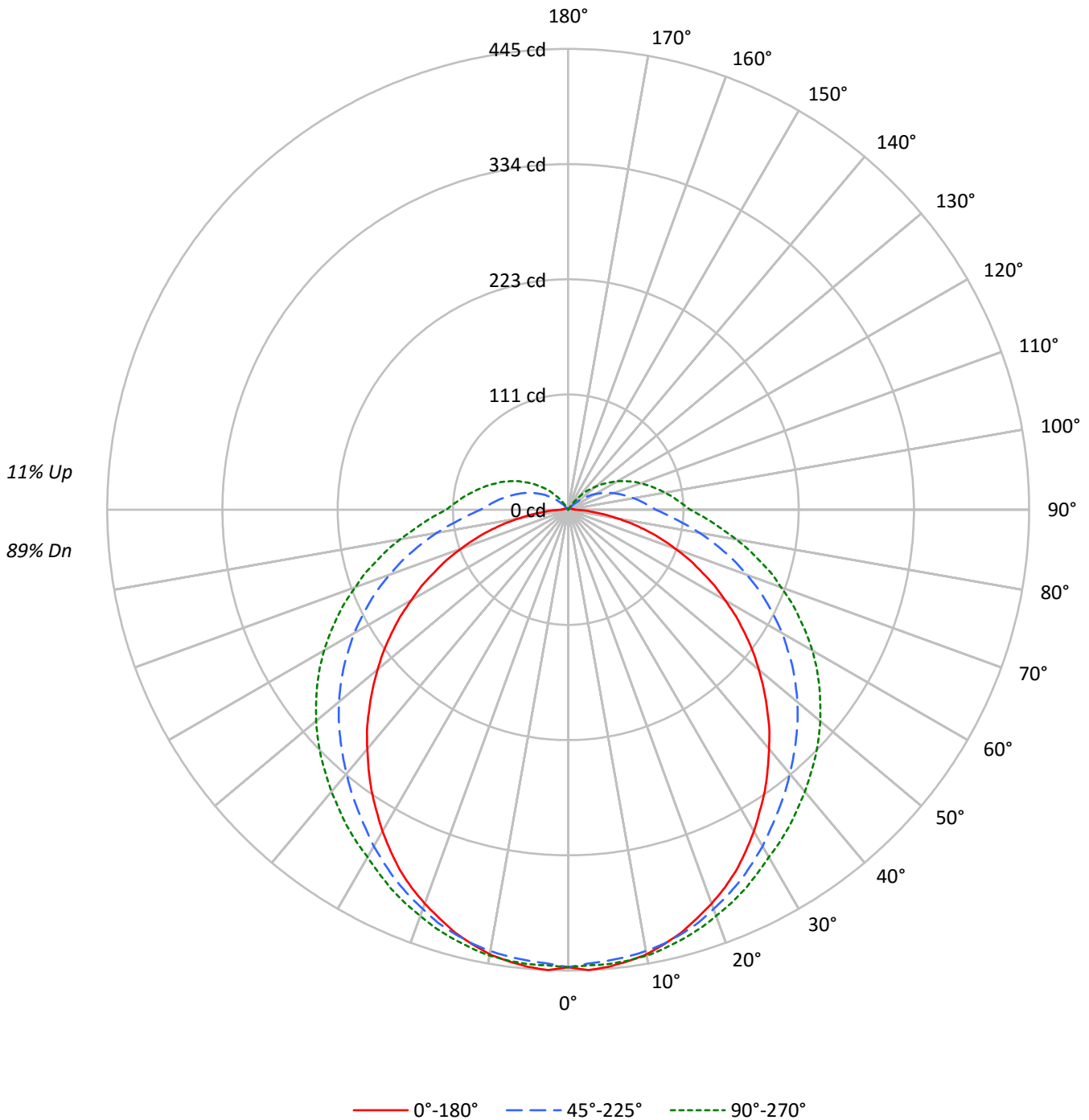
Input Watts (W): 18.8
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P242349

CATALOG NUMBER: S122DR-S485D940-X4F0-XX-UDD-D-W

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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	104	98	93	88	100	95	90	86	88	85	81	82	79	77	77	75	72	69
2	94	84	77	70	90	81	74	68	76	70	65	71	66	62	66	62	59	56
3	85	73	64	57	81	71	63	56	66	59	54	62	56	51	58	53	49	46
4	77	64	55	48	74	62	54	47	58	51	45	55	48	43	51	46	42	39
5	71	57	48	41	68	56	47	40	52	44	39	49	42	37	46	40	36	33
6	65	51	42	35	63	50	41	35	47	39	34	44	37	32	42	36	31	29
7	60	46	37	31	58	45	37	31	43	35	30	40	34	29	38	32	28	25
8	56	42	34	28	54	41	33	27	39	32	26	37	30	25	35	29	25	23
9	52	39	30	25	50	38	30	24	36	29	24	34	27	23	32	26	22	20
10	49	36	28	22	47	35	27	22	33	26	21	31	25	21	30	24	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8415	8415	8415
5°	8456	8066	8022
10°	8401	7795	7684
15°	8286	7515	7336
20°	8140	7218	7006
25°	7994	6934	6704
30°	7790	6644	6407
35°	7583	6365	6188
40°	7366	6123	5973
45°	7160	5907	5784
50°	6937	5707	5599
55°	6705	5492	5409
60°	6420	5270	5210
65°	6122	5015	4980
70°	5790	4739	4731
75°	5368	4465	4497
80°	4693	4180	4255
85°	4035	3913	4051



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.9	2.5
10°-20°	120.1	7.1
20°-30°	182.0	10.8
30°-40°	221.6	13.1
40°-50°	238.5	14.1
50°-60°	231.6	13.7
60°-70°	202.2	12.0
70°-80°	155.6	9.2
80°-90°	104.2	6.2
90°-100°	71.9	4.3
100°-110°	52.5	3.1
110°-120°	34.7	2.1
120°-130°	19.3	1.1
130°-140°	8.1	0.5
140°-150°	1.4	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	344.0	20.4
0°-40°	565.6	33.6
0°-60°	1035.7	61.4
0°-90°	1497.8	88.9
90°-120°	159.1	9.4
90°-150°	187.9	11.1
90°-180°	188.0	11.2
0°-180°	1685.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	442	442	442	442	442	
5°	443	441	437	441	440	42
15°	423	424	424	430	429	119
25°	384	389	394	402	404	177
35°	331	342	354	368	373	207
45°	272	289	311	331	337	210
55°	208	231	264	288	296	186
65°	142	174	211	238	246	141
75°	79	115	156	183	191	83
85°	23	63	104	131	140	24
90°	6	44	84	110	118	4
95°	5	35	74	98	106	4
105°	3	22	55	78	84	4
115°	3	10	38	58	65	2
125°	1	1	22	39	45	1
135°	1	1	7	20	26	1
145°	0	0	0	4	7	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P242349

CATALOG NUMBER: S122DR-S485D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	441.8	441.8	441.8	441.8	441.8
2.5°	445.0	443.1	438.6	441.8	440.5
5°	443.1	441.1	437.3	441.1	440.5
7.5°	439.9	438.6	435.4	439.9	439.2
10°	436.0	434.7	432.8	437.9	437.3
12.5°	429.6	430.3	429.0	434.1	433.5
15°	422.6	423.9	423.9	429.6	429.0
17.5°	413.6	416.2	418.1	423.9	423.9
20°	404.7	407.9	410.4	417.5	417.5
22.5°	395.0	398.9	402.7	409.8	411.1
25°	384.2	388.6	394.4	402.1	404.0
27.5°	371.4	378.4	384.8	394.4	395.7
30°	358.6	366.9	375.2	385.4	387.4
32.5°	344.5	354.1	364.3	376.5	380.3
35°	331.0	341.9	354.1	368.2	372.6
37.5°	316.3	328.5	343.8	359.2	363.7
40°	301.6	315.7	332.9	349.6	355.4
42.5°	287.5	301.6	322.1	340.6	346.4
45°	271.5	288.8	311.2	331.0	337.4
47.5°	256.1	274.7	300.3	320.8	327.8
50°	240.1	260.0	288.8	310.5	317.6
52.5°	224.7	245.9	276.6	299.0	306.7
55°	208.1	231.1	264.4	287.5	295.8
57.5°	192.1	217.7	251.0	276.0	284.3
60°	174.8	202.3	238.8	263.2	272.1
62.5°	159.4	188.2	224.7	251.0	259.3
65°	142.1	173.5	211.3	237.5	245.9
67.5°	126.8	159.4	197.8	224.1	233.1
70°	110.1	143.4	183.1	210.6	218.3
72.5°	94.8	129.3	169.7	196.6	206.2
75°	78.8	114.6	155.6	183.1	191.4
77.5°	63.4	100.5	142.1	169.7	178.6
80°	48.0	87.1	128.7	155.6	164.5
82.5°	35.2	73.6	115.9	142.8	151.1
85°	23.0	62.7	103.7	130.6	139.6
87.5°	14.1	52.5	93.5	119.7	128.1
90°	6.4	43.5	84.5	110.1	117.8
92.5°	5.8	39.7	78.8	103.7	111.4
95°	5.1	35.2	73.6	98.0	105.6
97.5°	4.5	32.0	69.1	92.8	100.5
100°	4.5	28.2	64.0	87.7	94.8
102.5°	3.8	25.0	59.5	82.6	89.6
105°	3.2	21.8	55.1	77.5	84.5
107.5°	3.2	18.6	50.6	72.4	79.4
110°	2.6	15.4	46.7	67.2	74.3



TEST NUMBER: P242349

CATALOG NUMBER: S122DR-S485D940-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	2.6	12.8	42.3	62.7	69.8
115°	2.6	9.6	38.4	57.6	64.7
117.5°	1.9	7.0	33.9	53.1	59.5
120°	1.9	4.5	30.1	48.0	55.1
122.5°	1.9	2.6	26.3	43.5	49.3
125°	1.3	1.3	21.8	39.1	44.8
127.5°	1.3	0.6	17.9	33.9	39.7
130°	1.3	0.6	14.1	29.5	34.6
132.5°	1.3	0.6	10.2	25.0	30.1
135°	0.6	0.6	7.0	20.5	25.6
137.5°	0.6	0.6	3.8	16.0	20.5
140°	0.6	0.0	1.3	11.5	15.4
142.5°	0.6	0.0	0.0	7.7	10.9
145°	0.0	0.0	0.0	3.8	7.0
147.5°	0.0	0.0	0.0	0.6	2.6
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)