

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: P242329

Luminaire Tested: **S122DR-S290D835-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P242329
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-S290D835-X4F0-XX-UDD-D-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN DROP DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1149.5 lumens
Efficiency: N/A
Efficacy: 99.1 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

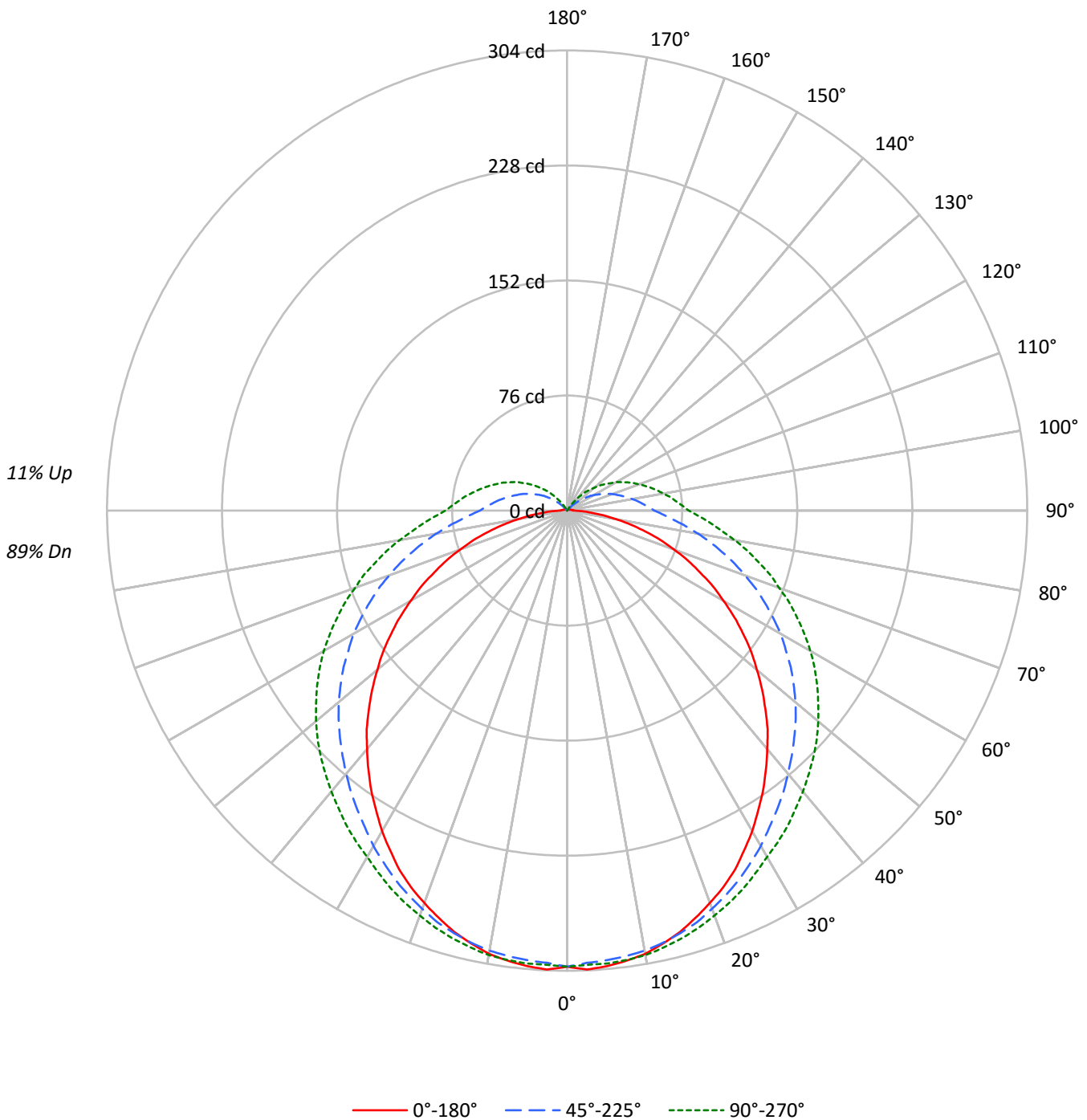
Input Watts (W): 11.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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
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°	5739	5739	5739
5°	5765	5500	5470
10°	5729	5317	5240
15°	5651	5123	5002
20°	5549	4922	4777
25°	5452	4729	4572
30°	5312	4531	4369
35°	5170	4341	4220
40°	5022	4175	4072
45°	4881	4028	3944
50°	4730	3891	3818
55°	4572	3745	3688
60°	4378	3595	3554
65°	4175	3420	3396
70°	3949	3232	3227
75°	3658	3045	3068
80°	3197	2851	2902
85°	2754	2668	2763



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.6	2.5
10°-20°	81.9	7.1
20°-30°	124.1	10.8
30°-40°	151.1	13.1
40°-50°	162.6	14.1
50°-60°	157.9	13.7
60°-70°	137.9	12.0
70°-80°	106.1	9.2
80°-90°	71.1	6.2
90°-100°	49.0	4.3
100°-110°	35.8	3.1
110°-120°	23.6	2.1
120°-130°	13.2	1.1
130°-140°	5.5	0.5
140°-150°	0.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	234.6	20.4
0°-40°	385.7	33.6
0°-60°	706.2	61.4
0°-90°	1021.4	88.9
90°-120°	108.5	9.4
90°-150°	128.1	11.1
90°-180°	128.0	11.1
0°-180°	1149.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	301	301	301	301	301	
5°	302	301	298	301	300	29
15°	288	289	289	293	292	81
25°	262	265	269	274	276	120
35°	226	233	242	251	254	141
45°	185	197	212	226	230	143
55°	142	158	180	196	202	127
65°	97	118	144	162	168	96
75°	54	78	106	125	131	57
85°	16	43	71	89	95	17
90°	4	30	58	75	80	3
95°	4	24	50	67	72	3
105°	2	15	38	53	58	2
115°	2	6	26	39	44	2
125°	1	1	15	27	31	1
135°	0	0	5	14	18	0
145°	0	0	0	3	5	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



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CATALOG NUMBER: S122DR-S290D835-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	301.3	301.3	301.3	301.3	301.3
2.5°	303.5	302.1	299.1	301.3	300.4
5°	302.1	300.8	298.2	300.8	300.4
7.5°	300.0	299.1	296.9	300.0	299.5
10°	297.3	296.5	295.2	298.7	298.2
12.5°	293.0	293.4	292.5	296.0	295.6
15°	288.2	289.0	289.0	293.0	292.5
17.5°	282.1	283.8	285.1	289.0	289.0
20°	275.9	278.1	279.9	284.7	284.7
22.5°	269.4	272.0	274.6	279.4	280.3
25°	262.0	265.0	269.0	274.2	275.5
27.5°	253.2	258.0	262.4	269.0	269.8
30°	244.5	250.2	255.9	262.8	264.2
32.5°	234.9	241.5	248.4	256.7	259.4
35°	225.7	233.2	241.5	251.1	254.1
37.5°	215.7	224.0	234.5	244.9	248.0
40°	205.6	215.3	227.0	238.4	242.3
42.5°	196.0	205.6	219.6	232.3	236.2
45°	185.1	196.9	212.2	225.7	230.1
47.5°	174.6	187.3	204.8	218.7	223.6
50°	163.7	177.3	196.9	211.8	216.6
52.5°	153.3	167.7	188.6	203.9	209.1
55°	141.9	157.6	180.3	196.0	201.7
57.5°	131.0	148.5	171.2	188.2	193.9
60°	119.2	138.0	162.9	179.5	185.6
62.5°	108.7	128.4	153.3	171.2	176.8
65°	96.9	118.3	144.1	162.0	167.7
67.5°	86.5	108.7	134.9	152.8	158.9
70°	75.1	97.8	124.9	143.6	148.9
72.5°	64.6	88.2	115.7	134.0	140.6
75°	53.7	78.2	106.1	124.9	130.6
77.5°	43.2	68.5	96.9	115.7	121.8
80°	32.7	59.4	87.8	106.1	112.2
82.5°	24.0	50.2	79.0	97.4	103.0
85°	15.7	42.8	70.7	89.1	95.2
87.5°	9.6	35.8	63.7	81.6	87.3
90°	4.4	29.7	57.6	75.1	80.3
92.5°	3.9	27.1	53.7	70.7	76.0
95°	3.5	24.0	50.2	66.8	72.0
97.5°	3.1	21.8	47.2	63.3	68.5
100°	3.1	19.2	43.7	59.8	64.6
102.5°	2.6	17.0	40.6	56.3	61.1
105°	2.2	14.8	37.5	52.8	57.6
107.5°	2.2	12.7	34.5	49.3	54.1
110°	1.7	10.5	31.9	45.8	50.6



TEST NUMBER: P242329

CATALOG NUMBER: S122DR-S290D835-X4F0-XX-UDD-D-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1.7	8.7	28.8	42.8	47.6
115°	1.7	6.5	26.2	39.3	44.1
117.5°	1.3	4.8	23.1	36.2	40.6
120°	1.3	3.1	20.5	32.7	37.5
122.5°	1.3	1.7	17.9	29.7	33.6
125°	0.9	0.9	14.8	26.6	30.6
127.5°	0.9	0.4	12.2	23.1	27.1
130°	0.9	0.4	9.6	20.1	23.6
132.5°	0.9	0.4	7.0	17.0	20.5
135°	0.4	0.4	4.8	14.0	17.5
137.5°	0.4	0.4	2.6	10.9	14.0
140°	0.4	0.0	0.9	7.9	10.5
142.5°	0.4	0.0	0.0	5.2	7.4
145°	0.0	0.0	0.0	2.6	4.8
147.5°	0.0	0.0	0.0	0.4	1.7
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)