

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: P243395

Luminaire Tested: **S123RDR-H340D835-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243395
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-64)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1230.6 lumens
Efficiency: N/A
Efficacy: 109.9 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

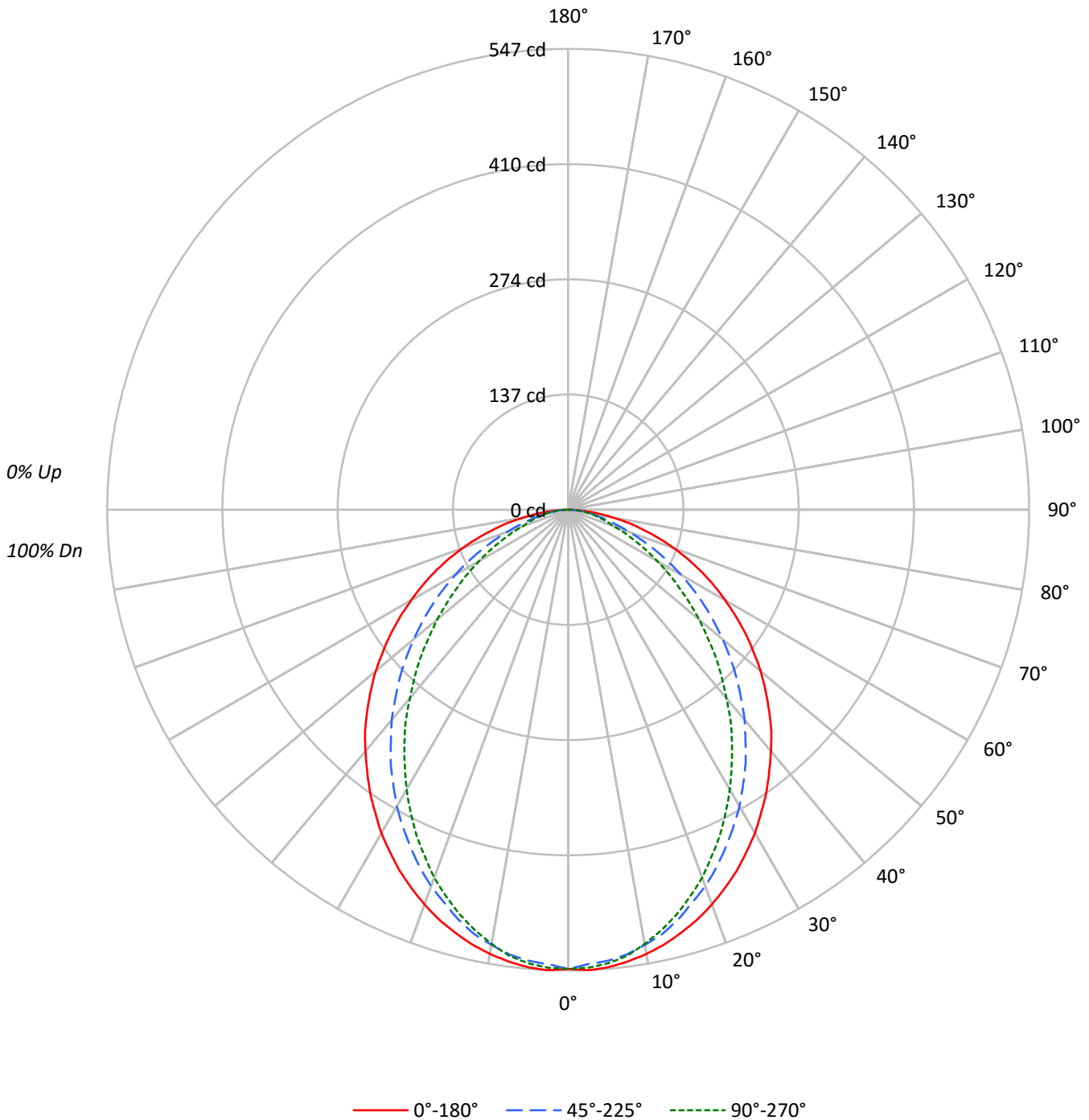
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P243395

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P243395

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-F-W

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	105	101	98	107	103	99	96	99	96	93	95	93	90	91	89	88					86				
2	101	93	87	81	98	91	85	80	87	83	78	84	80	77	81	78	75					73				
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65					62				
4	85	73	65	59	83	72	64	58	70	63	58	67	62	57	65	60	56					54				
5	78	66	58	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	56	49	44	54	48	44					42				
7	67	55	46	40	66	54	46	40	52	45	40	51	44	40	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	30	39	34	29					28				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6607	6607	6607
5°	6633	6540	6577
10°	6590	6456	6441
15°	6519	6320	6241
20°	6432	6135	5994
25°	6327	5913	5700
30°	6205	5690	5368
35°	6064	5432	5012
40°	5923	5154	4617
45°	5777	4844	4248
50°	5621	4507	3820
55°	5431	4159	3388
60°	5217	3745	2953
65°	5008	3278	2521
70°	4717	2743	2017
75°	4351	2178	1920
80°	3797	1927	1752
85°	3199	1683	1627



TEST NUMBER: P243395

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	4.2
10°-20°	142.8	11.6
20°-30°	205.5	16.7
30°-40°	231.5	18.8
40°-50°	221.1	18.0
50°-60°	180.8	14.7
60°-70°	121.4	9.9
70°-80°	60.6	4.9
80°-90°	15.7	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°	399.5	32.5
0°-40°	631.0	51.3
0°-60°	1033.0	83.9
0°-90°	1230.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1230.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	545	545	545	545	545	
5°	545	543	538	542	540	52
15°	520	516	504	501	497	146
25°	473	463	442	432	426	218
35°	410	394	367	347	339	256
45°	337	317	283	258	248	260
55°	257	234	197	170	160	230
65°	175	150	114	93	88	173
75°	93	71	46	42	41	98
85°	23	13	12	11	12	27
90°	0	0	0	0	0	



TEST NUMBER: P243395

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1
2.5°	547.2	545.9	544.2	544.6	545.1	545.5	545.5	545.1	543.8	542.1	540.0
5°	545.1	543.8	542.1	542.1	543.0	543.0	543.0	542.5	541.3	539.6	537.5
7.5°	540.9	540.0	537.9	538.4	538.8	538.8	538.8	538.4	536.7	534.6	532.5
10°	535.4	534.2	532.5	532.5	532.9	532.9	532.9	532.1	530.0	527.5	524.5
12.5°	528.3	527.1	525.4	525.4	525.4	525.4	525.4	524.1	520.8	518.3	515.8
15°	519.5	518.3	516.6	516.6	516.2	515.8	514.9	512.8	509.9	507.0	503.6
17.5°	509.9	508.2	506.1	505.7	505.3	504.9	503.6	502.4	498.2	494.0	489.0
20°	498.6	496.9	494.8	494.4	493.1	491.9	491.1	488.5	483.9	478.9	475.6
22.5°	486.0	484.4	482.3	481.4	478.9	478.1	476.8	473.1	468.0	463.4	459.7
25°	473.1	471.0	468.4	467.2	464.3	462.6	462.2	456.7	451.7	446.7	442.1
27.5°	458.0	456.3	454.2	451.7	448.8	446.7	445.8	440.8	434.5	428.7	424.5
30°	443.3	440.8	438.7	435.8	431.6	429.5	427.8	422.8	417.4	410.3	406.5
32.5°	426.2	424.5	422.0	419.0	414.9	413.2	410.7	404.4	397.3	392.3	386.4
35°	409.8	408.2	404.4	401.5	395.6	393.9	391.4	386.0	378.0	372.2	367.1
37.5°	391.8	389.7	386.8	382.6	377.6	375.5	372.2	366.7	357.5	351.6	345.4
40°	374.3	371.3	368.0	363.4	358.3	356.3	353.3	345.4	337.8	331.1	325.7
42.5°	356.7	353.3	349.1	345.0	339.5	336.6	333.2	325.7	317.3	311.0	303.5
45°	337.0	334.5	330.3	325.3	319.0	316.9	313.1	305.2	296.8	290.1	282.6
47.5°	317.7	314.8	310.6	305.6	299.3	296.4	292.6	284.7	276.3	267.9	261.2
50°	298.1	295.1	290.1	285.1	279.2	275.5	272.1	264.2	254.9	247.4	239.0
52.5°	277.1	274.6	270.4	265.4	257.9	254.9	251.6	242.8	234.0	225.2	217.7
55°	257.0	255.4	250.3	245.3	237.4	234.0	230.7	221.5	212.7	203.9	196.8
57.5°	236.1	234.9	229.8	224.0	216.9	213.5	209.3	200.1	191.7	182.9	175.4
60°	215.2	213.9	208.9	203.0	196.3	192.2	187.5	180.4	170.8	162.8	154.5
62.5°	195.1	193.4	189.2	182.9	175.4	171.2	167.0	158.7	149.9	141.5	134.0
65°	174.6	172.5	167.5	161.2	154.1	150.3	146.1	138.1	129.4	121.4	114.3
67.5°	154.1	152.0	146.5	141.5	133.1	129.4	125.6	117.6	109.3	101.3	94.6
70°	133.1	131.0	126.8	120.1	113.0	109.3	105.5	97.1	89.6	83.7	77.4
72.5°	112.6	110.9	106.8	100.5	93.8	90.0	85.8	78.7	72.0	65.7	61.1
75°	92.9	90.4	86.7	80.8	74.1	70.7	67.8	60.7	54.4	50.2	46.5
77.5°	74.1	71.2	67.0	62.4	56.1	52.7	49.8	44.0	39.8	36.8	36.0
80°	54.4	54.0	49.8	44.8	39.4	36.8	33.9	30.1	28.9	28.5	27.6
82.5°	38.1	36.4	33.1	28.5	24.3	22.6	21.8	20.9	20.1	20.1	19.3
85°	23.0	21.4	18.4	14.7	13.8	13.4	13.0	13.0	12.6	12.1	12.1
87.5°	10.0	8.4	6.3	5.9	5.4	5.4	5.9	5.9	5.9	5.4	5.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P243395

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1	545.1
2.5°	540.9	543.0	544.2	544.6	544.6	544.6	545.1	545.1	544.6	544.2
5°	537.9	540.0	540.9	541.7	541.7	541.7	541.7	541.7	541.3	540.5
7.5°	533.3	534.6	535.8	535.4	535.4	535.0	534.6	535.0	534.2	534.2
10°	525.0	526.2	527.1	525.8	525.8	526.2	526.2	525.8	524.5	523.3
12.5°	515.3	516.6	515.3	515.8	514.9	514.1	513.7	513.2	512.0	511.1
15°	502.8	502.8	501.9	501.9	500.7	499.0	498.6	499.0	497.3	497.3
17.5°	489.0	488.1	486.9	486.0	485.6	485.6	483.9	483.9	481.8	481.4
20°	473.9	473.1	471.8	469.7	468.9	469.3	467.6	466.4	465.1	464.7
22.5°	458.0	455.9	454.6	452.5	450.9	450.9	449.6	447.5	446.3	445.0
25°	440.0	437.9	435.4	433.7	432.4	430.4	429.5	427.8	426.6	426.2
27.5°	421.6	418.2	414.9	413.2	412.4	409.8	408.6	407.7	405.2	404.8
30°	401.9	399.4	395.2	392.3	390.2	390.6	387.7	386.0	384.7	383.5
32.5°	383.0	378.9	374.7	370.9	368.4	368.0	365.0	363.4	362.1	360.9
35°	361.7	357.5	352.5	349.1	346.6	345.4	342.4	341.6	339.5	338.7
37.5°	340.3	335.7	330.7	326.5	324.9	321.9	320.7	318.6	316.9	316.9
40°	319.4	314.0	308.9	303.9	301.8	300.2	296.8	295.1	293.0	291.8
42.5°	297.6	291.4	286.8	282.2	279.2	278.0	274.2	272.1	270.0	269.6
45°	275.9	269.6	263.7	259.1	257.9	255.4	251.6	248.7	248.2	247.8
47.5°	253.7	247.4	242.0	236.9	235.3	232.3	229.8	227.7	225.2	224.0
50°	232.3	226.1	220.2	214.8	212.7	210.2	207.6	204.7	203.9	202.6
52.5°	211.0	203.9	197.6	192.6	190.9	188.8	185.9	183.4	182.1	181.3
55°	189.2	182.1	176.7	171.6	169.5	168.3	164.9	162.8	161.2	160.3
57.5°	167.9	160.8	155.7	152.0	149.0	147.8	144.4	142.3	141.5	141.1
60°	147.8	141.1	135.6	131.9	129.4	128.1	125.6	123.5	122.2	121.8
62.5°	127.7	121.8	116.8	113.0	111.4	109.7	107.6	105.9	104.7	104.7
65°	108.4	102.6	98.0	95.0	93.4	92.5	90.0	89.2	87.9	87.9
67.5°	89.6	85.4	82.1	78.3	77.0	77.0	74.5	73.7	72.8	72.8
70°	73.3	69.5	65.7	63.6	62.4	62.0	59.9	58.6	57.8	56.9
72.5°	57.4	54.0	50.7	50.2	50.2	49.8	49.8	49.0	49.0	49.4
75°	44.0	43.1	42.3	42.3	41.9	41.4	41.4	41.0	41.0	41.0
77.5°	35.2	34.7	34.3	33.9	33.9	33.5	33.1	33.1	33.1	33.1
80°	26.8	26.4	26.4	26.0	25.5	26.0	25.5	25.5	25.1	25.1
82.5°	18.8	18.8	18.8	18.4	18.4	18.4	18.4	18.0	18.0	18.4
85°	11.7	11.7	11.7	11.7	11.3	11.7	11.3	11.3	11.3	11.7
87.5°	5.0	5.4	5.0	5.4	5.4	5.0	5.0	5.0	5.0	5.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)