

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: P243399

Luminaire Tested: **S123RDR-H340D840-X4F0-XX-UDD-F-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243399
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-H340D840-X4F0-XX-UDD-F-W
Description: DEFINE 3 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1242.8 lumens
Efficiency: N/A
Efficacy: 111.0 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

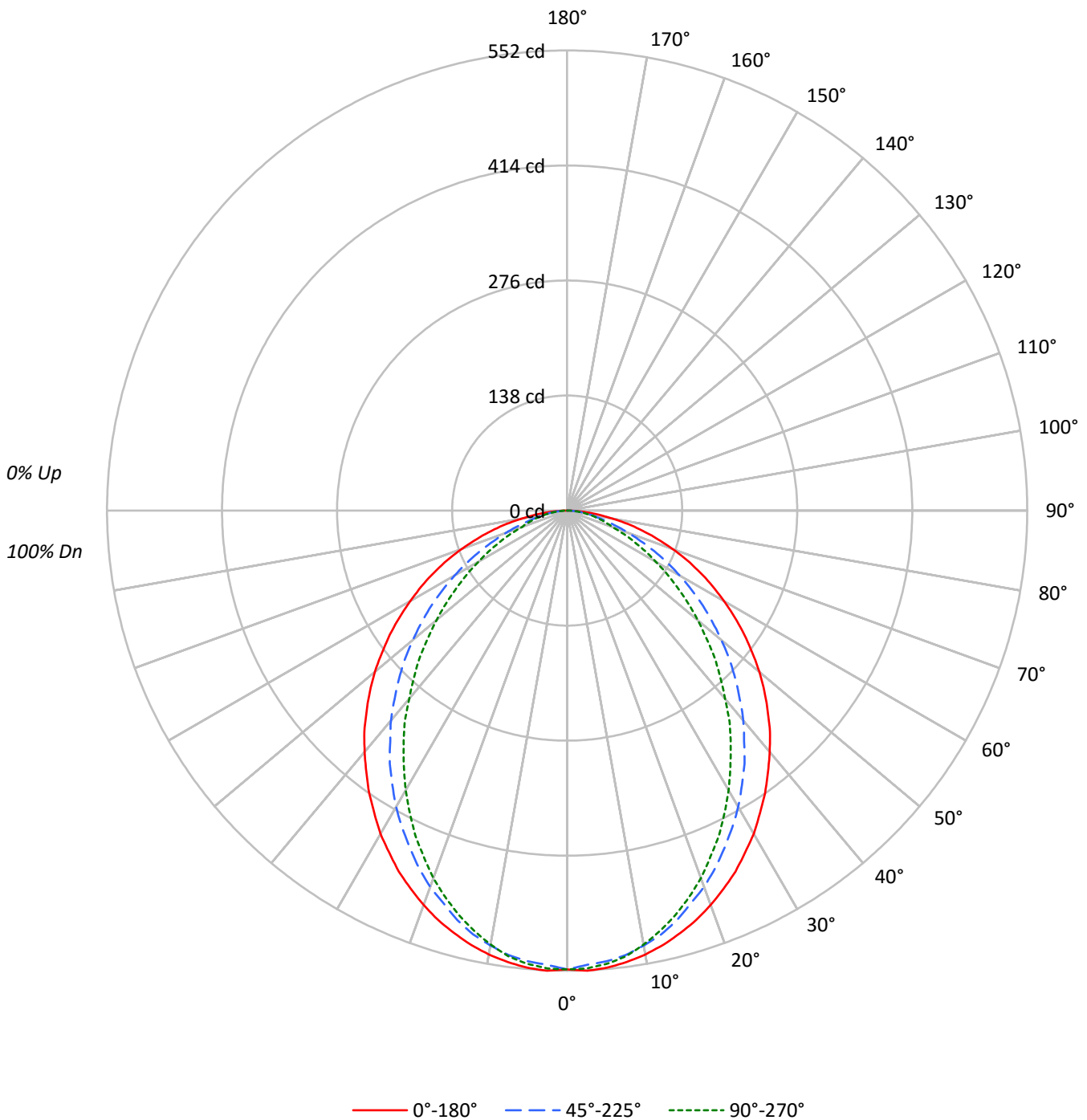
Input Watts (W): 11.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	6672	6672	6672
5°	6697	6605	6641
10°	6655	6520	6505
15°	6583	6382	6302
20°	6495	6195	6054
25°	6389	5970	5756
30°	6266	5746	5419
35°	6125	5487	5061
40°	5980	5204	4663
45°	5833	4892	4291
50°	5676	4552	3858
55°	5486	4199	3421
60°	5268	3782	2982
65°	5057	3310	2547
70°	4763	2771	2038
75°	4398	2196	1939
80°	3839	1948	1773
85°	3240	1711	1641



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.8	4.2
10°-20°	144.2	11.6
20°-30°	207.5	16.7
30°-40°	233.8	18.8
40°-50°	223.3	18.0
50°-60°	182.6	14.7
60°-70°	122.6	9.9
70°-80°	61.2	4.9
80°-90°	15.8	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°	403.5	32.5
0°-40°	637.2	51.3
0°-60°	1043.2	83.9
0°-90°	1242.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1242.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	550	550	550	550	550	
5°	550	548	543	547	546	52
15°	525	521	509	506	502	148
25°	478	467	446	437	430	220
35°	414	398	371	350	342	259
45°	340	320	285	260	250	263
55°	260	236	199	171	162	232
65°	176	152	115	94	89	174
75°	94	71	47	42	41	99
85°	23	14	12	11	12	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	550.4	550.4	550.4	550.4	550.4	550.4	550.4	550.4	550.4	550.4	550.4
2.5°	552.5	551.3	549.6	550.0	550.4	550.9	550.9	550.4	549.2	547.5	545.4
5°	550.4	549.2	547.5	547.5	548.3	548.3	548.3	547.9	546.6	544.9	542.8
7.5°	546.2	545.4	543.2	543.7	544.1	544.1	544.1	543.7	542.0	539.9	537.8
10°	540.7	539.4	537.8	537.8	538.2	538.2	538.2	537.3	535.2	532.7	529.7
12.5°	533.5	532.3	530.6	530.6	530.6	530.6	530.6	529.3	525.9	523.4	520.8
15°	524.6	523.4	521.7	521.7	521.3	520.8	520.0	517.9	514.9	512.0	508.6
17.5°	514.9	513.2	511.1	510.7	510.3	509.8	508.6	507.3	503.1	498.9	493.8
20°	503.5	501.8	499.7	499.3	498.0	496.7	495.9	493.4	488.7	483.6	480.3
22.5°	490.8	489.1	487.0	486.2	483.6	482.8	481.5	477.7	472.6	468.0	464.2
25°	477.7	475.6	473.1	471.8	468.8	467.2	466.7	461.2	456.2	451.1	446.4
27.5°	462.5	460.8	458.7	456.2	453.2	451.1	450.2	445.2	438.8	432.9	428.7
30°	447.7	445.2	443.1	440.1	435.9	433.8	432.1	427.0	421.5	414.3	410.5
32.5°	430.4	428.7	426.1	423.2	419.0	417.3	414.7	408.4	401.2	396.1	390.2
35°	413.9	412.2	408.4	405.4	399.5	397.8	395.3	389.8	381.8	375.8	370.8
37.5°	395.7	393.6	390.6	386.4	381.3	379.2	375.8	370.3	361.0	355.1	348.8
40°	377.9	375.0	371.6	367.0	361.9	359.8	356.8	348.8	341.2	334.4	328.9
42.5°	360.2	356.8	352.6	348.4	342.9	339.9	336.5	328.9	320.5	314.1	306.5
45°	340.3	337.8	333.6	328.5	322.1	320.0	316.2	308.2	299.7	293.0	285.4
47.5°	320.9	317.9	313.7	308.6	302.3	299.3	295.5	287.5	279.0	270.6	263.8
50°	301.0	298.0	293.0	287.9	282.0	278.2	274.8	266.8	257.5	249.9	241.4
52.5°	279.9	277.3	273.1	268.0	260.4	257.5	254.1	245.2	236.3	227.4	219.8
55°	259.6	257.9	252.8	247.7	239.7	236.3	232.9	223.6	214.8	205.9	198.7
57.5°	238.4	237.2	232.1	226.2	219.0	215.6	211.4	202.1	193.6	184.7	177.1
60°	217.3	216.0	211.0	205.0	198.3	194.0	189.4	182.2	172.5	164.5	156.0
62.5°	197.0	195.3	191.1	184.7	177.1	172.9	168.7	160.2	151.3	142.9	135.3
65°	176.3	174.2	169.1	162.8	155.6	151.8	147.5	139.5	130.6	122.6	115.4
67.5°	155.6	153.5	148.0	142.9	134.4	130.6	126.8	118.8	110.3	102.3	95.5
70°	134.4	132.3	128.1	121.3	114.1	110.3	106.5	98.1	90.5	84.6	78.2
72.5°	113.7	112.0	107.8	101.5	94.7	90.9	86.7	79.5	72.7	66.4	61.7
75°	93.9	91.3	87.5	81.6	74.8	71.4	68.5	61.3	55.0	50.7	46.9
77.5°	74.8	71.9	67.6	63.0	56.6	53.3	50.3	44.4	40.2	37.2	36.4
80°	55.0	54.5	50.3	45.2	39.7	37.2	34.2	30.4	29.2	28.7	27.9
82.5°	38.5	36.8	33.4	28.7	24.5	22.8	22.0	21.1	20.3	20.3	19.4
85°	23.3	21.6	18.6	14.8	14.0	13.5	13.1	13.1	12.7	12.3	12.3
87.5°	10.1	8.5	6.3	5.9	5.5	5.5	5.9	5.9	5.9	5.5	5.5
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: P243399

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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	550.4	550.4	550.4	550.4	550.4	550.4	550.4	550.4	550.4	550.4
2.5°	546.2	548.3	549.6	550.0	550.0	550.0	550.4	550.4	550.0	549.6
5°	543.2	545.4	546.2	547.1	547.1	547.1	547.1	547.1	546.6	545.8
7.5°	538.6	539.9	541.1	540.7	540.7	540.3	539.9	540.3	539.4	539.4
10°	530.1	531.4	532.3	531.0	531.0	531.4	531.4	531.0	529.7	528.5
12.5°	520.4	521.7	520.4	520.8	520.0	519.1	518.7	518.3	517.0	516.2
15°	507.7	507.7	506.9	506.9	505.6	503.9	503.5	503.9	502.2	502.2
17.5°	493.8	492.9	491.7	490.8	490.4	490.4	488.7	488.7	486.6	486.2
20°	478.6	477.7	476.5	474.3	473.5	473.9	472.2	471.0	469.7	469.3
22.5°	462.5	460.4	459.1	457.0	455.3	455.3	454.0	451.9	450.7	449.4
25°	444.3	442.2	439.7	438.0	436.7	434.6	433.8	432.1	430.8	430.4
27.5°	425.7	422.3	419.0	417.3	416.4	413.9	412.6	411.8	409.2	408.8
30°	405.9	403.3	399.1	396.1	394.0	394.4	391.5	389.8	388.5	387.2
32.5°	386.8	382.6	378.4	374.6	372.0	371.6	368.6	367.0	365.7	364.4
35°	365.3	361.0	356.0	352.6	350.0	348.8	345.8	345.0	342.9	342.0
37.5°	343.7	339.1	334.0	329.8	328.1	325.1	323.8	321.7	320.0	320.0
40°	322.6	317.1	312.0	306.9	304.8	303.1	299.7	298.0	295.9	294.7
42.5°	300.6	294.2	289.6	284.9	282.0	280.7	276.9	274.8	272.7	272.3
45°	278.6	272.3	266.3	261.7	260.4	257.9	254.1	251.1	250.7	250.3
47.5°	256.2	249.9	244.4	239.3	237.6	234.6	232.1	230.0	227.4	226.2
50°	234.6	228.3	222.4	216.9	214.8	212.2	209.7	206.7	205.9	204.6
52.5°	213.1	205.9	199.5	194.5	192.8	190.7	187.7	185.2	183.9	183.1
55°	191.1	183.9	178.4	173.3	171.2	169.9	166.6	164.5	162.8	161.9
57.5°	169.5	162.3	157.3	153.5	150.5	149.2	145.9	143.7	142.9	142.5
60°	149.2	142.5	137.0	133.2	130.6	129.4	126.8	124.7	123.4	123.0
62.5°	128.9	123.0	118.0	114.1	112.5	110.8	108.6	107.0	105.7	105.7
65°	109.5	103.6	98.9	96.0	94.3	93.4	90.9	90.0	88.8	88.8
67.5°	90.5	86.2	82.9	79.1	77.8	77.8	75.3	74.4	73.6	73.6
70°	74.0	70.2	66.4	64.3	63.0	62.6	60.5	59.2	58.3	57.5
72.5°	57.9	54.5	51.2	50.7	50.7	50.3	50.3	49.5	49.5	49.9
75°	44.4	43.5	42.7	42.7	42.3	41.9	41.9	41.4	41.4	41.4
77.5°	35.5	35.1	34.7	34.2	34.2	33.8	33.4	33.4	33.4	33.4
80°	27.1	26.6	26.6	26.2	25.8	26.2	25.8	25.8	25.4	25.4
82.5°	19.0	19.0	19.0	18.6	18.6	18.6	18.6	18.2	18.2	18.6
85°	11.8	11.8	11.8	11.8	11.4	11.8	11.4	11.4	11.4	11.8
87.5°	5.1	5.5	5.1	5.5	5.5	5.1	5.1	5.1	5.1	5.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)