

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: P243357

Luminaire Tested: **S123DR-H560D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243357
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-54)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123DR-H560D830-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2045.3 lumens
Efficiency: N/A
Efficacy: 118.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.88' x H: 0.08')
CIE Type: Direct

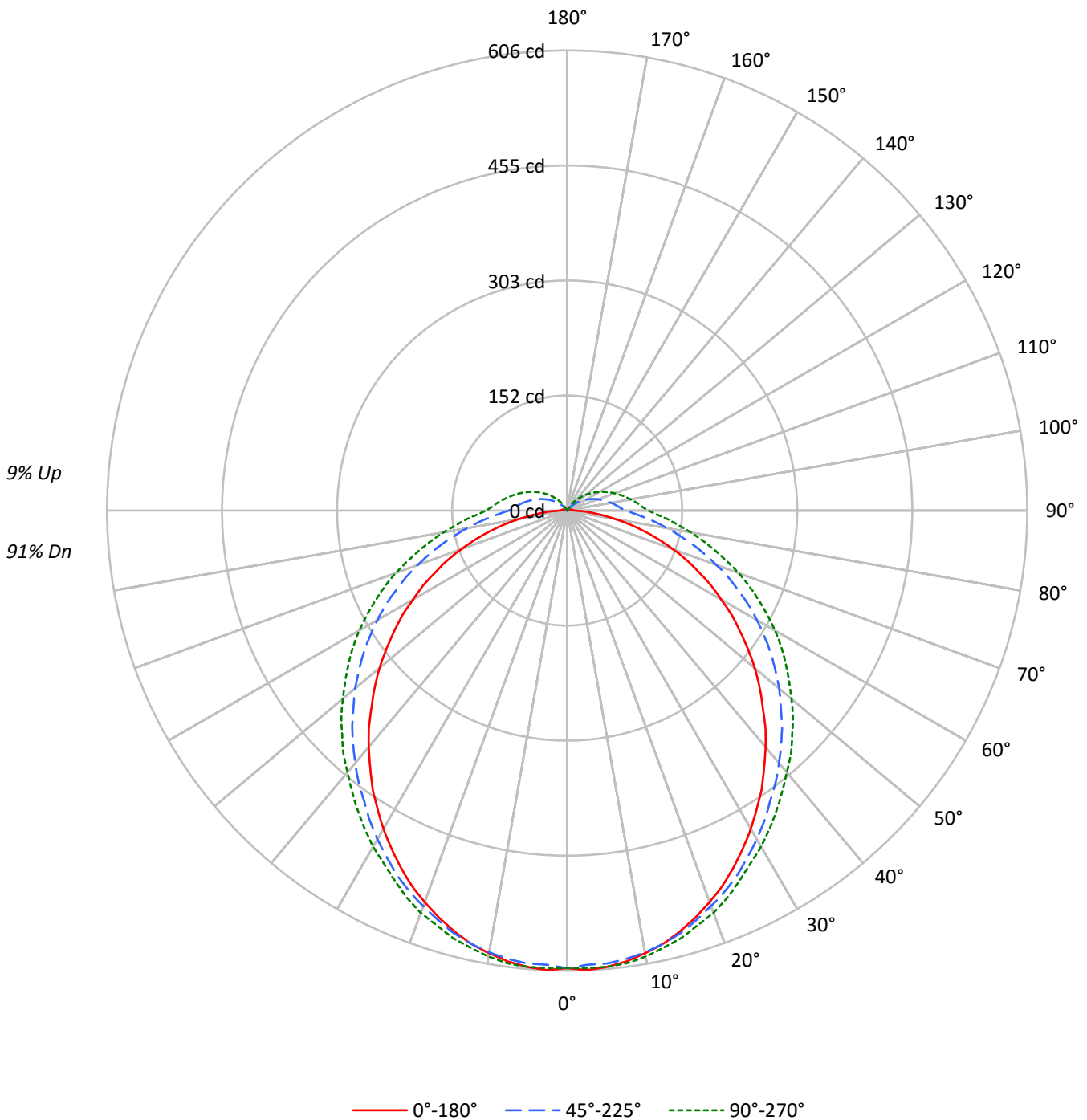
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76	73
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62	60
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52	50
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45	42
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30	28
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7304	7304	7304
5°	7326	7116	7113
10°	7258	6937	6897
15°	7158	6739	6661
20°	7022	6504	6421
25°	6864	6286	6144
30°	6688	6043	5910
35°	6513	5795	5677
40°	6320	5592	5455
45°	6105	5393	5268
50°	5928	5189	5076
55°	5708	4981	4886
60°	5478	4751	4702
65°	5237	4505	4475
70°	4963	4241	4255
75°	4548	3956	3996
80°	4025	3671	3768
85°	3572	3442	3593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	2.8
10°-20°	163.1	8.0
20°-30°	244.3	11.9
30°-40°	292.3	14.3
40°-50°	306.5	15.0
50°-60°	288.2	14.1
60°-70°	241.1	11.8
70°-80°	173.1	8.5
80°-90°	103.7	5.1
90°-100°	65.7	3.2
100°-110°	48.4	2.4
110°-120°	32.4	1.6
120°-130°	18.7	0.9
130°-140°	8.6	0.4
140°-150°	2.0	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	464.6	22.7
0°-40°	756.9	37.0
0°-60°	1351.6	66.1
0°-90°	1869.4	91.4
90°-120°	146.6	7.2
90°-150°	175.9	8.6
90°-180°	176.0	8.6
0°-180°	2045.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	603	603	603	603	603	
5°	603	603	599	604	603	57
15°	574	578	576	584	582	162
25°	518	525	530	538	537	239
35°	447	458	466	478	481	279
45°	364	382	400	414	419	281
55°	278	302	327	345	351	249
65°	191	219	249	271	278	190
75°	105	137	170	194	201	111
85°	32	65	102	125	133	33
90°	9	42	77	100	107	6
95°	7	34	67	88	95	6
105°	5	22	51	70	75	5
115°	3	11	36	52	58	3
125°	2	2	22	36	41	2
135°	1	1	9	21	24	1
145°	1	0	0	6	9	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	602.6	602.6	602.6	602.6	602.6
2.5°	605.8	603.9	598.8	604.5	603.2
5°	603.2	602.6	598.8	603.9	603.2
7.5°	598.8	598.8	595.7	601.4	601.4
10°	591.9	593.8	590.7	597.0	596.3
12.5°	584.4	586.9	584.4	591.3	589.4
15°	573.7	577.5	576.2	583.8	582.5
17.5°	561.8	566.2	565.5	573.1	572.4
20°	548.6	554.2	554.2	561.8	563.7
22.5°	534.7	541.0	542.9	550.5	551.7
25°	518.4	525.3	529.7	537.9	537.3
27.5°	501.4	509.6	514.6	523.4	523.4
30°	483.8	493.3	499.6	509.0	510.9
32.5°	465.0	476.3	483.8	493.9	496.4
35°	446.8	457.5	466.3	478.2	481.3
37.5°	426.0	439.2	451.2	463.7	465.6
40°	406.6	421.0	434.2	447.4	449.9
42.5°	386.5	401.5	417.2	430.4	436.1
45°	363.8	382.1	400.3	414.1	419.1
47.5°	343.7	361.9	381.4	397.8	403.4
50°	322.4	341.2	364.5	380.2	385.8
52.5°	300.4	321.1	345.6	362.6	368.2
55°	278.4	301.6	327.4	345.0	351.3
57.5°	257.6	280.9	307.9	327.4	334.3
60°	234.4	260.1	288.4	308.5	316.1
62.5°	213.6	240.0	269.6	289.7	297.2
65°	191.0	219.3	248.8	270.8	277.7
67.5°	170.3	197.9	230.0	252.0	259.5
70°	148.3	177.2	209.2	231.9	240.0
72.5°	126.3	157.1	189.8	213.0	219.9
75°	104.9	137.0	170.3	193.5	201.1
77.5°	84.8	116.9	151.4	174.7	182.9
80°	64.7	98.0	133.8	157.1	165.3
82.5°	47.1	81.1	117.5	140.1	147.7
85°	32.0	65.4	101.8	125.0	133.2
87.5°	18.9	52.8	88.0	111.2	118.1
90°	8.8	41.5	76.7	99.9	106.8
92.5°	8.2	37.1	71.0	93.0	99.9
95°	6.9	33.9	66.6	88.0	94.9
97.5°	6.9	30.8	62.8	83.6	89.9
100°	6.3	27.6	59.1	78.5	84.8
102.5°	5.7	24.5	54.7	74.1	80.4
105°	5.0	22.0	50.9	69.7	75.4
107.5°	4.4	18.9	47.1	65.4	71.0
110°	4.4	16.3	43.4	61.0	66.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	3.8	13.8	39.6	56.6	62.2
115°	3.1	11.3	35.8	52.2	57.8
117.5°	3.1	8.8	32.0	48.4	53.4
120°	3.1	6.9	28.9	44.0	49.0
122.5°	2.5	4.4	25.8	40.2	45.2
125°	2.5	2.5	22.0	35.8	40.8
127.5°	1.9	1.3	18.9	32.0	36.4
130°	1.9	1.3	15.7	28.3	32.7
132.5°	1.3	1.3	12.6	24.5	28.9
135°	1.3	0.6	9.4	20.7	24.5
137.5°	1.3	0.6	6.3	17.0	20.7
140°	0.6	0.6	3.1	13.2	17.0
142.5°	0.6	0.0	0.6	10.1	13.2
145°	0.6	0.0	0.0	6.3	8.8
147.5°	0.6	0.0	0.0	3.1	5.7
150°	0.6	0.0	0.0	0.0	1.9
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)