

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: P243529

Luminaire Tested: **S124DR-H575D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243529
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-55)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124DR-H575D830-X4F0-XX-UDD-D-W
Description: DEFINE 4 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: 2021.3 lumens
Efficiency: N/A
Efficacy: 117.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

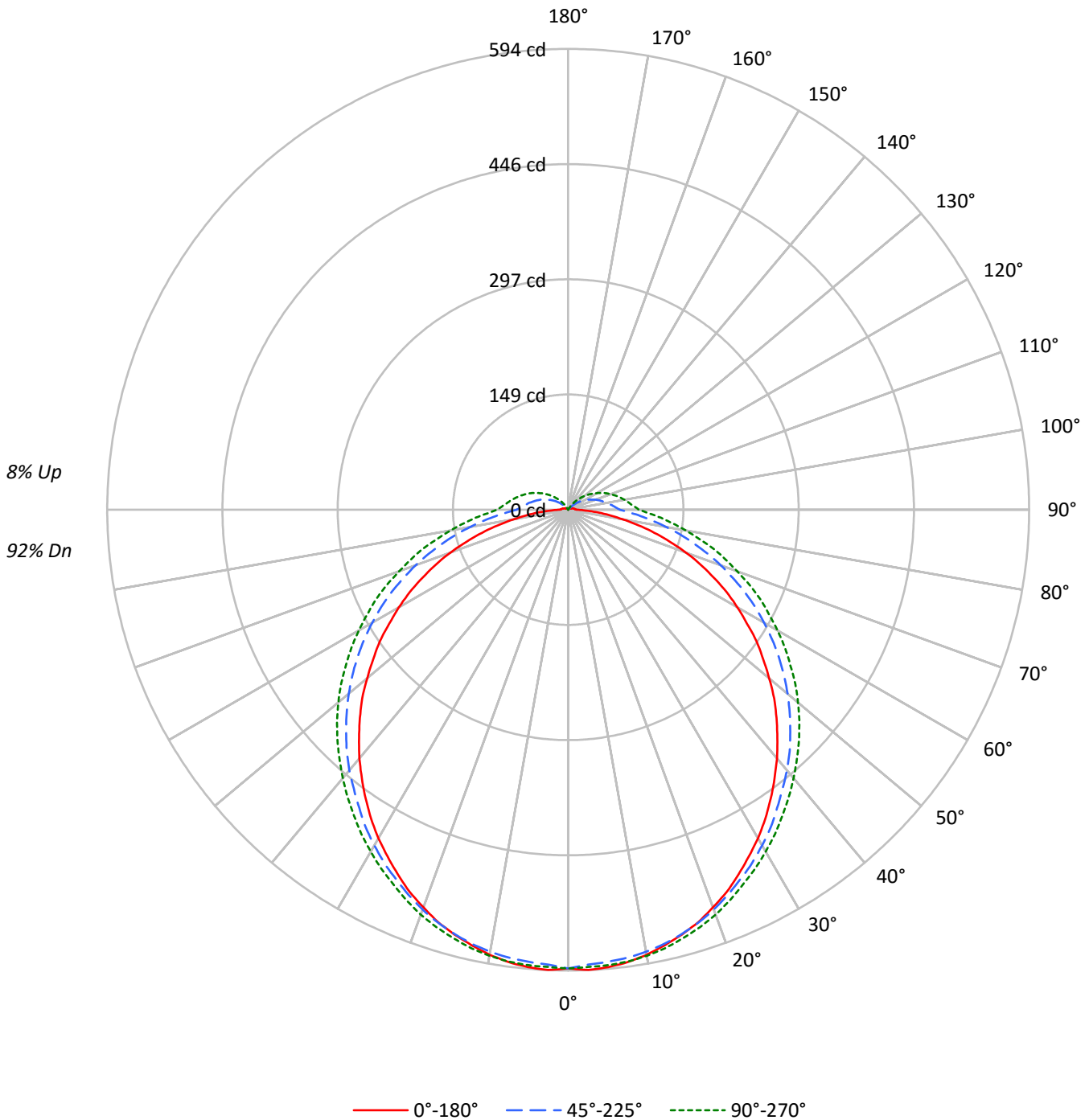
Input Watts (W): 17.2
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	114	114	114	114	107	107	107	101	101	101	95	95	95	92
1	105	100	95	91	102	97	93	89	91	88	84	86	83	80	81	79	77	74
2	95	86	79	73	92	84	77	71	79	73	68	74	70	66	70	67	63	60
3	86	75	67	60	83	73	65	59	69	62	57	65	60	55	62	57	53	50
4	79	66	57	50	76	65	56	49	61	54	48	58	52	46	55	49	45	43
5	72	59	50	43	70	58	49	42	55	47	41	52	45	40	49	43	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	44	39	34	32
7	62	48	39	33	60	47	38	32	45	37	32	43	36	31	41	35	30	28
8	58	44	35	29	56	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	29	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°	5256	5256	5256
5°	5272	5128	5139
10°	5238	5042	5033
15°	5186	4941	4911
20°	5119	4831	4790
25°	5040	4705	4649
30°	4957	4588	4527
35°	4863	4458	4401
40°	4770	4346	4284
45°	4670	4226	4172
50°	4559	4105	4056
55°	4460	3976	3921
60°	4319	3832	3791
65°	4156	3670	3657
70°	3963	3486	3468
75°	3656	3260	3331
80°	3239	3044	3138
85°	2931	2868	3023



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	2.8
10°-20°	160.5	7.9
20°-30°	243.0	12.0
30°-40°	294.2	14.6
40°-50°	311.2	15.4
50°-60°	293.2	14.5
60°-70°	243.6	12.1
70°-80°	171.2	8.5
80°-90°	96.4	4.8
90°-100°	57.2	2.8
100°-110°	42.4	2.1
110°-120°	28.3	1.4
120°-130°	16.0	0.8
130°-140°	6.8	0.3
140°-150°	1.3	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	459.5	22.7
0°-40°	753.7	37.3
0°-60°	1358.0	67.2
0°-90°	1869.3	92.5
90°-120°	127.9	6.3
90°-150°	152.0	7.5
90°-180°	152.0	7.5
0°-180°	2021.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	591	591	591	591	591	
5°	592	589	585	590	589	56
15°	567	568	566	572	572	160
25°	519	523	525	533	533	239
35°	455	462	469	480	481	285
45°	380	392	405	417	420	293
55°	297	312	331	346	349	264
65°	207	228	251	266	273	205
75°	115	140	167	186	194	122
85°	36	64	94	114	120	37
90°	11	37	67	85	91	7
95°	9	30	58	76	81	7
105°	6	20	44	60	66	7
115°	4	10	31	45	51	4
125°	2	2	18	31	35	2
135°	1	1	6	16	20	1
145°	1	0	0	4	6	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°	591.3	591.3	591.3	591.3	591.3
2.5°	593.8	591.9	586.9	590.7	590.0
5°	591.9	589.4	585.0	590.0	589.4
7.5°	588.2	586.3	582.5	588.2	587.5
10°	582.5	581.2	578.7	583.8	583.8
12.5°	575.0	575.0	573.1	578.7	578.7
15°	566.8	568.1	566.2	572.4	571.8
17.5°	557.4	558.6	558.0	564.3	564.3
20°	545.4	547.3	548.6	555.5	555.5
22.5°	533.5	536.0	537.3	544.8	544.8
25°	519.0	523.4	525.3	532.9	532.9
27.5°	504.0	509.6	513.4	520.3	521.6
30°	488.9	495.2	499.6	507.1	509.0
32.5°	472.5	478.8	485.7	493.3	495.8
35°	454.9	462.5	469.4	479.5	481.3
37.5°	436.7	445.5	453.7	464.4	466.9
40°	418.5	429.2	438.6	448.7	451.8
42.5°	399.0	409.7	422.3	433.0	436.1
45°	379.5	391.5	404.7	416.6	420.4
47.5°	360.1	372.6	387.1	399.6	404.0
50°	338.1	351.9	368.9	381.4	386.5
52.5°	316.7	331.8	350.6	363.2	368.9
55°	296.6	312.3	331.2	345.6	349.4
57.5°	273.3	290.9	311.7	327.4	331.2
60°	252.0	269.6	291.6	307.3	311.7
62.5°	230.0	248.8	271.5	287.2	291.6
65°	206.7	227.5	250.7	266.4	273.3
67.5°	184.1	204.9	229.4	247.0	252.6
70°	161.5	182.9	209.2	226.8	231.2
72.5°	137.6	160.9	187.9	206.1	212.4
75°	115.0	139.5	167.1	186.0	193.5
77.5°	93.0	118.8	147.7	167.1	172.2
80°	71.0	99.3	128.2	147.7	154.0
82.5°	53.4	79.8	110.0	130.7	135.7
85°	35.8	63.5	93.6	113.7	120.0
87.5°	21.4	49.6	78.5	97.4	103.7
90°	10.7	37.1	66.6	84.8	91.1
92.5°	9.4	33.3	61.6	79.8	86.1
95°	8.8	30.2	57.8	76.0	81.1
97.5°	8.2	27.6	54.0	71.6	77.3
100°	7.5	24.5	50.9	67.9	73.5
102.5°	6.9	22.0	47.1	64.1	69.7
105°	6.3	19.5	44.0	60.3	66.0
107.5°	5.7	17.0	40.8	56.6	62.2
110°	5.0	14.5	37.7	52.8	58.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4.4	12.6	33.9	49.0	54.7
115°	4.4	10.1	30.8	45.2	50.9
117.5°	3.8	7.5	27.6	41.5	46.5
120°	3.8	5.7	24.5	37.7	42.7
122.5°	3.1	3.8	21.4	34.6	39.0
125°	2.5	1.9	18.2	30.8	35.2
127.5°	2.5	1.9	15.1	27.0	31.4
130°	1.9	1.9	11.9	23.2	27.6
132.5°	1.9	1.3	8.8	20.1	23.9
135°	1.3	1.3	5.7	16.3	20.1
137.5°	1.3	0.6	3.8	13.2	17.0
140°	1.3	0.6	1.3	10.1	13.2
142.5°	0.6	0.6	0.0	6.9	9.4
145°	0.6	0.0	0.0	3.8	6.3
147.5°	0.6	0.0	0.0	0.6	3.1
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)