

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: P243554

Luminaire Tested: **S124DR-H795D940-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243554
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-H795D940-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2678.0 lumens
Efficiency: N/A
Efficacy: 113.5 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

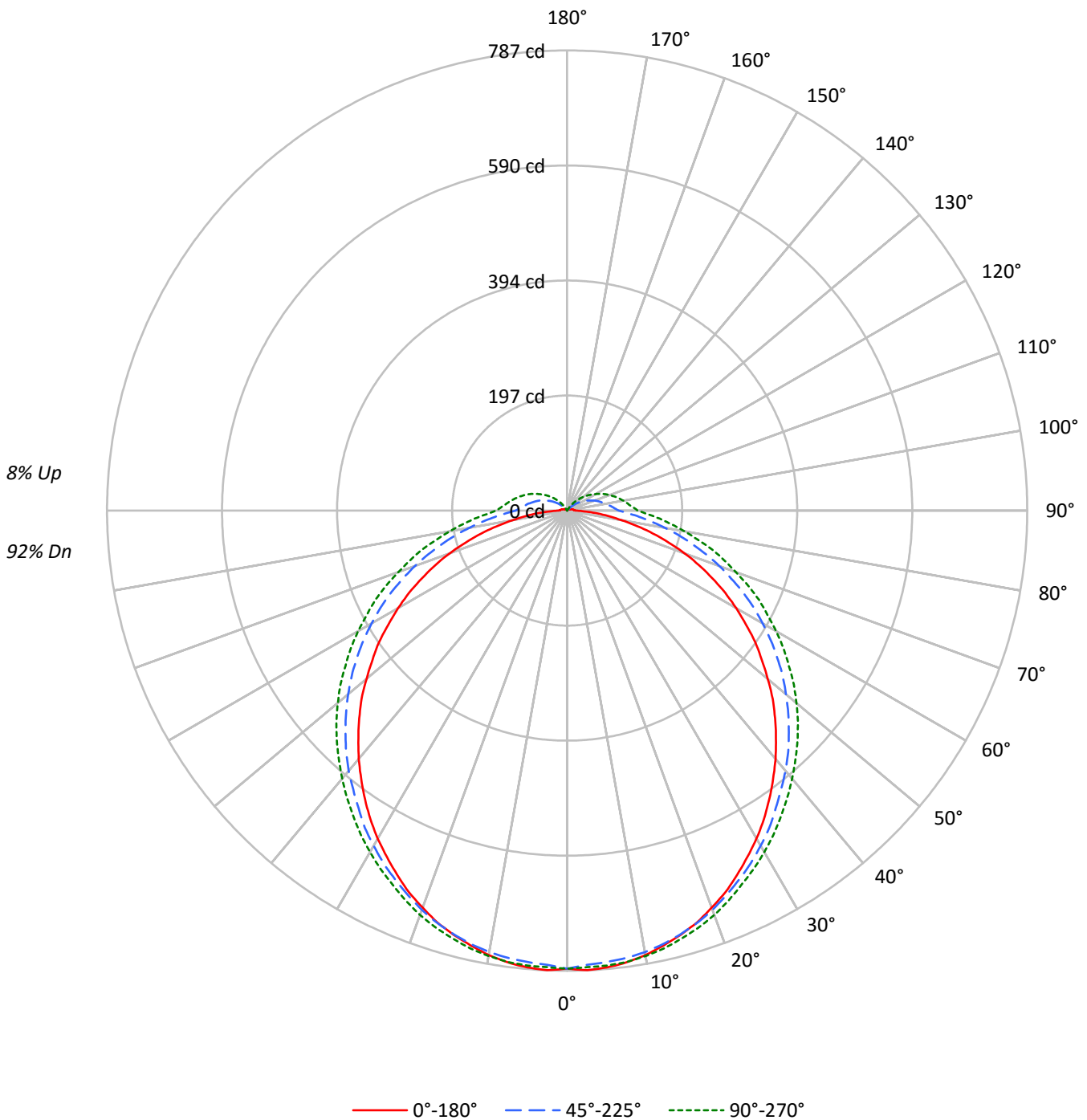
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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°	6964	6964	6964
5°	6985	6795	6810
10°	6940	6681	6668
15°	6871	6545	6507
20°	6783	6400	6346
25°	6678	6234	6159
30°	6566	6079	5999
35°	6444	5906	5832
40°	6320	5758	5676
45°	6189	5600	5528
50°	6039	5438	5373
55°	5909	5267	5195
60°	5723	5076	5023
65°	5507	4862	4847
70°	5251	4619	4596
75°	4845	4321	4414
80°	4293	4032	4157
85°	3889	3802	4006



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.2	2.8
10°-20°	212.7	7.9
20°-30°	321.9	12.0
30°-40°	389.8	14.6
40°-50°	412.3	15.4
50°-60°	388.4	14.5
60°-70°	322.8	12.1
70°-80°	226.9	8.5
80°-90°	127.8	4.8
90°-100°	75.8	2.8
100°-110°	56.1	2.1
110°-120°	37.4	1.4
120°-130°	21.1	0.8
130°-140°	9.0	0.3
140°-150°	1.7	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	608.8	22.7
0°-40°	998.6	37.3
0°-60°	1799.3	67.2
0°-90°	2476.7	92.5
90°-120°	169.4	6.3
90°-150°	201.3	7.5
90°-180°	201.0	7.5
0°-180°	2678.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	784	784	784	784	784	
5°	784	781	775	782	781	74
15°	751	753	750	758	758	212
25°	688	694	696	706	706	317
35°	603	613	622	635	638	377
45°	503	519	536	552	557	388
55°	393	414	439	458	463	350
65°	274	301	332	353	362	271
75°	152	185	222	246	256	161
85°	48	84	124	151	159	49
90°	14	49	88	112	121	9
95°	12	40	77	101	107	9
105°	8	26	58	80	87	9
115°	6	13	41	60	67	6
125°	3	2	24	41	47	3
135°	2	2	8	22	27	2
145°	1	0	0	5	8	1
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°	783.5	783.5	783.5	783.5	783.5
2.5°	786.8	784.3	777.6	782.6	781.8
5°	784.3	781.0	775.1	781.8	781.0
7.5°	779.3	776.8	771.8	779.3	778.5
10°	771.8	770.1	766.8	773.5	773.5
12.5°	761.8	761.8	759.3	766.8	766.8
15°	751.0	752.6	750.1	758.5	757.6
17.5°	738.5	740.2	739.3	747.7	747.7
20°	722.7	725.2	726.8	736.0	736.0
22.5°	706.9	710.2	711.8	721.8	721.8
25°	687.7	693.5	696.0	706.0	706.0
27.5°	667.7	675.2	680.2	689.4	691.0
30°	647.7	656.1	661.9	671.9	674.4
32.5°	626.1	634.4	643.6	653.6	656.9
35°	602.8	612.8	621.9	635.3	637.8
37.5°	578.6	590.3	601.1	615.3	618.6
40°	554.5	568.6	581.1	594.5	598.6
42.5°	528.7	542.8	559.5	573.6	577.8
45°	502.9	518.7	536.2	552.0	557.0
47.5°	477.1	493.7	512.9	529.5	535.3
50°	447.9	466.2	488.7	505.4	512.0
52.5°	419.6	439.6	464.6	481.2	488.7
55°	393.0	413.8	438.8	457.9	462.9
57.5°	362.2	385.5	413.0	433.8	438.8
60°	333.9	357.2	386.3	407.1	413.0
62.5°	304.7	329.7	359.7	380.5	386.3
65°	273.9	301.4	332.2	353.0	362.2
67.5°	243.9	271.4	303.9	327.2	334.7
70°	214.0	242.3	277.2	300.6	306.4
72.5°	182.3	213.1	248.9	273.1	281.4
75°	152.4	184.8	221.5	246.4	256.4
77.5°	123.2	157.4	195.7	221.5	228.1
80°	94.1	131.5	169.8	195.7	204.0
82.5°	70.8	105.7	145.7	173.2	179.8
85°	47.5	84.1	124.1	150.7	159.0
87.5°	28.3	65.8	104.1	129.0	137.4
90°	14.2	49.1	88.3	112.4	120.7
92.5°	12.5	44.1	81.6	105.7	114.1
95°	11.7	40.0	76.6	100.7	107.4
97.5°	10.8	36.6	71.6	94.9	102.4
100°	10.0	32.5	67.4	89.9	97.4
102.5°	9.2	29.1	62.4	84.9	92.4
105°	8.3	25.8	58.3	79.9	87.4
107.5°	7.5	22.5	54.1	74.9	82.4
110°	6.7	19.1	50.0	69.9	77.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.8	16.7	45.0	64.9	72.4
115°	5.8	13.3	40.8	59.9	67.4
117.5°	5.0	10.0	36.6	54.9	61.6
120°	5.0	7.5	32.5	50.0	56.6
122.5°	4.2	5.0	28.3	45.8	51.6
125°	3.3	2.5	24.1	40.8	46.6
127.5°	3.3	2.5	20.0	35.8	41.6
130°	2.5	2.5	15.8	30.8	36.6
132.5°	2.5	1.7	11.7	26.6	31.6
135°	1.7	1.7	7.5	21.6	26.6
137.5°	1.7	0.8	5.0	17.5	22.5
140°	1.7	0.8	1.7	13.3	17.5
142.5°	0.8	0.8	0.0	9.2	12.5
145°	0.8	0.0	0.0	5.0	8.3
147.5°	0.8	0.0	0.0	0.8	4.2
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)