

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: P243549

Luminaire Tested: **S124DR-H795D935-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P243549
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-H795D935-X4F0-XX-UDD-D-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2585.8 lumens
Efficiency: N/A
Efficacy: 109.6 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

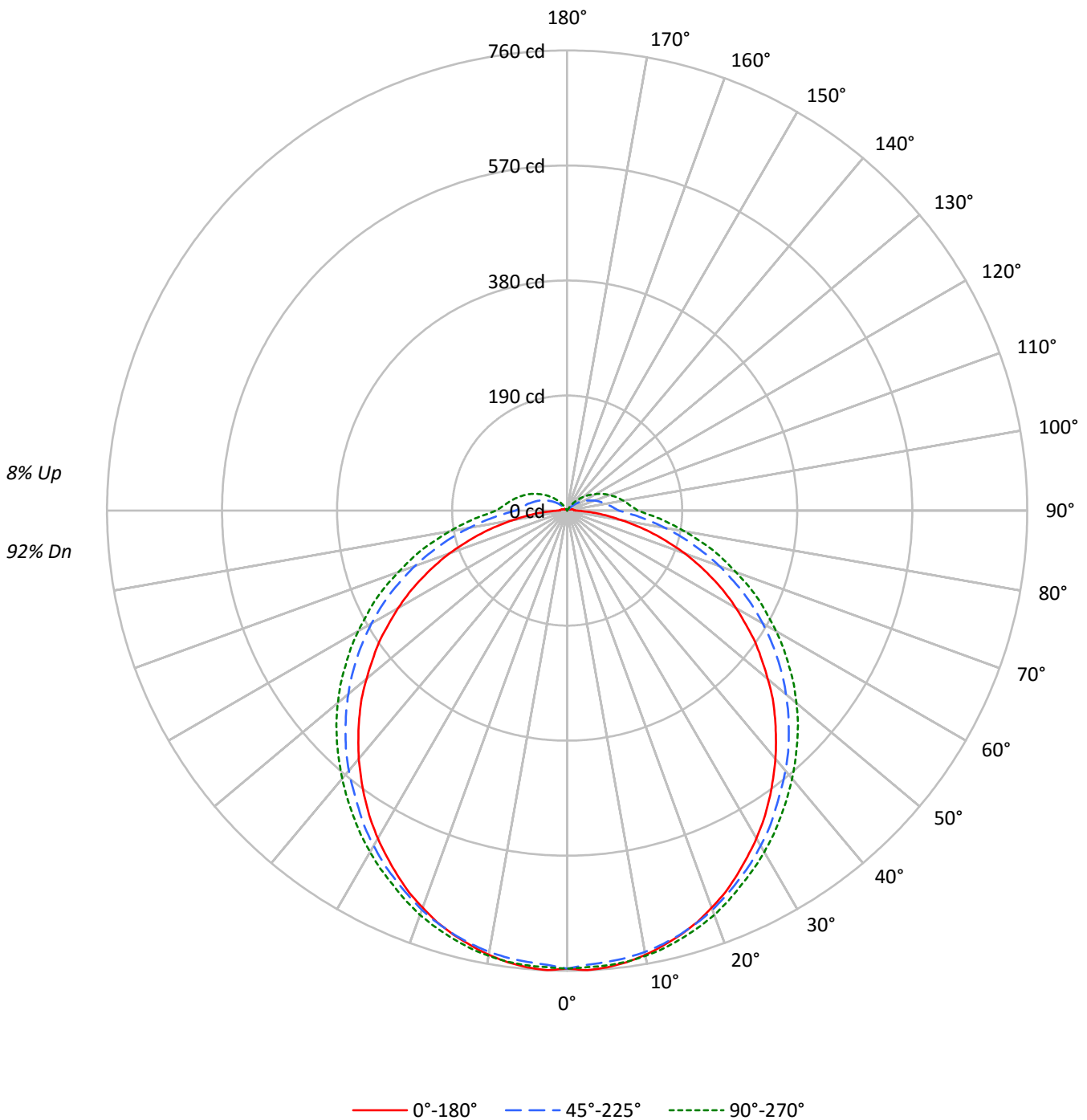
Input Watts (W): 23.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6724	6724	6724
5°	6745	6561	6575
10°	6701	6451	6438
15°	6634	6320	6283
20°	6549	6180	6127
25°	6448	6020	5947
30°	6340	5869	5792
35°	6222	5703	5631
40°	6102	5560	5481
45°	5976	5406	5337
50°	5831	5251	5188
55°	5704	5086	5017
60°	5526	4901	4849
65°	5318	4696	4679
70°	5070	4460	4437
75°	4677	4171	4262
80°	4143	3895	4014
85°	3749	3670	3868



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.6	2.8
10°-20°	205.4	7.9
20°-30°	310.8	12.0
30°-40°	376.4	14.6
40°-50°	398.1	15.4
50°-60°	375.0	14.5
60°-70°	311.7	12.1
70°-80°	219.1	8.5
80°-90°	123.4	4.8
90°-100°	73.2	2.8
100°-110°	54.2	2.1
110°-120°	36.2	1.4
120°-130°	20.4	0.8
130°-140°	8.7	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°	587.8	22.7
0°-40°	964.2	37.3
0°-60°	1737.4	67.2
0°-90°	2391.4	92.5
90°-120°	163.6	6.3
90°-150°	194.4	7.5
90°-180°	194.0	7.5
0°-180°	2585.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	756	756	756	756	756	
5°	757	754	748	755	754	72
15°	725	727	724	732	732	205
25°	664	670	672	682	682	306
35°	582	592	600	613	616	364
45°	486	501	518	533	538	375
55°	379	400	424	442	447	338
65°	264	291	321	341	350	262
75°	147	178	214	238	248	156
85°	46	81	120	146	154	47
90°	14	47	85	108	117	9
95°	11	39	74	97	104	9
105°	8	25	56	77	84	8
115°	6	13	39	58	65	5
125°	3	2	23	39	45	3
135°	2	2	7	21	26	1
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°	756.5	756.5	756.5	756.5	756.5
2.5°	759.7	757.3	750.8	755.7	754.9
5°	757.3	754.1	748.4	754.9	754.1
7.5°	752.4	750.0	745.2	752.4	751.6
10°	745.2	743.6	740.4	746.8	746.8
12.5°	735.6	735.6	733.2	740.4	740.4
15°	725.1	726.7	724.3	732.4	731.5
17.5°	713.1	714.7	713.9	721.9	721.9
20°	697.8	700.2	701.8	710.6	710.6
22.5°	682.5	685.7	687.3	697.0	697.0
25°	664.0	669.6	672.1	681.7	681.7
27.5°	644.7	652.0	656.8	665.6	667.2
30°	625.4	633.5	639.1	648.7	651.2
32.5°	604.5	612.6	621.4	631.1	634.3
35°	582.0	591.7	600.5	613.4	615.8
37.5°	558.7	570.0	580.4	594.1	597.3
40°	535.4	549.1	561.1	574.0	578.0
42.5°	510.5	524.1	540.2	553.9	557.9
45°	485.6	500.8	517.7	533.0	537.8
47.5°	460.6	476.7	495.2	511.3	516.9
50°	432.5	450.2	471.9	488.0	494.4
52.5°	405.2	424.5	448.6	464.7	471.9
55°	379.4	399.5	423.7	442.1	447.0
57.5°	349.7	372.2	398.7	418.8	423.7
60°	322.4	344.9	373.0	393.1	398.7
62.5°	294.2	318.3	347.3	367.4	373.0
65°	264.5	291.0	320.8	340.9	349.7
67.5°	235.5	262.1	293.4	315.9	323.2
70°	206.6	233.9	267.7	290.2	295.8
72.5°	176.1	205.8	240.4	263.7	271.7
75°	147.1	178.5	213.8	238.0	247.6
77.5°	119.0	151.9	188.9	213.8	220.3
80°	90.8	127.0	164.0	188.9	197.0
82.5°	68.3	102.1	140.7	167.2	173.6
85°	45.8	81.2	119.8	145.5	153.5
87.5°	27.3	63.5	100.5	124.6	132.6
90°	13.7	47.4	85.2	108.5	116.6
92.5°	12.1	42.6	78.8	102.1	110.1
95°	11.3	38.6	74.0	97.3	103.7
97.5°	10.5	35.4	69.1	91.6	98.9
100°	9.6	31.4	65.1	86.8	94.1
102.5°	8.8	28.1	60.3	82.0	89.2
105°	8.0	24.9	56.3	77.2	84.4
107.5°	7.2	21.7	52.3	72.4	79.6
110°	6.4	18.5	48.2	67.5	74.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	5.6	16.1	43.4	62.7	69.9
115°	5.6	12.9	39.4	57.9	65.1
117.5°	4.8	9.6	35.4	53.1	59.5
120°	4.8	7.2	31.4	48.2	54.7
122.5°	4.0	4.8	27.3	44.2	49.8
125°	3.2	2.4	23.3	39.4	45.0
127.5°	3.2	2.4	19.3	34.6	40.2
130°	2.4	2.4	15.3	29.7	35.4
132.5°	2.4	1.6	11.3	25.7	30.5
135°	1.6	1.6	7.2	20.9	25.7
137.5°	1.6	0.8	4.8	16.9	21.7
140°	1.6	0.8	1.6	12.9	16.9
142.5°	0.8	0.8	0.0	8.8	12.1
145°	0.8	0.0	0.0	4.8	8.0
147.5°	0.8	0.0	0.0	0.8	4.0
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)