

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: P242670

Luminaire Tested: **S124DR-S795D830-X4F0-XX-UDD-D-W**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P242670  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-16)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: S124DR-S795D830-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2869.6 lumens  
Efficiency: N/A  
Efficacy: 108.7 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

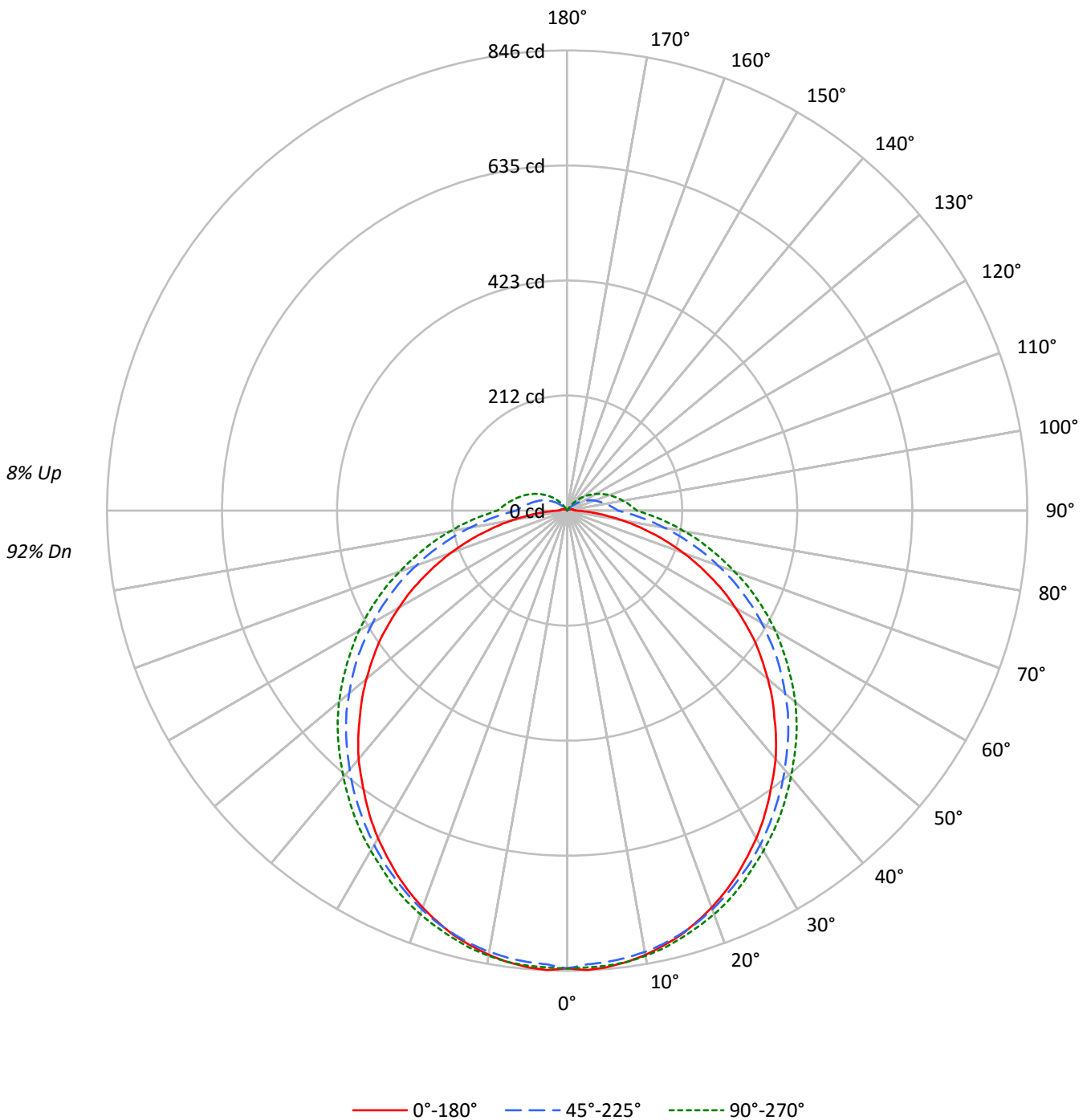
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	87	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	47	55	49	45	43
5	73	59	50	43	70	58	49	42	55	47	41	52	45	40	49	44	39	37
6	67	53	44	37	64	52	43	37	49	42	36	47	40	35	45	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	38	30	25	36	29	25	34	29	24	22
10	50	37	29	24	49	36	29	23	35	28	23	33	27	23	32	26	22	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	7482	7482	7482
5°	7504	7304	7323
10°	7458	7178	7166
15°	7391	7032	6986
20°	7290	6872	6810
25°	7176	6694	6618
30°	7052	6518	6422
35°	6912	6337	6248
40°	6800	6165	6069
45°	6634	6005	5912
50°	6493	5820	5746
55°	6350	5646	5553
60°	6122	5424	5376
65°	5875	5187	5158
70°	5575	4915	4906
75°	5154	4616	4673
80°	4686	4320	4436
85°	4093	4044	4276



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.7	2.8
10°-20°	228.5	8.0
20°-30°	345.5	12.0
30°-40°	418.0	14.6
40°-50°	441.9	15.4
50°-60°	415.9	14.5
60°-70°	345.1	12.0
70°-80°	242.2	8.4
80°-90°	136.5	4.8
90°-100°	81.3	2.8
100°-110°	60.2	2.1
110°-120°	40.4	1.4
120°-130°	22.7	0.8
130°-140°	9.8	0.3
140°-150°	1.9	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	653.7	22.8
0°-40°	1071.7	37.3
0°-60°	1929.5	67.2
0°-90°	2653.2	92.5
90°-120°	181.8	6.3
90°-150°	216.4	7.5
90°-180°	216.0	7.5
0°-180°	2869.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	842	842	842	842	842	
5°	843	840	833	841	840	80
15°	808	809	806	814	813	228
25°	739	745	747	758	759	340
35°	647	658	667	680	683	405
45°	539	557	575	591	596	417
55°	422	442	470	489	495	376
65°	292	322	354	378	386	290
75°	162	197	237	263	272	172
85°	50	90	132	160	170	52
90°	15	53	93	121	128	10
95°	12	43	82	107	116	10
105°	8	27	62	86	93	10
115°	6	14	44	65	72	6
125°	4	3	26	44	50	4
135°	2	2	8	24	29	2
145°	1	0	0	6	9	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°	841.7	841.7	841.7	841.7	841.7
2.5°	845.5	842.6	835.1	841.7	840.7
5°	842.6	839.8	833.2	840.7	839.8
7.5°	837.0	835.1	829.4	837.9	837.0
10°	829.4	828.5	823.8	832.3	831.3
12.5°	819.1	819.1	816.2	823.8	823.8
15°	807.8	808.7	805.9	814.4	813.4
17.5°	792.7	795.5	794.6	803.0	802.1
20°	776.7	779.5	780.4	789.8	789.8
22.5°	758.7	762.5	764.4	773.8	775.7
25°	739.0	744.6	747.4	757.8	758.7
27.5°	717.3	725.8	729.5	739.0	739.9
30°	695.6	703.1	709.7	720.1	722.0
32.5°	672.0	681.5	689.0	701.3	703.1
35°	646.6	657.9	667.3	680.5	683.3
37.5°	621.1	634.3	645.6	658.8	661.7
40°	596.6	608.9	622.1	636.2	640.0
42.5°	568.4	582.5	598.5	614.5	617.4
45°	539.1	557.0	575.0	591.0	595.7
47.5°	511.8	529.7	550.4	566.5	572.1
50°	481.6	502.4	523.1	542.0	547.6
52.5°	451.5	472.2	496.7	515.6	521.2
55°	422.3	442.1	470.3	489.2	494.8
57.5°	389.3	413.8	441.1	463.7	468.4
60°	357.2	381.7	412.8	434.5	442.1
62.5°	326.1	353.5	384.6	406.2	413.8
65°	292.2	322.3	354.4	378.0	385.5
67.5°	260.1	292.2	326.1	349.7	357.2
70°	227.2	259.2	295.0	320.5	327.1
72.5°	195.1	228.1	266.7	291.2	298.8
75°	162.1	197.0	236.6	263.0	271.5
77.5°	131.0	167.8	209.2	235.6	245.1
80°	102.7	140.4	181.9	210.2	217.7
82.5°	74.5	114.0	155.5	184.7	193.2
85°	50.0	89.5	132.0	160.2	169.7
87.5°	31.1	69.7	111.2	138.6	147.0
90°	15.1	52.8	93.3	120.6	128.2
92.5°	14.1	47.1	87.7	114.0	121.6
95°	12.3	43.4	82.0	107.4	115.9
97.5°	11.3	38.6	77.3	101.8	110.3
100°	10.4	34.9	71.6	97.1	103.7
102.5°	10.4	31.1	66.9	91.4	99.0
105°	8.5	27.3	62.2	85.8	93.3
107.5°	8.5	24.5	57.5	81.1	87.7
110°	7.5	20.7	53.7	75.4	82.9



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.6	17.9	49.0	69.7	77.3
115°	5.7	14.1	44.3	65.0	71.6
117.5°	5.7	11.3	39.6	59.4	66.9
120°	4.7	7.5	34.9	53.7	61.3
122.5°	4.7	4.7	30.2	49.0	55.6
125°	3.8	2.8	26.4	44.3	50.0
127.5°	3.8	2.8	21.7	38.6	45.2
130°	2.8	1.9	17.0	33.9	39.6
132.5°	2.8	1.9	13.2	29.2	34.9
135°	1.9	1.9	8.5	23.6	29.2
137.5°	1.9	0.9	4.7	18.9	23.6
140°	1.9	0.9	1.9	14.1	18.9
142.5°	0.9	0.9	0.0	10.4	14.1
145°	0.9	0.0	0.0	5.7	9.4
147.5°	0.9	0.0	0.0	0.9	4.7
150°	0.9	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)