

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P242670

Luminaire Tested: S124DRP-S795D830-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
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
Product Line: NEO-RAY
Catalog Number: S124DRP-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: -

Summary

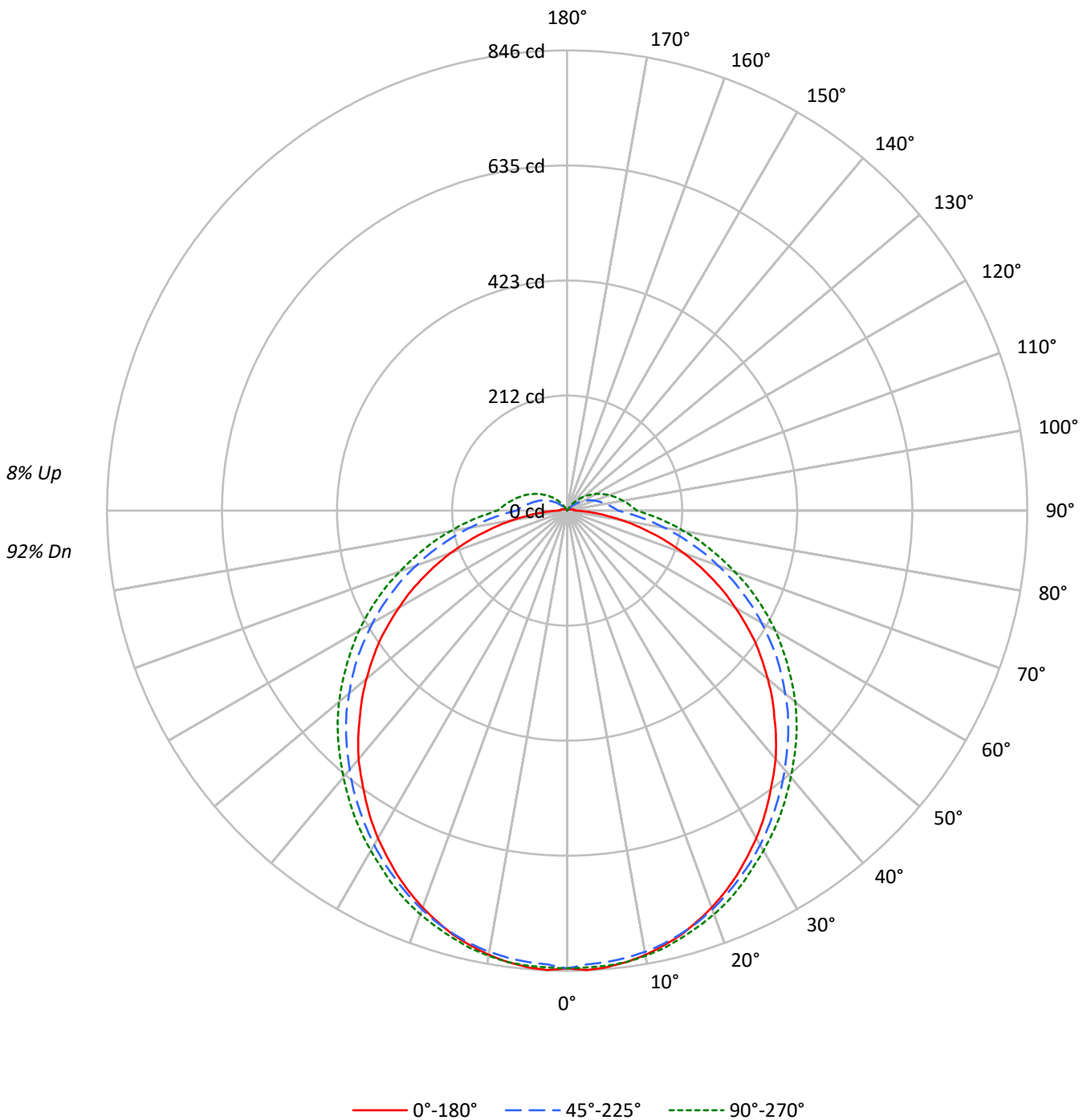
Lumens per Lamp: N/A
Luminaire Lumens: 2869.6 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{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: 24 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

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6634 cd/sqm



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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

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.78	18.31	17.26	18.78	19.27	18.33	19.86	18.81	20.33	20.82
	3H	18.42	19.81	18.91	20.29	20.83	20.64	22.03	21.13	22.51	23.04
	4H	18.99	20.31	19.50	20.80	21.35	21.70	23.02	22.21	23.51	24.06
	6H	19.37	20.60	19.90	21.10	21.67	22.76	23.98	23.28	24.49	25.05
	8H	19.48	20.65	20.01	21.18	21.75	23.27	24.45	23.81	24.98	25.55
	12H	19.54	20.66	20.08	21.19	21.79	23.83	24.95	24.37	25.48	26.08
4H	2H	17.63	18.95	18.14	19.44	19.99	18.83	20.15	19.35	20.64	21.20
	3H	19.51	20.63	20.03	21.17	21.74	21.36	22.48	21.89	23.02	23.59
	4H	20.22	21.24	20.76	21.79	22.39	22.58	23.61	23.13	24.15	24.76
	6H	20.73	21.64	21.30	22.21	22.83	23.81	24.71	24.38	25.29	25.91
	8H	20.89	21.74	21.46	22.31	22.94	24.42	25.27	24.99	25.84	26.48
	12H	20.99	21.76	21.58	22.36	23.00	25.08	25.85	25.68	26.45	27.09
8H	4H	20.80	21.64	21.36	22.22	22.85	22.84	23.69	23.41	24.26	24.89
	6H	21.49	22.21	22.09	22.82	23.46	24.23	24.95	24.83	25.56	26.20
	8H	21.74	22.39	22.36	23.01	23.66	24.97	25.62	25.58	26.24	26.89
	12H	21.93	22.50	22.54	23.12	23.83	25.79	26.37	26.41	26.98	27.70
12H	4H	20.93	21.70	21.52	22.30	22.94	22.85	23.62	23.44	24.22	24.86
	6H	21.70	22.35	22.32	22.97	23.62	24.28	24.93	24.89	25.55	26.20
	8H	22.04	22.62	22.66	23.23	23.95	25.09	25.66	25.70	26.28	26.99