

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: G3-1802-639-16

Luminaire Tested: S124DRP-S795D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: G3-1802-639-16  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124DRP-S795D835-X4F0-XX-UDD-D-W  
Description: DEFINE 4 DIRECT RECESSED WITH SATIN DROP DIFFUSER  
STANDARD LIGHT ENGINE  
Light Source: (92) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

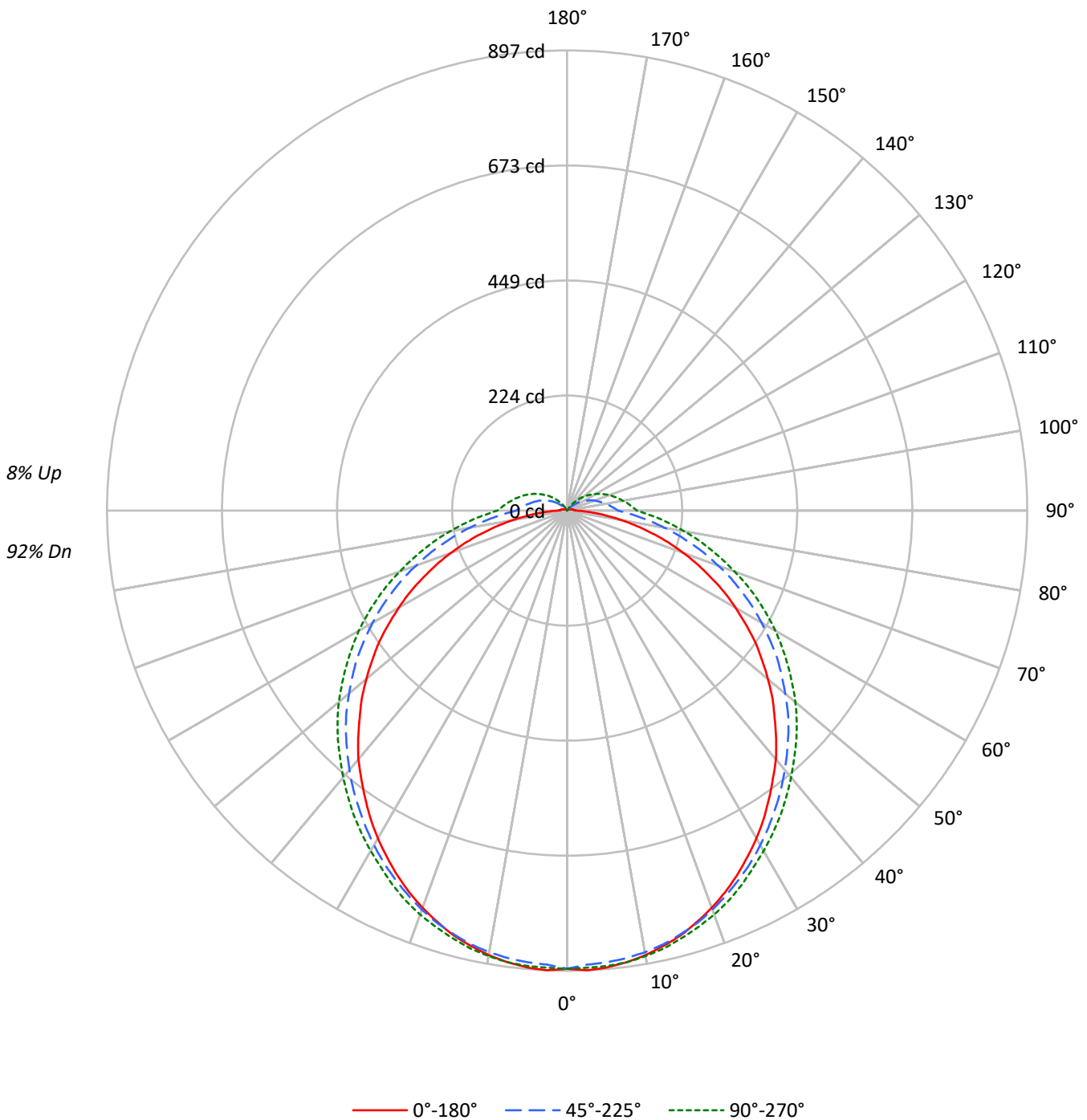
Lumens per Lamp: N/A  
Luminaire Lumens: 3044.6 lumens  
Efficiency: N/A  
Efficacy: 115.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.28 / 1.39  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.88' x H: 0.08')  
CIE Type: Direct

Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (Ain): 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°	7938	7938	7938
5°	7962	7750	7769
10°	7913	7615	7603
15°	7841	7461	7412
20°	7734	7292	7226
25°	7613	7103	7022
30°	7482	6915	6813
35°	7334	6723	6629
40°	7215	6540	6438
45°	7039	6370	6272
50°	6890	6175	6097
55°	6736	5990	5892
60°	6496	5755	5704
65°	6233	5504	5473
70°	5914	5215	5205
75°	5468	4897	4958
80°	4973	4583	4707
85°	4339	4289	4535

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7039 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	84.6	2.8
10°-20°	242.4	8.0
20°-30°	366.6	12.0
30°-40°	443.5	14.6
40°-50°	468.8	15.4
50°-60°	441.2	14.5
60°-70°	366.1	12.0
70°-80°	256.9	8.4
80°-90°	144.9	4.8
90°-100°	86.2	2.8
100°-110°	63.9	2.1
110°-120°	42.9	1.4
120°-130°	24.1	0.8
130°-140°	10.4	0.3
140°-150°	2.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	693.6	22.8
0°-40°	1137.1	37.3
0°-60°	2047.1	67.2
0°-90°	2815.0	92.5
90°-120°	192.9	6.3
90°-150°	229.6	7.5
90°-180°	230.0	7.6
0°-180°	3044.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	893	893	893	893	893	
5°	894	891	884	892	891	85
15°	857	858	855	864	863	241
25°	784	790	793	804	805	361
35°	686	698	708	722	725	430
45°	572	591	610	627	632	442
55°	448	469	499	519	525	399
65°	310	342	376	401	409	307
75°	172	209	251	279	288	183
85°	53	95	140	170	180	55
90°	16	56	99	128	136	11
95°	13	46	87	114	123	10
105°	9	29	66	91	99	10
115°	6	15	47	69	76	6
125°	4	3	28	47	53	4
135°	2	2	9	25	31	2
145°	1	0	0	6	10	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°	893	893	893	893	893
2.5°	897	894	886	893	892
5°	894	891	884	892	891
7.5°	888	886	880	889	888
10°	880	879	874	883	882
12.5°	869	869	866	874	874
15°	857	858	855	864	863
17.5°	841	844	843	852	851
20°	824	827	828	838	838
22.5°	805	809	811	821	823
25°	784	790	793	804	805
27.5°	761	770	774	784	785
30°	738	746	753	764	766
32.5°	713	723	731	744	746
35°	686	698	708	722	725
37.5°	659	673	685	699	702
40°	633	646	660	675	679
42.5°	603	618	635	652	655
45°	572	591	610	627	632
47.5°	543	562	584	601	607
50°	511	533	555	575	581
52.5°	479	501	527	547	553
55°	448	469	499	519	525
57.5°	413	439	468	492	497
60°	379	405	438	461	469
62.5°	346	375	408	431	439
65°	310	342	376	401	409
67.5°	276	310	346	371	379
70°	241	275	313	340	347
72.5°	207	242	283	309	317
75°	172	209	251	279	288
77.5°	139	178	222	250	260
80°	109	149	193	223	231
82.5°	79	121	165	196	205
85°	53	95	140	170	180
87.5°	33	74	118	147	156
90°	16	56	99	128	136
92.5°	15	50	93	121	129
95°	13	46	87	114	123
97.5°	12	41	82	108	117
100°	11	37	76	103	110
102.5°	11	33	71	97	105
105°	9	29	66	91	99
107.5°	9	26	61	86	93
110°	8	22	57	80	88



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	7	19	52	74	82
115°	6	15	47	69	76
117.5°	6	12	42	63	71
120°	5	8	37	57	65
122.5°	5	5	32	52	59
125°	4	3	28	47	53
127.5°	4	3	23	41	48
130°	3	2	18	36	42
132.5°	3	2	14	31	37
135°	2	2	9	25	31
137.5°	2	1	5	20	25
140°	2	1	2	15	20
142.5°	1	1	0	11	15
145°	1	0	0	6	10
147.5°	1	0	0	1	5
150°	1	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	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	16.99	18.51	17.47	18.98	19.48	18.54	20.07	19.02	20.53	21.03
	3H	18.63	20.02	19.12	20.49	21.03	20.85	22.24	21.34	22.71	23.25
	4H	19.19	20.51	19.71	21.00	21.56	21.91	23.22	22.42	23.72	24.27
	6H	19.58	20.80	20.10	21.31	21.88	22.96	24.19	23.49	24.69	25.26
	8H	19.68	20.86	20.22	21.39	21.96	23.48	24.65	24.02	25.18	25.76
	12H	19.74	20.87	20.29	21.39	22.00	24.03	25.16	24.58	25.68	26.29
4H	2H	17.84	19.15	18.35	19.65	20.20	19.04	20.36	19.55	20.85	21.40
	3H	19.72	20.84	20.24	21.37	21.95	21.57	22.69	22.09	23.23	23.80
	4H	20.42	21.45	20.97	21.99	22.60	22.79	23.81	23.33	24.36	24.96
	6H	20.94	21.84	21.50	22.41	23.03	24.02	24.92	24.58	25.49	26.11
	8H	21.09	21.94	21.66	22.52	23.15	24.63	25.48	25.20	26.05	26.68
	12H	21.20	21.97	21.79	22.57	23.20	25.29	26.06	25.88	26.66	27.30
8H	4H	21.00	21.85	21.57	22.42	23.05	23.04	23.89	23.61	24.46	25.09
	6H	21.69	22.41	22.30	23.03	23.66	24.43	25.15	25.04	25.77	26.40
	8H	21.95	22.59	22.56	23.22	23.87	25.18	25.82	25.79	26.45	27.10
	12H	22.13	22.71	22.75	23.32	24.04	26.00	26.58	26.62	27.19	27.91
12H	4H	21.14	21.91	21.73	22.51	23.14	23.06	23.83	23.65	24.43	25.07
	6H	21.91	22.56	22.52	23.18	23.83	24.48	25.13	25.10	25.76	26.41
	8H	22.25	22.82	22.86	23.44	24.15	25.29	25.87	25.91	26.48	27.20