

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: G3-1802-639-54

Luminaire Tested: S123DRP-H775D835-X4F0-XX-UDD-D-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: G3-1802-639-54
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-H775D835-X4F0-XX-UDD-D-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN DROP DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

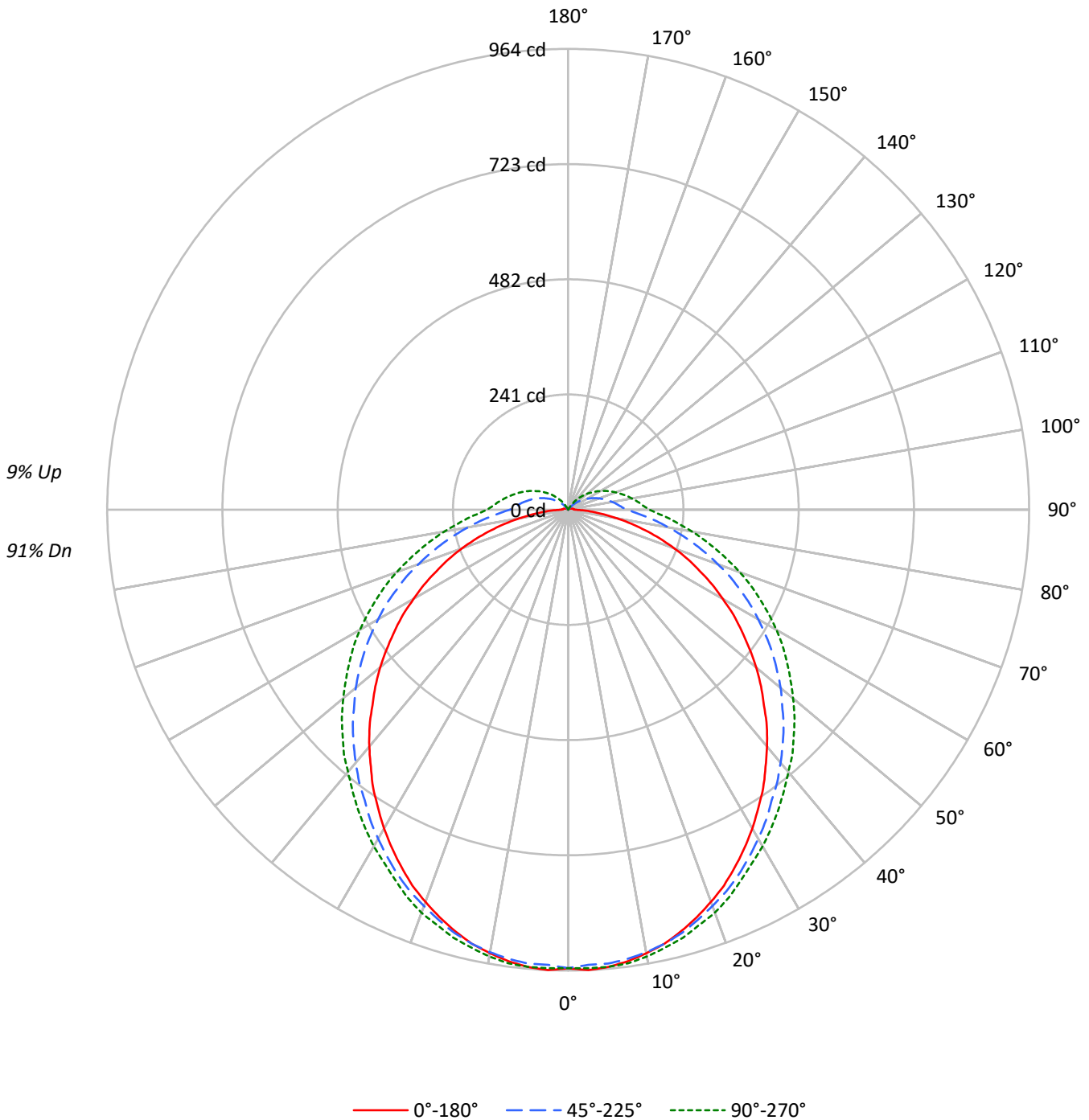
Lumens per Lamp: N/A
Luminaire Lumens: 3255.0 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 0.23' x L: 3.92' x H: 0.08')
CIE Type: Direct

Input Watts (W): 25.6
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: 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	113	113	113	113	106	106	106	100	100	100	94	94	94	91
1	105	100	95	90	101	96	92	88	91	87	84	85	82	80	80	78	76	73
2	95	86	79	72	91	83	77	71	78	73	68	74	69	65	69	66	62	60
3	86	75	66	60	83	73	65	58	69	62	56	65	59	54	61	56	52	50
4	79	66	57	50	76	64	56	49	61	53	48	57	51	46	54	49	45	42
5	72	59	50	43	70	57	49	42	54	47	41	51	45	40	49	43	39	36
6	67	53	44	37	64	52	43	37	49	41	36	46	40	35	44	38	34	31
7	62	48	39	33	60	47	38	32	44	37	32	42	36	31	40	34	30	28
8	57	44	35	29	55	43	34	29	41	33	28	39	32	27	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	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°	11501	11501	11501
5°	11535	11205	11200
10°	11428	10922	10860
15°	11271	10611	10487
20°	11056	10241	10109
25°	10809	9898	9673
30°	10533	9514	9305
35°	10256	9124	8938
40°	9951	8806	8588
45°	9615	8492	8296
50°	9334	8171	7992
55°	8989	7844	7693
60°	8628	7482	7402
65°	8250	7096	7047
70°	7818	6681	6700
75°	7169	6229	6291
80°	6347	5783	5931
85°	5645	5422	5657

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9615 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.0	2.8
10°-20°	259.6	8.0
20°-30°	388.8	11.9
30°-40°	465.2	14.3
40°-50°	487.8	15.0
50°-60°	458.6	14.1
60°-70°	383.8	11.8
70°-80°	275.4	8.5
80°-90°	165.0	5.1
90°-100°	104.6	3.2
100°-110°	77.1	2.4
110°-120°	51.6	1.6
120°-130°	29.8	0.9
130°-140°	13.7	0.4
140°-150°	3.1	0.1
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	739.4	22.7
0°-40°	1204.5	37.0
0°-60°	2150.9	66.1
0°-90°	2975.1	91.4
90°-120°	233.3	7.2
90°-150°	279.9	8.6
90°-180°	280.0	8.6
0°-180°	3255.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	959	959	959	959	959	
5°	960	959	953	961	960	91
15°	913	919	917	929	927	257
25°	825	836	843	856	855	380
35°	711	728	742	761	766	444
45°	579	608	637	659	667	448
55°	443	480	521	549	559	397
65°	304	349	396	431	442	302
75°	167	218	271	308	320	177
85°	51	104	162	199	212	52
90°	14	66	122	159	170	10
95°	11	54	106	140	151	9
105°	8	35	81	111	120	9
115°	5	18	57	83	92	5
125°	4	4	35	57	65	3
135°	2	1	15	33	39	2
145°	1	0	0	10	14	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°	959	959	959	959	959
2.5°	964	961	953	962	960
5°	960	959	953	961	960
7.5°	953	953	948	957	957
10°	942	945	940	950	949
12.5°	930	934	930	941	938
15°	913	919	917	929	927
17.5°	894	901	900	912	911
20°	873	882	882	894	897
22.5°	851	861	864	876	878
25°	825	836	843	856	855
27.5°	798	811	819	833	833
30°	770	785	795	810	813
32.5°	740	758	770	786	790
35°	711	728	742	761	766
37.5°	678	699	718	738	741
40°	647	670	691	712	716
42.5°	615	639	664	685	694
45°	579	608	637	659	667
47.5°	547	576	607	633	642
50°	513	543	580	605	614
52.5°	478	511	550	577	586
55°	443	480	521	549	559
57.5°	410	447	490	521	532
60°	373	414	459	491	503
62.5°	340	382	429	461	473
65°	304	349	396	431	442
67.5°	271	315	366	401	413
70°	236	282	333	369	382
72.5°	201	250	302	339	350
75°	167	218	271	308	320
77.5°	135	186	241	278	291
80°	103	156	213	250	263
82.5°	75	129	187	223	235
85°	51	104	162	199	212
87.5°	30	84	140	177	188
90°	14	66	122	159	170
92.5°	13	59	113	148	159
95°	11	54	106	140	151
97.5°	11	49	100	133	143
100°	10	44	94	125	135
102.5°	9	39	87	118	128
105°	8	35	81	111	120
107.5°	7	30	75	104	113
110°	7	26	69	97	106



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6	22	63	90	99
115°	5	18	57	83	92
117.5°	5	14	51	77	85
120°	5	11	46	70	78
122.5°	4	7	41	64	72
125°	4	4	35	57	65
127.5°	3	2	30	51	58
130°	3	2	25	45	52
132.5°	2	2	20	39	46
135°	2	1	15	33	39
137.5°	2	1	10	27	33
140°	1	1	5	21	27
142.5°	1	0	1	16	21
145°	1	0	0	10	14
147.5°	1	0	0	5	9
150°	1	0	0	0	3
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	17.52	19.02	18.01	19.51	20.03	19.59	21.09	20.08	21.58	22.10
	3H	19.07	20.44	19.58	20.94	21.50	21.99	23.36	22.49	23.85	24.41
	4H	19.60	20.90	20.12	21.41	21.98	23.10	24.40	23.63	24.91	25.49
	6H	19.94	21.15	20.48	21.67	22.26	24.23	25.44	24.77	25.96	26.55
	8H	20.03	21.18	20.58	21.73	22.33	24.79	25.95	25.34	26.50	27.09
	12H	20.07	21.18	20.63	21.73	22.35	25.41	26.52	25.97	27.06	27.69
4H	2H	18.44	19.73	18.96	20.25	20.82	20.04	21.34	20.57	21.85	22.42
	3H	20.24	21.34	20.78	21.90	22.49	22.65	23.76	23.19	24.31	24.91
	4H	20.91	21.92	21.47	22.48	23.11	23.93	24.94	24.49	25.50	26.13
	6H	21.38	22.27	21.96	22.86	23.50	25.23	26.12	25.81	26.71	27.35
	8H	21.51	22.35	22.10	22.94	23.60	25.89	26.73	26.47	27.32	27.97
	12H	21.60	22.36	22.20	22.98	23.64	26.62	27.38	27.22	28.00	28.66
8H	4H	21.55	22.39	22.14	22.98	23.64	24.15	24.99	24.73	25.58	26.23
	6H	22.21	22.92	22.82	23.55	24.21	25.61	26.32	26.23	26.95	27.61
	8H	22.44	23.08	23.07	23.72	24.39	26.40	27.04	27.02	27.68	28.35
	12H	22.61	23.18	23.24	23.81	24.55	27.29	27.86	27.92	28.49	29.23
12H	4H	21.71	22.47	22.32	23.09	23.75	24.16	24.92	24.77	25.54	26.20
	6H	22.46	23.10	23.08	23.74	24.41	25.65	26.29	26.28	26.93	27.61
	8H	22.78	23.35	23.41	23.98	24.72	26.50	27.07	27.13	27.70	28.44