

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



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931050

Luminaire Tested: DFN2DS-SQ3F0-120DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931050
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-120DS835-RLL
Description: 3 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

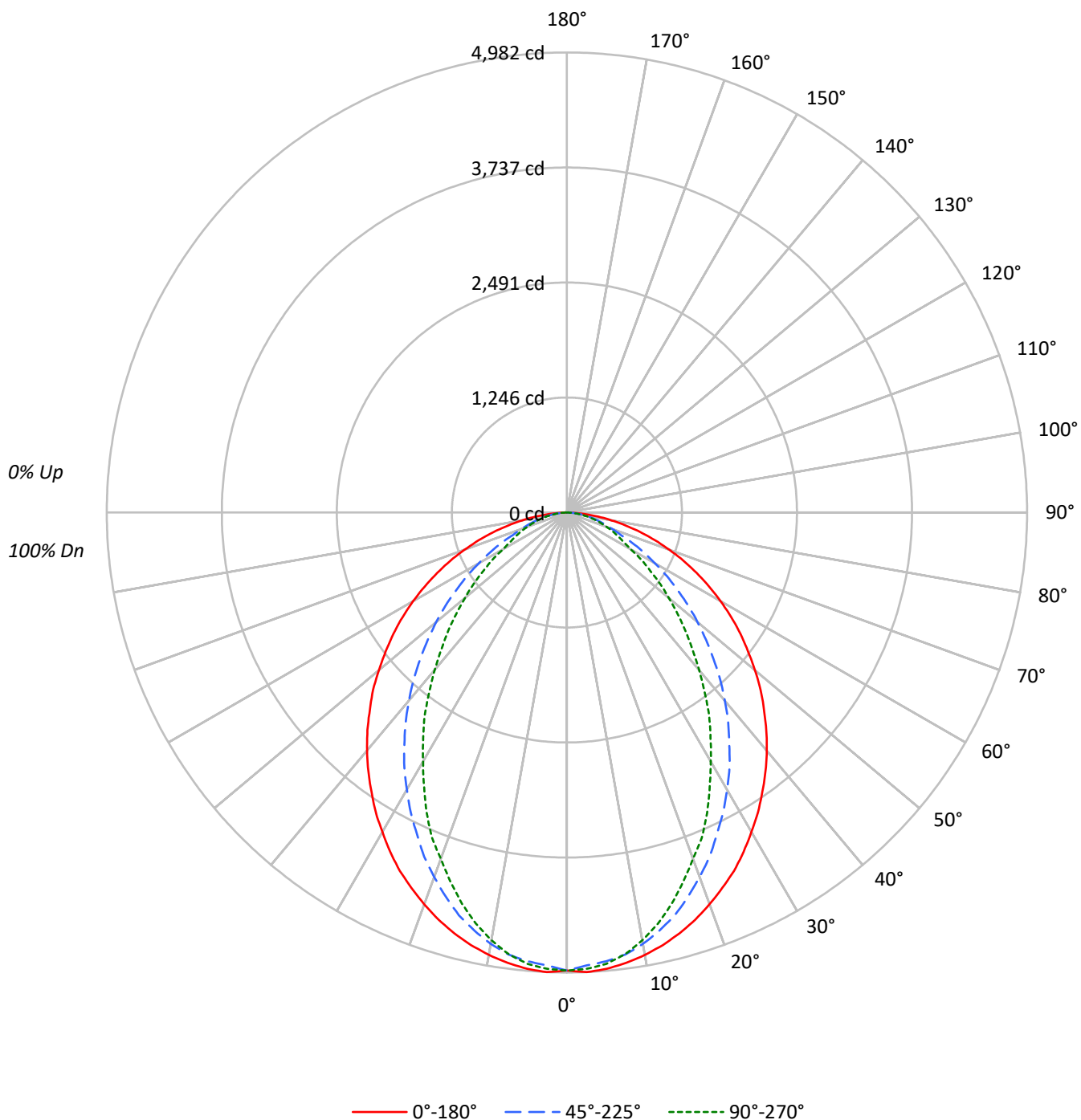
Lumens per Lamp: N/A
Luminaire Lumens: 10200.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 131.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9957
Total Harmonic Distortion (THDi): 0.049
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
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5683	5683	5683
5°	5704	5611	5643
10°	5661	5520	5473
15°	5596	5356	5202
20°	5506	5122	4865
25°	5414	4857	4539
30°	5285	4584	4121
35°	5161	4288	3754
40°	5035	3981	3330
45°	4887	3637	2945
50°	4737	3288	2569
55°	4581	2914	2206
60°	4402	2520	1831
65°	4199	2117	1667
70°	3955	1744	1533
75°	3655	1590	1431
80°	3227	1420	1304
85°	2536	1120	1120

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 4887 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	464.8	4.6
10°-20°	1276.0	12.5
20°-30°	1791.5	17.6
30°-40°	1952.8	19.1
40°-50°	1794.9	17.6
50°-60°	1409.6	13.8
60°-70°	917.5	9.0
70°-80°	472.3	4.6
80°-90°	120.6	1.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3532.3	34.6
0°-40°	5485.2	53.8
0°-60°	8689.6	85.2
0°-90°	10200.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10200.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4960	4960	4960	4960	4960	
5°	4960	4937	4879	4919	4906	470
15°	4717	4668	4515	4430	4385	1329
25°	4282	4138	3842	3658	3590	1969
35°	3690	3460	3066	2783	2684	2309
45°	3016	2715	2244	1925	1818	2329
55°	2293	1943	1459	1190	1104	2049
65°	1549	1185	781	629	615	1535
75°	826	511	359	328	323	873
85°	193	99	85	85	85	231
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4959.6	4959.6	4959.6	4959.6	4959.6
2.5°	4982.0	4959.6	4910.1	4955.3	4946.2
5°	4959.6	4937.2	4878.6	4919.1	4905.8
7.5°	4919.1	4892.4	4829.6	4847.2	4824.8
10°	4865.3	4833.9	4744.3	4730.5	4703.9
12.5°	4798.1	4757.7	4636.2	4609.6	4560.1
15°	4717.2	4667.7	4515.3	4430.0	4385.3
17.5°	4622.9	4551.0	4362.4	4263.9	4192.0
20°	4515.3	4425.3	4201.0	4089.1	3990.0
22.5°	4398.6	4295.3	4034.8	3882.4	3815.3
25°	4282.0	4138.1	3841.9	3658.1	3590.5
27.5°	4142.9	3990.0	3662.4	3451.5	3348.1
30°	3994.8	3823.9	3464.8	3236.2	3114.8
32.5°	3851.0	3644.3	3276.7	3007.2	2894.8
35°	3689.6	3460.5	3065.7	2782.9	2683.8
37.5°	3532.4	3285.3	2868.1	2558.1	2446.2
40°	3366.2	3097.2	2661.5	2342.9	2226.2
42.5°	3195.7	2908.6	2455.3	2122.9	2011.0
45°	3016.2	2715.3	2244.3	1925.3	1817.6
47.5°	2845.7	2527.2	2042.4	1723.4	1624.8
50°	2657.2	2338.6	1844.8	1534.8	1441.0
52.5°	2472.9	2136.2	1656.2	1360.0	1274.8
55°	2293.4	1943.4	1458.6	1189.5	1104.3
57.5°	2109.5	1750.5	1283.8	1032.4	960.5
60°	1921.0	1561.9	1099.5	871.0	799.1
62.5°	1737.2	1378.1	942.4	727.2	691.4
65°	1548.6	1184.8	781.0	628.6	614.8
67.5°	1369.1	1005.2	628.6	551.9	538.6
70°	1180.5	830.5	520.5	475.7	457.6
72.5°	1001.0	668.6	435.2	399.5	390.5
75°	825.7	511.4	359.1	327.6	323.3
77.5°	651.0	363.3	282.9	264.8	255.7
80°	489.1	260.5	215.2	197.6	197.6
82.5°	341.0	175.2	148.1	139.0	139.0
85°	192.9	98.6	85.2	85.2	85.2
87.5°	71.9	35.7	35.7	31.4	31.4
90°	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	17.27	18.79	17.64	19.11	19.42	13.23	14.75	13.60	15.07	15.38
	3H	19.04	20.40	19.41	20.73	21.09	14.50	15.86	14.87	16.19	16.55
	4H	19.70	20.98	20.10	21.33	21.71	15.00	16.28	15.40	16.63	17.01
	6H	20.19	21.37	20.60	21.74	22.13	15.38	16.56	15.79	16.93	17.32
	8H	20.36	21.48	20.78	21.87	22.27	15.50	16.63	15.93	17.02	17.42
	12H	20.46	21.54	20.89	21.92	22.35	15.58	16.66	16.02	17.05	17.47
4H	2H	17.38	18.66	17.77	19.00	19.38	13.93	15.21	14.33	15.56	15.94
	3H	19.31	20.37	19.72	20.77	21.17	15.37	16.43	15.78	16.83	17.23
	4H	20.06	21.01	20.49	21.43	21.87	15.97	16.93	16.40	17.34	17.78
	6H	20.65	21.48	21.11	21.92	22.38	16.46	17.29	16.92	17.73	18.19
	8H	20.86	21.64	21.33	22.09	22.55	16.62	17.40	17.08	17.84	18.31
	12H	21.02	21.71	21.50	22.19	22.66	16.74	17.43	17.22	17.91	18.38
8H	4H	20.08	20.86	20.55	21.30	21.77	16.32	17.10	16.79	17.55	18.01
	6H	20.72	21.36	21.22	21.85	22.33	16.91	17.55	17.41	18.04	18.52
	8H	20.97	21.55	21.48	22.06	22.54	17.13	17.71	17.64	18.22	18.71
	12H	21.17	21.68	21.68	22.18	22.74	17.31	17.82	17.82	18.31	18.88
12H	4H	20.07	20.76	20.55	21.24	21.71	16.37	17.06	16.85	17.54	18.01
	6H	20.70	21.28	21.21	21.79	22.28	16.97	17.55	17.49	18.06	18.55
	8H	20.98	21.49	21.49	21.99	22.55	17.25	17.76	17.76	18.25	18.81