

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: P931428

Luminaire Tested: DFN2DS-TR3F0-090DS835-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931428
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-TR3F0-090DS835-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

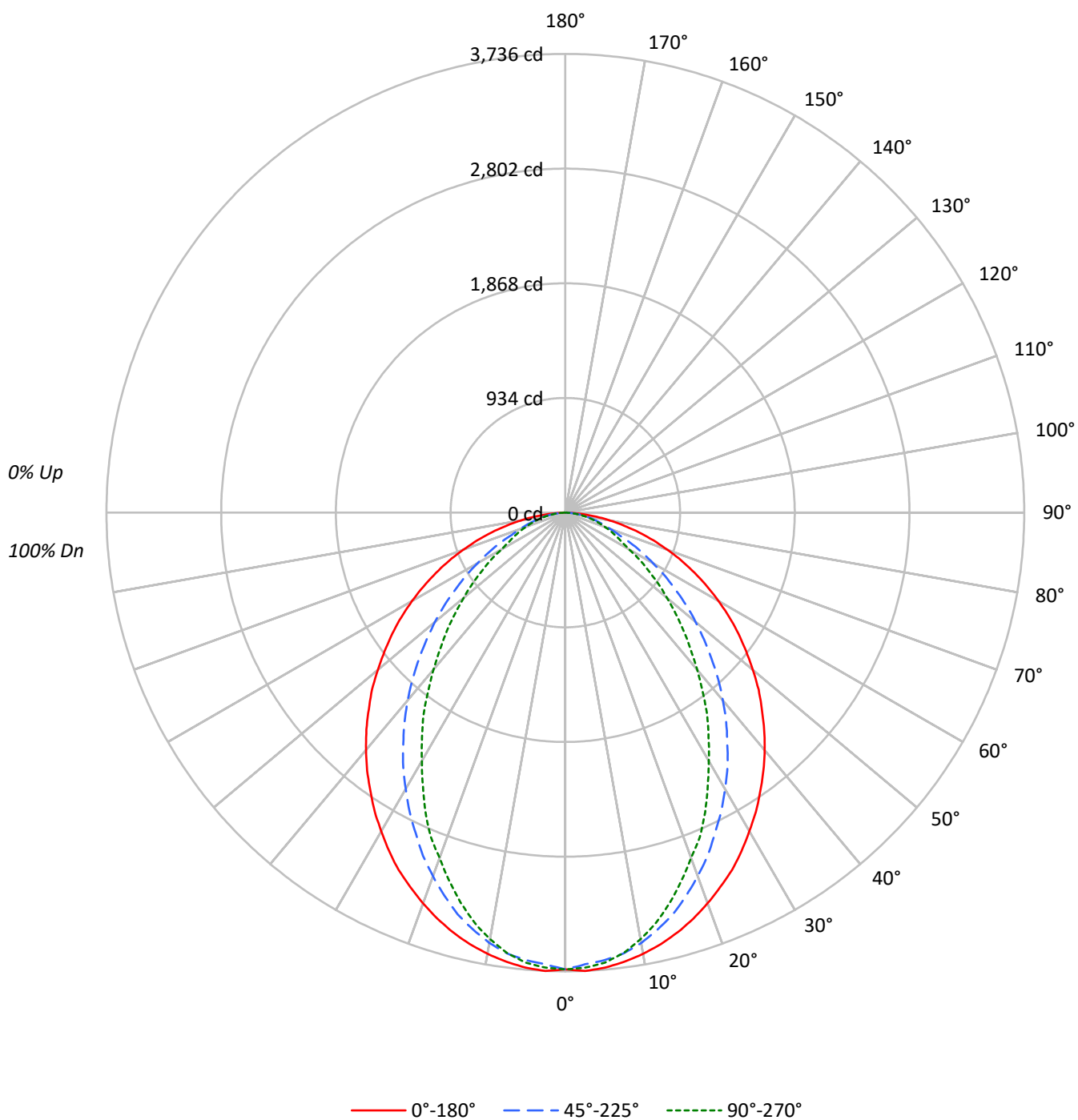
Lumens per Lamp: N/A
Luminaire Lumens: 7650.0 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 99.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9951
Total Harmonic Distortion (THDi): 0.07
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°	4635	4635	4635
5°	4653	4577	4602
10°	4617	4502	4464
15°	4564	4369	4243
20°	4491	4178	3968
25°	4416	3962	3703
30°	4311	3739	3361
35°	4210	3498	3062
40°	4107	3247	2716
45°	3987	2966	2402
50°	3863	2682	2095
55°	3737	2377	1799
60°	3591	2055	1494
65°	3424	1727	1360
70°	3226	1422	1250
75°	2982	1297	1168
80°	2632	1158	1063
85°	2067	914	914

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 3987 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	348.6	4.6
10°-20°	957.0	12.5
20°-30°	1343.6	17.6
30°-40°	1464.6	19.1
40°-50°	1346.2	17.6
50°-60°	1057.2	13.8
60°-70°	688.1	9.0
70°-80°	354.2	4.6
80°-90°	90.4	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°	2649.2	34.6
0°-40°	4113.9	53.8
0°-60°	6517.2	85.2
0°-90°	7650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3720	3720	3720	3720	3720	
5°	3720	3703	3659	3689	3679	353
15°	3538	3501	3386	3322	3289	997
25°	3212	3104	2882	2744	2693	1477
35°	2767	2595	2299	2087	2013	1732
45°	2262	2036	1683	1444	1363	1747
55°	1720	1458	1094	892	828	1537
65°	1161	889	586	471	461	1151
75°	619	384	269	246	242	655
85°	145	74	64	64	64	173
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3719.7	3719.7	3719.7	3719.7	3719.7
2.5°	3736.5	3719.7	3682.5	3716.5	3709.7
5°	3719.7	3702.9	3659.0	3689.3	3679.3
7.5°	3689.3	3669.3	3622.2	3635.4	3618.6
10°	3649.0	3625.4	3558.3	3547.9	3527.9
12.5°	3598.6	3568.3	3477.2	3457.2	3420.0
15°	3537.9	3500.8	3386.5	3322.5	3289.0
17.5°	3467.2	3413.3	3271.8	3197.9	3144.0
20°	3386.5	3319.0	3150.7	3066.8	2992.5
22.5°	3299.0	3221.5	3026.1	2911.8	2861.5
25°	3211.5	3103.6	2881.5	2743.6	2692.9
27.5°	3107.2	2992.5	2746.8	2588.6	2511.1
30°	2996.1	2867.9	2598.6	2427.2	2336.1
32.5°	2888.2	2733.2	2457.5	2255.4	2171.1
35°	2767.2	2595.4	2299.3	2087.2	2012.9
37.5°	2649.3	2464.0	2151.1	1918.6	1834.7
40°	2524.7	2322.9	1996.1	1757.2	1669.7
42.5°	2396.8	2181.5	1841.4	1592.2	1508.2
45°	2262.2	2036.5	1683.2	1443.9	1363.2
47.5°	2134.3	1895.4	1531.8	1292.5	1218.6
50°	1992.9	1753.9	1383.6	1151.1	1080.7
52.5°	1854.7	1602.2	1242.2	1020.0	956.1
55°	1720.0	1457.5	1093.9	892.2	828.2
57.5°	1582.2	1312.9	962.9	774.3	720.4
60°	1440.7	1171.4	824.7	653.2	599.3
62.5°	1302.9	1033.6	706.8	545.4	518.6
65°	1161.4	888.6	585.7	471.4	461.1
67.5°	1026.8	753.9	471.4	413.9	403.9
70°	885.4	622.9	390.4	356.8	343.2
72.5°	750.7	501.4	326.4	299.6	292.9
75°	619.3	383.6	269.3	245.7	242.5
77.5°	488.2	272.5	212.1	198.6	191.8
80°	366.8	195.4	161.4	148.2	148.2
82.5°	255.7	131.4	111.1	104.3	104.3
85°	144.6	73.9	63.9	63.9	63.9
87.5°	53.9	26.8	26.8	23.6	23.6
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	16.56	18.08	16.93	18.40	18.71	12.52	14.05	12.89	14.36	14.67
	3H	18.33	19.69	18.71	20.02	20.38	13.79	15.15	14.17	15.48	15.84
	4H	18.99	20.28	19.39	20.62	21.00	14.29	15.57	14.69	15.92	16.30
	6H	19.48	20.67	19.90	21.03	21.43	14.67	15.85	15.08	16.22	16.61
	8H	19.65	20.78	20.08	21.17	21.57	14.80	15.92	15.22	16.31	16.71
	12H	19.75	20.83	20.18	21.21	21.64	14.88	15.96	15.31	16.34	16.77
4H	2H	16.67	17.95	17.07	18.30	18.68	13.22	14.50	13.62	14.85	15.23
	3H	18.60	19.66	19.01	20.06	20.46	14.66	15.73	15.07	16.12	16.53
	4H	19.35	20.31	19.78	20.72	21.16	15.26	16.22	15.69	16.63	17.07
	6H	19.94	20.77	20.40	21.22	21.68	15.75	16.58	16.21	17.02	17.48
	8H	20.16	20.93	20.62	21.38	21.84	15.91	16.69	16.38	17.13	17.60
	12H	20.31	21.00	20.79	21.48	21.95	16.03	16.72	16.51	17.20	17.67
8H	4H	19.37	20.15	19.84	20.60	21.06	15.62	16.39	16.08	16.84	17.30
	6H	20.01	20.65	20.51	21.15	21.62	16.20	16.84	16.70	17.34	17.81
	8H	20.26	20.84	20.78	21.35	21.84	16.42	17.00	16.94	17.51	18.00
	12H	20.47	20.98	20.98	21.47	22.03	16.60	17.11	17.11	17.60	18.17
12H	4H	19.36	20.05	19.84	20.53	21.00	15.66	16.35	16.14	16.83	17.30
	6H	19.99	20.57	20.51	21.08	21.57	16.27	16.84	16.78	17.35	17.84
	8H	20.28	20.79	20.79	21.28	21.84	16.54	17.05	17.05	17.54	18.11