

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: P931563

Luminaire Tested: DFN2DS-TR4F0-100DS935-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931563
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR4F0-100DS935-FLL
Description: 4 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

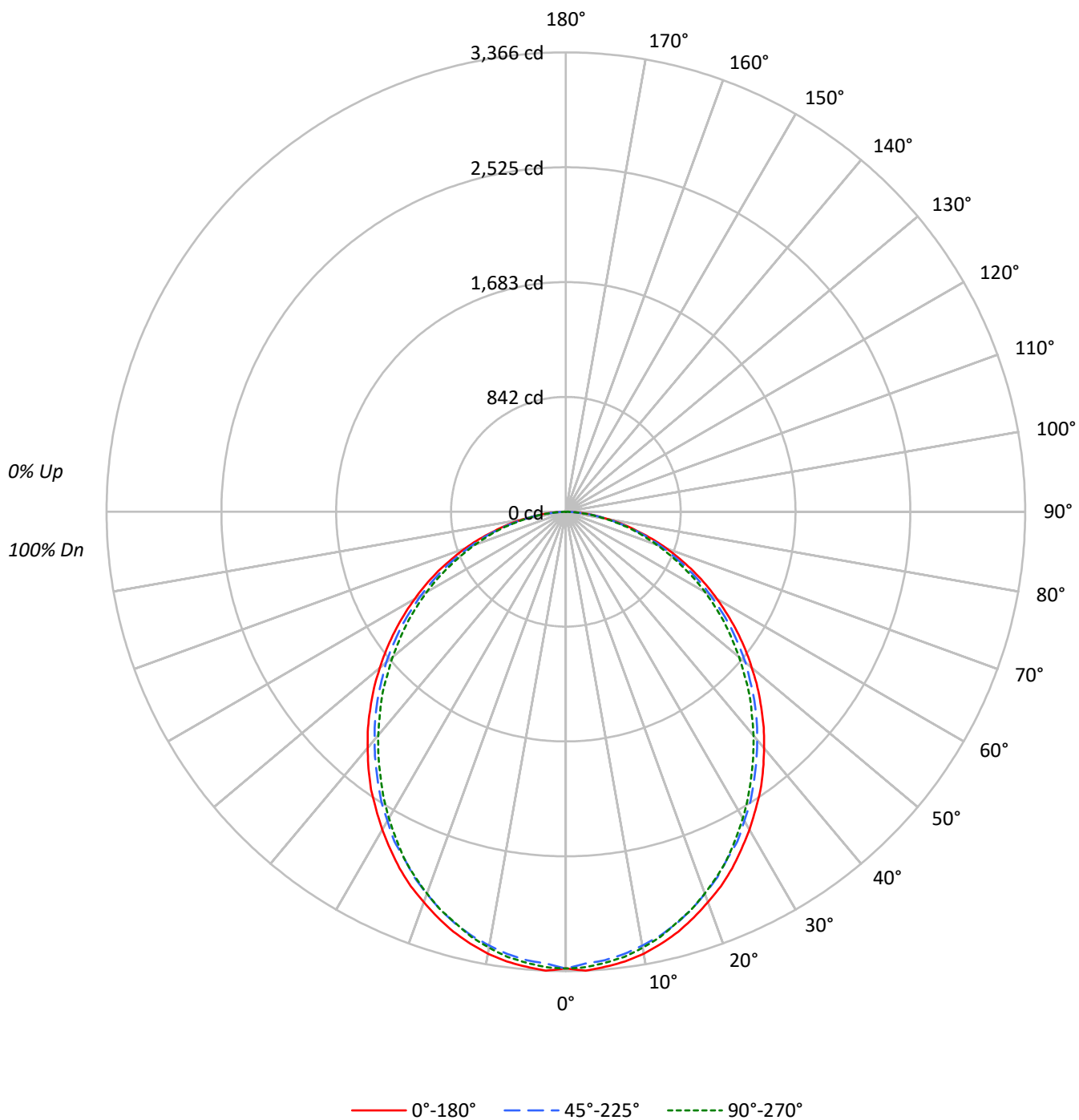
Lumens per Lamp: N/A
Luminaire Lumens: 8514.0 lumens
Efficiency: N/A
Efficacy: 79.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.96' x L: 3.43' x H: 0')
CIE Type: Direct

Input Watts (W): 107.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9972
Total Harmonic Distortion (THDi): 0.128
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2658	2658	2658
5°	2669	2630	2646
10°	2653	2604	2617
15°	2620	2570	2567
20°	2573	2519	2516
25°	2527	2457	2457
30°	2468	2400	2379
35°	2412	2331	2297
40°	2343	2262	2219
45°	2274	2194	2140
50°	2199	2124	2048
55°	2122	2041	1966
60°	2035	1943	1871
65°	1942	1845	1760
70°	1824	1726	1645
75°	1659	1590	1551
80°	1473	1427	1354
85°	1201	1145	1027

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2274 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.0	3.7
10°-20°	886.2	10.4
20°-30°	1302.3	15.3
30°-40°	1512.5	17.8
40°-50°	1510.7	17.7
50°-60°	1317.3	15.5
60°-70°	973.7	11.4
70°-80°	550.9	6.5
80°-90°	145.4	1.7
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°	2503.4	29.4
0°-40°	4016.0	47.2
0°-60°	6843.9	80.4
0°-90°	8514.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8514.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3346	3346	3346	3346	3346	
5°	3346	3334	3298	3324	3318	318
15°	3186	3166	3124	3137	3121	897
25°	2883	2857	2803	2809	2803	1327
35°	2487	2455	2404	2384	2368	1553
45°	2024	2002	1953	1918	1905	1562
55°	1532	1512	1474	1435	1419	1369
65°	1033	1014	982	952	936	1021
75°	540	534	518	499	505	577
85°	132	129	126	116	113	155
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3346.3	3346.3	3346.3	3346.3	3346.3
2.5°	3365.8	3349.7	3314.2	3346.3	3340.2
5°	3346.3	3333.7	3298.2	3323.8	3317.6
7.5°	3323.8	3304.6	3269.1	3295.1	3288.6
10°	3288.6	3266.1	3227.5	3253.1	3243.6
12.5°	3240.1	3221.0	3182.4	3198.5	3192.0
15°	3185.5	3166.4	3124.4	3137.4	3121.4
17.5°	3117.9	3098.8	3056.8	3072.9	3056.8
20°	3043.8	3024.7	2979.6	2989.2	2976.5
22.5°	2970.1	2941.1	2899.1	2899.1	2892.6
25°	2883.1	2857.4	2802.8	2808.9	2802.8
27.5°	2786.4	2763.9	2722.2	2712.7	2696.6
30°	2690.2	2664.2	2616.0	2606.5	2593.5
32.5°	2587.1	2568.0	2516.4	2496.9	2483.9
35°	2487.4	2455.3	2403.7	2384.3	2368.2
37.5°	2374.7	2345.6	2294.1	2271.6	2255.5
40°	2259.0	2233.0	2181.5	2152.8	2139.9
42.5°	2146.3	2120.3	2069.2	2036.7	2017.6
45°	2024.1	2001.6	1953.1	1917.9	1905.0
47.5°	1905.0	1882.5	1830.9	1795.3	1776.2
50°	1779.3	1763.3	1718.2	1673.1	1657.1
52.5°	1657.1	1634.6	1592.9	1557.5	1534.9
55°	1531.8	1512.4	1473.8	1435.2	1419.2
57.5°	1406.2	1390.1	1348.1	1309.6	1296.6
60°	1280.5	1267.9	1222.8	1187.3	1177.8
62.5°	1158.3	1135.8	1103.7	1071.6	1058.7
65°	1033.0	1013.6	981.5	952.4	936.5
67.5°	904.4	888.0	859.3	836.8	823.8
70°	785.2	772.2	743.2	720.7	708.0
72.5°	663.0	650.0	634.0	611.5	601.8
75°	540.4	534.3	517.9	498.8	505.2
77.5°	431.2	418.2	411.7	402.1	392.6
80°	321.9	318.5	312.0	302.5	296.0
82.5°	218.9	218.9	215.8	202.8	202.8
85°	131.8	128.7	125.6	115.8	112.7
87.5°	58.0	51.5	45.1	35.5	32.1
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	14.68	16.29	15.04	16.60	16.92	14.24	15.85	14.60	16.16	16.47
	3H	16.43	17.88	16.81	18.21	18.57	15.94	17.39	16.32	17.72	18.08
	4H	17.08	18.45	17.47	18.79	19.17	16.58	17.95	16.98	18.30	18.67
	6H	17.55	18.81	17.96	19.18	19.57	17.04	18.31	17.45	18.68	19.07
	8H	17.69	18.90	18.11	19.29	19.69	17.19	18.40	17.61	18.79	19.18
	12H	17.78	18.94	18.21	19.32	19.75	17.27	18.43	17.70	18.81	19.24
4H	2H	15.24	16.61	15.64	16.96	17.33	14.89	16.26	15.29	16.60	16.98
	3H	17.22	18.36	17.62	18.76	19.16	16.81	17.95	17.22	18.35	18.75
	4H	17.99	19.03	18.42	19.44	19.88	17.57	18.60	18.00	19.02	19.45
	6H	18.59	19.49	19.04	19.93	20.39	18.16	19.06	18.61	19.50	19.96
	8H	18.78	19.62	19.24	20.07	20.53	18.34	19.19	18.80	19.63	20.09
	12H	18.91	19.67	19.39	20.15	20.61	18.46	19.22	18.94	19.69	20.16
8H	4H	18.27	19.11	18.73	19.55	20.02	17.89	18.74	18.35	19.18	19.65
	6H	18.98	19.68	19.47	20.17	20.65	18.60	19.30	19.09	19.79	20.26
	8H	19.24	19.87	19.75	20.38	20.86	18.85	19.48	19.36	19.98	20.47
	12H	19.44	20.00	19.95	20.49	21.05	19.03	19.58	19.53	20.07	20.63
12H	4H	18.29	19.05	18.77	19.53	20.00	17.93	18.69	18.41	19.16	19.63
	6H	19.02	19.66	19.53	20.16	20.65	18.66	19.29	19.17	19.79	20.28
	8H	19.34	19.90	19.85	20.39	20.95	18.96	19.52	19.47	20.01	20.57