

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: P931227

Luminaire Tested: DFN2DS-TR2F0-020DS830-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931227
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-TR2F0-020DS830-FLL
Description: 2 foot, Triangle Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

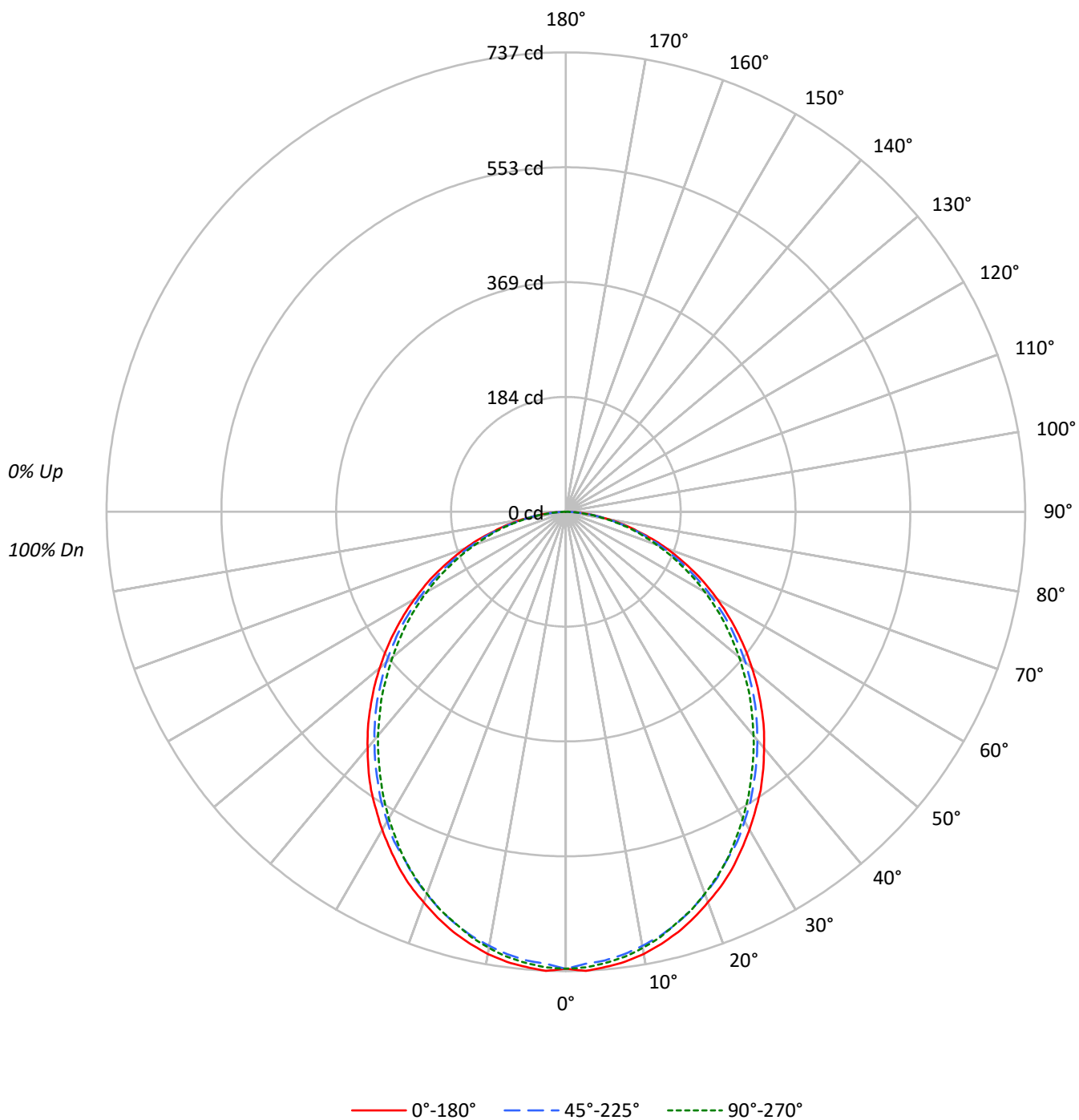
Lumens per Lamp: N/A
Luminaire Lumens: 1865.2 lumens
Efficiency: N/A
Efficacy: 106.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 2.36' x L: 2.04' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
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°	1635	1635	1635
5°	1641	1618	1627
10°	1632	1601	1609
15°	1611	1581	1579
20°	1583	1549	1548
25°	1554	1511	1511
30°	1518	1476	1463
35°	1484	1434	1413
40°	1441	1391	1365
45°	1399	1350	1316
50°	1353	1306	1260
55°	1305	1255	1209
60°	1251	1195	1151
65°	1194	1135	1083
70°	1122	1062	1011
75°	1020	977	954
80°	907	879	832
85°	737	704	632

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1399 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.0	3.7
10°-20°	194.1	10.4
20°-30°	285.3	15.3
30°-40°	331.4	17.8
40°-50°	330.9	17.7
50°-60°	288.6	15.5
60°-70°	213.3	11.4
70°-80°	120.7	6.5
80°-90°	31.9	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°	548.4	29.4
0°-40°	879.8	47.2
0°-60°	1499.3	80.4
0°-90°	1865.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1865.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	733	733	733	733	733	
5°	733	730	722	728	727	70
15°	698	694	684	687	684	197
25°	632	626	614	615	614	291
35°	545	538	527	522	519	340
45°	443	438	428	420	417	342
55°	336	331	323	314	311	300
65°	226	222	215	209	205	224
75°	118	117	113	109	111	126
85°	29	28	28	25	25	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	733.1	733.1	733.1	733.1	733.1
2.5°	737.3	733.8	726.0	733.1	731.7
5°	733.1	730.3	722.5	728.2	726.8
7.5°	728.2	723.9	716.2	721.9	720.4
10°	720.4	715.5	707.1	712.6	710.6
12.5°	709.8	705.7	697.2	700.7	699.2
15°	697.8	693.7	684.5	687.3	683.8
17.5°	683.0	678.9	669.7	673.2	669.7
20°	666.8	662.6	652.7	654.9	652.1
22.5°	650.6	644.3	635.1	635.1	633.7
25°	631.6	626.0	614.0	615.3	614.0
27.5°	610.4	605.5	596.4	594.3	590.7
30°	589.3	583.7	573.1	571.0	568.1
32.5°	566.7	562.6	551.3	547.0	544.2
35°	544.9	537.9	526.6	522.3	518.8
37.5°	520.3	513.9	502.6	497.7	494.1
40°	494.8	489.2	477.9	471.7	468.7
42.5°	470.2	464.5	453.3	446.2	442.0
45°	443.4	438.5	427.9	420.1	417.3
47.5°	417.3	412.4	401.1	393.3	389.1
50°	389.8	386.3	376.4	366.5	363.0
52.5°	363.0	358.1	348.9	341.2	336.3
55°	335.5	331.3	322.8	314.4	310.9
57.5°	308.0	304.5	295.3	286.9	284.0
60°	280.5	277.8	267.9	260.1	258.0
62.5°	253.8	248.8	241.8	234.7	231.9
65°	226.3	222.0	215.1	208.7	205.2
67.5°	198.1	194.5	188.2	183.3	180.5
70°	172.0	169.2	162.8	157.9	155.1
72.5°	145.3	142.4	138.9	134.0	131.9
75°	118.4	117.1	113.4	109.3	110.7
77.5°	94.5	91.7	90.1	88.1	86.0
80°	70.6	69.8	68.4	66.2	64.8
82.5°	47.9	47.9	47.3	44.5	44.5
85°	28.8	28.2	27.5	25.3	24.7
87.5°	12.7	11.3	9.9	7.8	7.1
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	12.99	14.60	13.35	14.91	15.23	12.55	14.16	12.91	14.47	14.79
	3H	14.74	16.19	15.12	16.52	16.88	14.25	15.70	14.63	16.03	16.39
	4H	15.39	16.76	15.79	17.10	17.48	14.89	16.26	15.29	16.61	16.99
	6H	15.86	17.13	16.27	17.49	17.88	15.36	16.62	15.77	16.99	17.38
	8H	16.00	17.21	16.42	17.60	18.00	15.50	16.71	15.92	17.10	17.50
	12H	16.09	17.25	16.52	17.63	18.06	15.58	16.74	16.01	17.12	17.55
4H	2H	13.55	14.92	13.95	15.27	15.64	13.20	14.57	13.60	14.92	15.29
	3H	15.53	16.67	15.94	17.07	17.47	15.12	16.27	15.53	16.66	17.06
	4H	16.30	17.34	16.73	17.75	18.19	15.88	16.92	16.31	17.33	17.77
	6H	16.90	17.81	17.35	18.25	18.70	16.47	17.37	16.92	17.81	18.27
	8H	17.09	17.94	17.55	18.38	18.84	16.65	17.50	17.11	17.94	18.41
	12H	17.22	17.98	17.70	18.46	18.93	16.77	17.53	17.25	18.01	18.47
8H	4H	16.58	17.42	17.04	17.87	18.33	16.20	17.05	16.66	17.49	17.96
	6H	17.29	17.99	17.79	18.48	18.96	16.91	17.61	17.40	18.10	18.58
	8H	17.55	18.18	18.06	18.69	19.17	17.16	17.79	17.67	18.30	18.78
	12H	17.75	18.31	18.26	18.80	19.36	17.34	17.89	17.84	18.39	18.95
12H	4H	16.60	17.36	17.08	17.84	18.31	16.24	17.00	16.72	17.47	17.94
	6H	17.34	17.97	17.85	18.48	18.96	16.97	17.60	17.48	18.11	18.59
	8H	17.65	18.21	18.16	18.70	19.26	17.27	17.83	17.78	18.32	18.88